## GROCERY STORE AT MEADOW WALK SUDBURY

Town of Sudbury Zoning Board of Appeals Applications

for

Major Commercial Project Special Permit and Sign Special Permits

For properties located at 526 and 528 BOSTON POST ROAD SUDBURY, MASSACHUSETTS

#### Applicant:

# BPR Development LLC c/o National Development

Attn: John J. O'Neil, III, Managing Partner 2310 Washington Street Newton Lower Falls, Massachusetts 617-257-9800



Civil Engineer, Landscape Architect, Surveyor,	Counsel:
Traffic Engineer and Wetlands Scientist:	
VHB	Goulston & Storrs
c/o Karen F. Staffier, PE - Project Manager	c/o Peter L. Tamm - Director
101 Walnut Street	400 Atlantic Avenue
Watertown, MA 02472	Boston, Massachusetts 02110-3333
617-607-0088	617-482-1776
karenstaffier@vhb.com	ptamm@goulstonstorrs.com
Project Architect and MEP-FP Engineer:	Project Geotechnical Engineer:
JACOBS	Sanborn Head & Associates
c/o Ben J. Anderson - Sr. Project Manager	c/o Kevin P. Stetson, P.E Vice President
One Broadway, 10th Floor	Technology Park Drive
Cambridge, MA 02142	Westford, MA 01886
617-250-4850	978-392-0900
han andarran @iaaaha aam	
ben.anderson@jacobs.com	kstetson@sanbornhead.com
ben anderson@jacoos.com	kstetson@sanbornhead.com

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# <u>Tab #1</u>

TRANSMITTAL

## <u>Tab #2</u>

# MAJOR COMMERCIAL PROJECT SPECIAL PERMIT APPLICATION FORM

## SIGN SPECIAL PERMIT APPLICATION #1

## SIGN SPECIAL PERMIT APPLICATION #2

2	IGN	<b>SPECIAL</b>	PERMIT	APPLICAT	TION F	ORM #3
J	$\mathbf{r}$	DIECIAL		ALLICA		O(N)

# Tab #6

# APPLICATION FEE CALCULATIONS



## OWNER'S CONSENT LETTER

# Tab #9

# CERTIFIED ABUTTER'S LISTS

# <u>Tab #10</u>

## PETITIONER'S BRIEF

## TRAFFIC MEMORANDUM

# SITE PLANS, FLOOR PLANS, AND ELEVATIONS

11" x 17" black & white
(WITH FULL-SIZE PRINTS UNDER SEPARATE COVER)

# BUILDING ELEVATIONS, MATERIALS BOARD, AND PRECEDENT IMAGES

11" X 17" COLOR PRINTS

# <u>Tab #14</u>

SIGNAGE DRAWINGS –
SIGNS A, B, AND C

# <u>Tab #15</u>

# APPLICATION MATERIALS IN PDF FORMAT ON CD/DVD

LETTER OF TRANSMITTAL				
FROM:	National Development c/o Steve Senna 2310 Washington Street Newton, MA 02462 (617) 527-9800 ssenna@natdev.com		DA	Grocery Store at Meadow Walk Sudbury 526 and 528 Boston Post Road Sudbury, MA ZONING BOARD OF APPEALS Applications for Major Commercial Project Special Permit, and Sign Special Permits
	70.000			
TO:	Town of Sudb	ury Plannir	ng Board	
ADDRESS:	278 Old Sudbu	ry Road		
CITY:	Sudbury, MA	01776		
ATTENTION	Jody Kablack,	Director o	f Planning and Community De	velopment
ITEM#	TRANSMITTAL TYPE	COPIES		ITEM DESCRIPTION
Α	Application Binder	22		application materials, including 11"x17" prints of the at 11/10/2015 with Reference Drawings.
			"Site Plans prepared by VIID date	ed 11/10/2015 with Reference Drawings.
В	Application Fee Check	1	Application Fee Check (#006027)	for \$500.00
С	Full Size Drawings	0	"Site Plans" prepared by VHB date	ed 11/10/2015 with Reference Drawings.
			NOTE:	DRAWINGS WERE PROVIDED UNDER A SEPARATE
				INAWINGS WERE PROVIDED UNDER A SEPARATE  IING BOARD APPLICATION MATERIALS FOR THE PROJECT.
		-		
	<u></u>			
THESE ARI	E BEING TRANSMITTED AS I	NDICATED E	BELOW:	
	AS REQUESTED	[	APPROVED AS IS	SUBMIT COPIES FOR DISTRIBUTION
[ v	1	Г	7	
<u>[X</u>	FOR APPROVAL	L	APPROVED WITH CORRECTIONS	RETURN CORRECTED
COMMENTS:  Of the 22 copies of Item "A" there is one original, which also includes a CD with electronic copies of all of the Application Materials.				
			Sic	ned: Steve Senna, Vice President
THE REAL PROPERTY.	BIATIONIAI			



SUDBURY, MASSACHUSETTS

#### APPLICATION FOR SPECIAL PERMIT

PART I APPLICANT INFORMATION Page 1 of 3
Name(s): BPR Development LLC C/O National Development (Steve Senna)
Address: 2310 Washington Street, Newton Lower Falls, MA 02462
Telephone #: 617-559-5046 Email: ssenna@natdev.com
PART II OWNER INFORMATION
Name(s): Raytheon Company c/o Jerry A. Cellucci
Address: 870 Winter Street, Waltham, MA 02451
Telephone #: 781-522-3062 Email: jerry a cellucci@raytheon.com
PART III PROPERTY INFORMATION
Address for which special permit is requested: 526 and 528 Boston Post Road
Town Assessor Map #: K07-0011 and K07-0013
Area: 49.498 acres Frontage: Zoning District: LID and RES A-1
Is the deed for this property recorded? YES NO 526: June 25, 1979 526: 13723 526: 417  If YES, Date: 528: June 26, 2008 Book #: 528: 51383 Page#: 528: 258
PART IV DESCRIPTION OF REQUEST
a) Under what provision of the Bylaw is a special permit requested?  Article: 6200 Section #: 6210  b) If this is a Special Permit application under Section 2460B (Construction After Demolition), what is the total floor area of the existing structure: n/a, and what is the total floor area of the proposed structure: n/a
c) Why is a Special Permit Needed?  The proposed project is a commercial building that is greater than 20,000 square feet.  As such, it is a Major Commercial Project under the Town of Sudbury's Zoning Bylaw.  All Major Commercial Projects in the LID Zoning district require a Special Permit from the Town of Sudbury's Zoning Board of Appeals.

#### SUDBURY, MASSACHUSETTS

#### APPLICATION FOR SPECIAL PERMIT

PART IV DESCRIPTION OF REQUEST (continued)	Page 2 of 3
d) Why does the applicant believe that the proposed use or build general purpose and intent of the Bylaw?	ling would be in harmony with the
Please see the attached Petitioner's Brief dated N	ovember 10, 2015 (tab #10).
e) Why does the applicant believe that the proposed use wor location, would not be detrimental to the neighborhood, and character of the zoning district?	
Please see the attached Petitioner's Brief dated N	lovember 10, 2015 (tab #10).
- *	
f) Why does the applicant believe that adequate and appropriate proper operation of the proposed use?	facilities will be provided for the
Please see the attached Petitioner's Brief dated No	ovember 10, 2015 (tab #10).
<u> </u>	
g) Why does the applicant believe that the proposed use would radjoining zoning districts and neighboring properties due to the enoise, sewage, refuse materials, or visual nuisances?	
Please see the attached Petitioner's Brief dated No	ovember 10, 2015 (tab #10).

SUDBURY, MASSACHUSETTS

#### APPLICATION FOR SPECIAL PERMIT

PART IV	DESCRIPTION OF REQUEST (continued)	Page 3 of 3
h) Why does the immediate	the applicant believe that the proposed use would not cause undue traf	fic congestion in
Plea	se see the attached Traffic Memorandum prepared by VHB d	lated
Nov	ember 10, 2015 (tab #11).	-
i) Has a Speci	al Permit previously been requested? YES NO	
If YES, Case	Number(s) Applicant Approved oplicable.	Denied
	or conditions of the previously granted permit:	
area(s), includ structures on  \$100.00 Fil  \$25.00 Adv  PART VI	showing the location, size, and position of the property, building(s) and ing all dimensions and setback distances from property lines, public was adjoining property.  ing fee (initial application) \$50.00 for renewals (payable to the Town of vertising fee (payable to the Town of Sudbury)  SIGNATURE  Il of the above are true to the best of my knowledge.	nys and f Sudbury)
	BPR Development LLC  Date:	

## SIGN APPLICATION "A" - South Elevation facing Route 20

## ZONING BOARD OF APPEALS

SUDBURY, MASSACHUSETTS

PARTI	APPLICANT INFORMATION Page 1 of 3	
Name(s):	BPR Development LLC c/o National Development (Steve Senna)	
Address:	2310 Washington Street, Newton, MA 02462	
Telephone #:	617-559-5046	
PART II	OWNER INFORMATION	
Name(s):	Raytheon Company c/o Jerry A. Cellucci	
Address:	870 Winter Street, Waltham, MA 02451	
Telephone #:	781-522-3062 Email: jerry a cellucci@raytheon. com	
PART III	PROPERTY INFORMATION	
Address or lot # of property for which sign special permit is requested: 526 and 528 Boston Post Road, Sudbury, MA 01776  Area: 49.498 acres Frontage: 763.1 feet Zoning District: LID and RES A-1  Is the deed for this property recorded? YES X NO   526: June 25, 1979 526: 13723 526: 417  If YES, Date: 528: June 26, 2008 Book #: 528: 51383 Page #: 528: 258		
PART IV	DESCRIPTION OF REQUEST	
a) Under what provision of the Bylaw is a special permit requested?		
Article: 3200 Section Number: 3290		
b) How large will the sign be? Size: 96square feet		
c) Description of the sign:		
Material: 0.063 Aluminum; 3/16" Plex; 3/4" Trim Cap; LED illumination		
Shape	:Individual Channel Letter	

SUDBURY, MASSACHUSETTS

PA	RT IV DESC	CRIPTION OF REQUEST (continued)	Page 2 of 3	
	Style of Lette	ering: Corporate Logo	_ , ,	
	Color of lette	ers: Green	_	
	Color of back	kground: Various building materials. See attached elevat	tions.	
	Type:	☐ freestanding Xattached		
	Sides:	X single faced □ double faced		
	Illumination:	Xinternal, _+/- 44watts		
		□ external,watts		
		□ none		
d)	Is this sign: □ re	placing an existing sign No $\Box$ in addition to an existing s	ign No	
e)	How far will the	sign be from the street?feet	_	
		mit previously been requested? YES \( \square\) NO \( \text{X} \)		
	If YES, Case #: n/a Applicant: n/a			
	Approved □ Denied □			
Tapproved in Defined in				
PA	RT V REQ	UIRED ATTACHMENTS		
0	\$100.00 – Filing	fee (payable to the Town of Sudbury)		
•	\$25.00 Advertising fee (payable to the Town of Sudbury)			
0	• A sketch of the proposed sign, including all dimensions			
0	If the sign is to b included	e freestanding a plot plan showing the location of the propose	ed sign must be	
	4)			

SUDBURY, MASSACHUSETTS

PART VI	SIGNATURE	Page 3 of 3	
I certify that all of the above answers are true to the best of my knowledge.			
1 corning that a			
	DPR Development LLC	Date: 11 10 20 15	
	O PLE SCOPING TO	_Date:	

## **SIGN APPLICATION "B" - East Elevation Main Entry**

#### **ZONING BOARD OF APPEALS**

SUDBURY, MASSACHUSETTS

Name(s): BPR Development LLC c/o National Development (Steve Senna)				
Address: 2310 Washington Street, Newton, MA 02462				
Telephone #: 617-559-5046				
PART II OWNER INFORMATION				
Name(s): Raytheon Company c/o Jerry A. Cellucci				
Address: 870 Winter Street, Waltham, MA 02451				
Telephone #: 781-522-3062 Email: jerry a cellucci@raytheon. com				
PART III PROPERTY INFORMATION				
Address or lot # of property for which sign special permit is requested: 526 and 528 Boston Post Road, Sudbury, MA 01776				
Area: 49.498 acres Frontage: 763.1 feet Zoning District: LID and RES A-1				
Is the deed for this property recorded? YES X NO □  526: June 25, 1979 526: 13723 526: 417  If YES, Date: 528: June 26, 2008 Book #: 528: 51383 Page #: 528: 258				
PART IV DESCRIPTION OF REQUEST				
a) Under what provision of the Bylaw is a special permit requested?				
Article: 3200 Section Number: 3290				
b) How large will the sign be? Size: 148 square feet				
c) Description of the sign:				
Material: 0.063 Aluminum; 3/16" Plex; 3/4" Trim Cap; LED illumination				
Shape: <u>Individual Channel Letter</u>				

SUDBURY, MASSACHUSETTS

PAR	T IV DESC	CRIPTION OF REQUEST (continued)	Page 2 of 3			
	Style of Lettering: Corporate Logo					
	Color of letters: Green					
	Color of back	ground: Various building materials. See attached elevat	ions.			
	Type:	☐ freestanding Xattached				
	Sides:	X single faced □ double faced				
	Illumination:	Xinternal, _+/- 44watts				
		□ external,watts				
		□ none				
d) Is	this sign: □ re	placing an existing sign $\underline{No}  \Box$ in addition to an existing s	ign <u>No</u>			
e) H	ow far will the s	sign be from the street? 296 feet				
f) H	as a Special Peri	mit previously been requested? YES \( \square\) NO \( \square\)				
	If YES, Case #: n/a Applicant: n/a					
	Approved □ Denied □					
PAR	T V REQ	UIRED ATTACHMENTS				
• \$	100.00 – Filing	fee (payable to the Town of Sudbury)				
• \$	25.00 Advertisi	ng fee (payable to the Town of Sudbury)				
• A	sketch of the p	roposed sign, including all dimensions				
	f the sign is to b	e freestanding a plot plan showing the location of the propose	ed sign must be			

SUDBURY, MASSACHUSETTS

PART VI	SIGNATURE	Page 3 of 3
I certify that	all of the above answers are true to the best of my knowled	lge.
		e: 11 10 2015
	( ) BPR Development LLC	e:

## SIGN APPLICATION "C" - East Elevation Secondary Entry

#### **ZONING BOARD OF APPEALS**

SUDBURY, MASSACHUSETTS

PART I	APPLICANT INFORMATION Page 1 of 3			
Name(s):	BPR Development LLC c/o National Development (Steve Senna)			
Address:	2310 Washington Street, Newton, MA 02462			
Telephone #:	617-559-5046			
PART II	OWNER INFORMATION			
Name(s):	Raytheon Company c/o Jerry A. Cellucci			
Address:	870 Winter Street, Waltham, MA 02451			
Telephone #:	781-522-3062 Email: jerry a cellucci@raytheon. com			
PART III	PROPERTY INFORMATION			
Address or lot # of property for which sign special permit is requested: 526 and 528 Boston Post Road, Sudbury, MA 01776				
Area: 49.498 acres Frontage: 763.1 feet Zoning District: LID and RES A-1				
Is the deed for this property recorded? YES X NO □  526: June 25, 1979 526: 13723 526: 417  If YES, Date: 528: June 26, 2008 Book #: 528: 51383 Page #: 528: 258				
PART IV DESCRIPTION OF REQUEST				
a) Under wha	at provision of the Bylaw is a special permit requested?			
Article	e: 3200 Section Number: 3290			
b) How large	will the sign be? Size: 96 square feet			
c) Description of the sign:				
Materi	Material: 0.063 Aluminum; 3/16" Plex; 3/4" Trim Cap; LED illumination			
Shape	: Individual Channel Letter			

SUDBURY, MASSACHUSETTS

PART IV I	DESCRIPTION OF REQUEST (continued)	Page 2 of 3
Style of	Lettering: Corporate Logo	
Color of	_	
Color of	f background: Various building materials. See attached eleva	tions.
Type:	☐ freestanding	
Sides:	X single faced □ double faced	
Illumina	ation: Xinternal, <u>+/- 44</u> watts	
	□ external,watts	
	□ none	
d) Is this sign:	$\Box$ replacing an existing sign $\underline{No}$ $\Box$ in addition to an existing sign	sign <u>No</u>
e) How far will	I the sign be from the street? 459 feet	
f) Has a Specia	ll Permit previously been requested? YES $\square$ NO	
If YES, Case #:	n/aApplicant:n/a	· · · · · · · · · · · · · · · · · · ·
Approv	red   Denied	
PART V F	REQUIRED ATTACHMENTS	
• \$100.00 – F	iling fee (payable to the Town of Sudbury)	
• \$25.00 Adv	ertising fee (payable to the Town of Sudbury)	
• A sketch of	the proposed sign, including all dimensions	
• If the sign is included	s to be freestanding a plot plan showing the location of the propos	ed sign must be
f) Has a Special If YES, Case #: Approv  PART V  100.00 - F  25.00 Adv  A sketch of  If the sign is	n/a Applicant: n/a  red □ Denied □  REQUIRED ATTACHMENTS  Tiling fee (payable to the Town of Sudbury)  ertising fee (payable to the Town of Sudbury)  the proposed sign, including all dimensions	ed sign must be

SUDBURY, MASSACHUSETTS

PART VI	SIGNATURE	Page 3 of 3
I certify that a	all of the above answers are true to the best of my kn	owledge.
	Che.	Date: 11 10 2015
	BPR Development LLC	Date:
		Date
п		

#### **APPLICATION FEE CALCULATIONS**

# TOWN OF SUDBURY ZONING BOARD OF APPEALS APPLICATIONS FOR

# MAJOR COMMERCIAL PROJECT SPECIAL PERMIT AND SIGN SPECIAL PERMITS

# PROPOSED GROCERY STORE AT MEADOW WALK SUDBURY 526-528 BOSTON POST ROAD SUDBURY, MA

#### **NOVEMBER 10, 2015**

	ZONING BOARD OF APPEALS  Special Permit for  Major Commercial Project		NG BOARD OF APPEALS Special Permit for SIGNS
Fees			
Filing Fee 1	\$	100.00	\$ 100.00
Filing Fee 2	\$	-	\$ 100.00
Filing Fee 3	\$	-	\$ 100.00
Advertising Fee 1	\$	25.00	\$ 25.00
Advertising Fee 2	\$	-	\$ 25.00
Advertising Fee 3	\$	-	\$ 25.00
Peer Review Escrow	\$		\$ -
subtotal	\$	125.00	\$ 375.00
		GRAND TOTAL TO ZBA:	\$ 500.00

(50	00)	-			K NO.: 00602	7 TOSUE
Invoice No.	Inv. Date	Inv. Amount	Disc. Amt	<b>Description</b>	Vehr	Net Amount
11/9/15B	11/09/15	500.00	0.00	RAYTHEON ZBA APPLICATION FEES		500.00
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	wer Falls, MA	02462				
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PAY TO THE						
ORDER OF	TOWN OF SUI	DBURY		$\wedge \mathcal{M}$	11	
		•				
					90 Days	

#\*OO6027#\* #\*O11075150#\* 26900162368#\*

Raytheon Company
Executive Offices
870 Winter Street
Waltham, MA 02451
Tel 781 522-3062
Fax 781 522-6465
Email: jerry\_a\_cellucci@raytheon.com

#### Raytheon

November 2, 2015 15JAC223

Town of Sudbury Board of Appeals c/o Mr. Jonathan F.X. O'Brien, Chairman 278 Old Sudbury Road Sudbury, MA 01776

Town of Sudbury Planning Board c/o Mr. Craig Lizotte, Chairman 278 Old Sudbury Road Sudbury, MA 01776

Town of Sudbury Conservation Commission c/o Mr. Thomas Friedlander, Chairman 275 Old Lancaster Road Sudbury, MA 01776

Town of Sudbury Building Department c/o Mr. Mark Herweck, Building Inspector 275 Old Lancaster Road Sudbury, MA 01776

Re: 526-528 Boston Post Road, Sudbury, MA
Owner's Authorization – Development Permits and Approvals

Dear Messrs. O'Brien, Lizotte, Friedlander, and Herweck:

As you may know, Raytheon Company ("Raytheon"), the current owner of 526-528 Boston Post Road, Sudbury, MA (the "Property"), has entered into an agreement (the "Agreement") for the sale of the Property to BPR Development LLC ("BPR").

This letter shall serve as written confirmation that, in connection with this transaction, BPR and its attorneys, agents and designees are authorized to (i) file applications and permitting documents on Raytheon's behalf with regard to any and all permits and approvals that may be needed for BPR's planned redevelopment of the Property as a mixed-use development, including, without limitation, permits and approvals issued by the Board of Appeals, the Planning Board, the Conservation Commission and any other local, state or federal agency (collectively, the "Project Approvals"); and (ii) take such other actions as BPR deems necessary, desirable or convenient in furtherance of the Project Approvals, provided that all permitting applications made by or on behalf of BPR prior to closing on the transaction are expressly conditioned on BPR's acquisition of the Property in accordance with the terms of the Agreement.

November 2, 2015 15JAC223 Page Two

Please do not hesitate to contact Jerry Cellucci, Esq. (781-522-3062) should you need additional information or have any questions related to this authorization.

Sincerely

Robert J. Moore

VP, Business Services Raytheon Company

cc:

Steve Senna, National Development Gregory Ferrick

Jerry Cellucci, Esq.

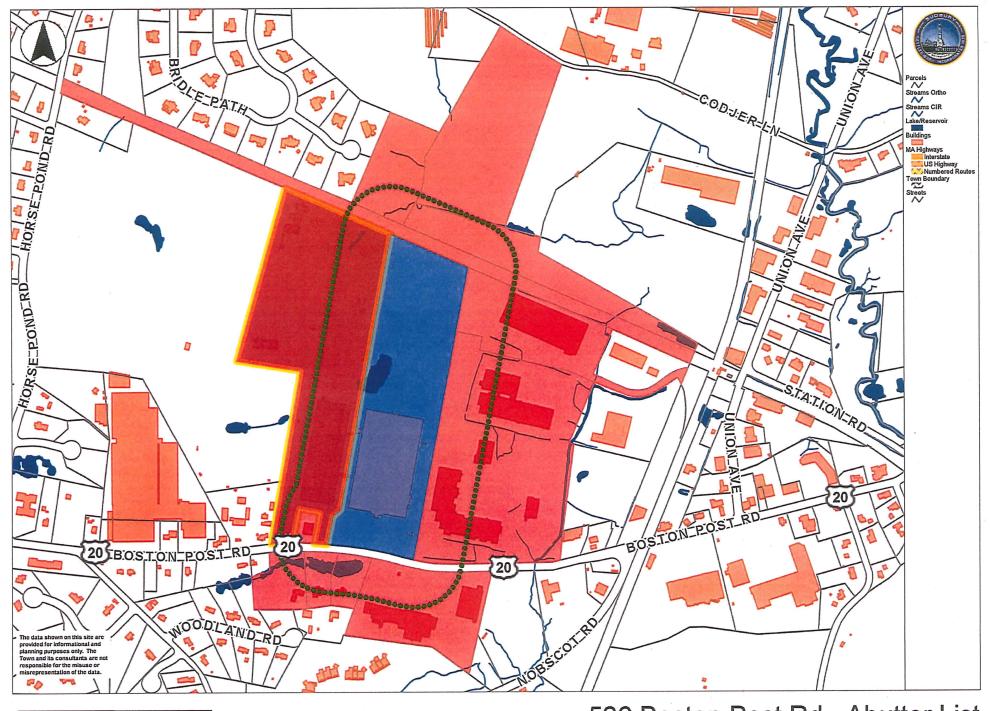
#### TOWN OF SUDBURY

#### **Assessors Certified List of Abutters for Special Permits**

526 Boston Post Road

The undersigned, being an applicant for approval of a Special Permit entitled
drawn by VHB / Vanasse Hangen Brustlin (engineer or surveyor) and identified as Assessors Map No. Ko7, Lot 0011, submits the attached sketch
plan which shows:
<ul> <li>a. The location of the land to be developed;</li> <li>b. The names, addresses and Assessor's Map numbers of all property owners located within 300 feet of the subject premises.</li> </ul>
BPR Development LLC  Name of Applicant  Signature of Applicant  STAPHEN C. SENNA  Vice President  Natural Development
Sudbury, Massachusetts  Date 11 6 2015
To the Planning Board:
This is to certify that at the time of the last assessment for taxation made by the Town of Sudbury the names and addresses of the parties assessed as owners within 300 feet of the subject parcel were as written above and/or on the attached sheet.
Sudbury Board of Assessors

(This form is not complete without an attached sketch plan and the signature by the Board of Assessors.)



526 Boston Post Rd - Abutter List

abutters_id_field	abutters_owner1	abutters_owner2	abutters_address	abutters_address2	abutters_town	abutters_state	abutters_zip	abutters_bookpage	abutters_location
J07-0012	TP FARMING LLC		110 CODJER LN		SUDBURY	MA	01776	37249-229	CODJER LN .
J07-0100	TOWN OF SUDBURY	TREASURERS OFFICE	278 OLD SUDBURY RD		Sudbury	MA	01776	49332-350	TRAILSIDE CIR
K07-0003	BISSON PAUL E & KRISTEN M		55 HIGHLAND AVE		SUDBURY	MA	01776	24728-151	55 HIGHLAND AVE
K07-0005	WELLYN INC	SUDB PLAZA C/O GRAVESTAR	160 SECOND ST		CAMBRIDGE	MA · · ·	02142	1409-92	505 BOSTON POST RD
K07-0011	RAYTHEON CO		PO BOX 660248 MS 336		DALLAS	TX	75266	13723-0417	526 BOSTON POST RD
K07-0012	TOWN OF SUDBURY FIRE STATION #2		BOSTON POST ROAD		SUDBURY	MA	01776	9668-219	540 BOSTON POST RD
K07-0013	RAYTHEON COMPANY		PO BOX 660248 MS 336		DALLAS	TX	75266	51383-258	528 BOSTON POST RD
K07-0016	PAUL J CAVICCHI JR TR	P.N.J. 1995 REALTY TRUST	110 CODJER LN		SUDBURY	MA	01776	36489-033	UNION AVE
K07-0017	E B REALTY LLC		490-B BOSTON POST RD SUITE 201		SUDBURY	MA	01776	52138-522	33 UNION AVE
K07-0018	PARIS TRUST LLC		490 B BOSTON POST RD STE 201		SUDBURY	MA	01776	44473-394	31 UNION AVE
K07-0102	BORGHANI SAEID		57 HIGHLAND AVE		SUDBURY	MA	01776	41338-412	<b>57 HIGHLAND AVE</b>
K07-5000	MASS BAY TRANSPORTATION		10 PARK PLAZA		BOSTON	MA	02116	13117-113	RAILWAY

526 Boston Post Road - Abutter List 10.26.15

Prop ID: K07-0103

Prop Location: 59 HIGHLAND AVE Sudbury, MA Owner: CURRAN SEAN Q & KELLY K

Co-Owner:

Mailing Address:

59 HIGHLAND AVE SUDBURY, MA 01776

CTOBER 28, 2015

### TOWN OF SUDBURY

### **Assessors Certified List of Abutters for Special Permits**

528 Boston Post Road

The undersigned, being an applicant for approval of a Special Fermit entitled
drawn by VHB/Vanasse Hangen Brustlin (engineer or surveyor) and
identified as Assessors Map No. Ko7, Lot 0013, submits the attached sketch
plan which shows:
The location of the land to be developed;

- The names, addresses and Assessor's Map numbers of all property owners b. located within 300 feet of the subject premises.

BPR Development LLC

Name of Applicant

Signature of Applicant STEPHEN C. SENNA

Vice President National Development

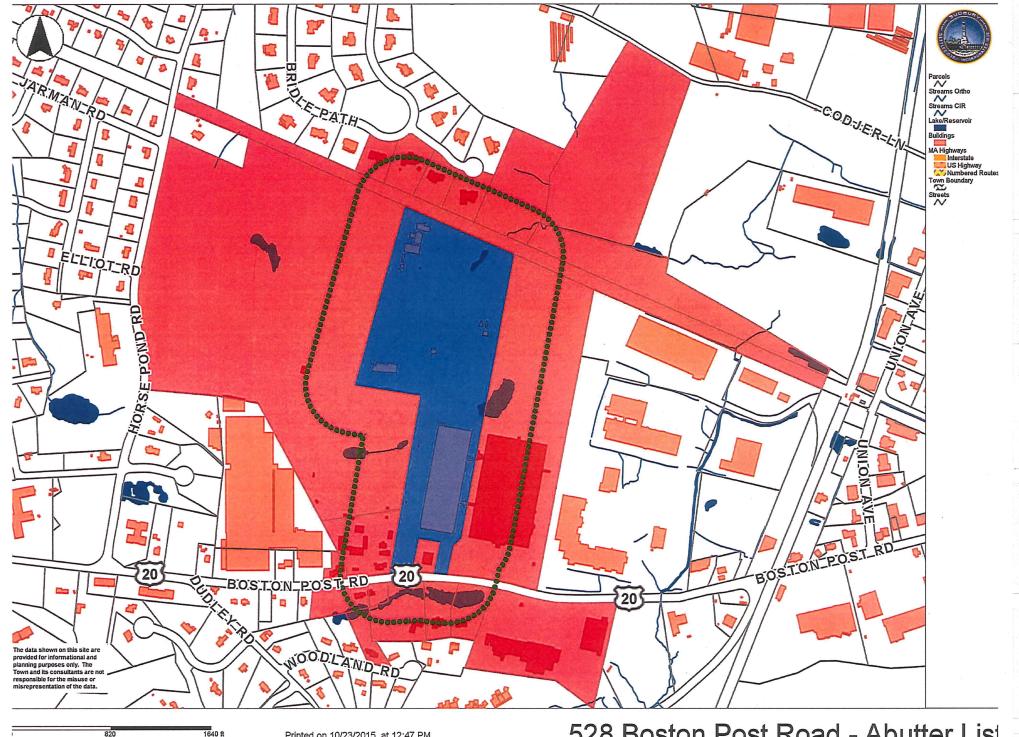
Sudbury, Massachusetts

To the Planning Board:

This is to certify that at the time of the last assessment for taxation made by the Town of Sudbury the names and addresses of the parties assessed as owners within 300 feet of the subject parcel were as written above and/or on the attached sheet.

Sudbury Board of A

(This form is not complete without an attached sketch plan and the signature by the Board of Assessors.)



Printed on 10/23/2015 at 12:47 PM

528 Boston Post Road - Abutter List

abutters_id_field	abutters_owner1	abutters_owner2	abutters_address	abutters_address2	abutters_town	abutters_state	abutters_zip	abutters_bookpage	abutters_location
J07-0012	TP FARMING LLC		110 CODJER LN		SUDBURY	MA	01776	37249-229	CODJER LN
J07-0100	TOWN OF SUDBURY	TREASURERS OFFICE	278 OLD SUDBURY RD		Sudbury	MA	01776	49332-350	TRAILSIDE CIR
J07-0108	SPEROU JOHN C & CHALAT T TRUST EES	SPEROU REALTY TRUST	57 BRIDLE PATH		SUDBURY	MA	01776	26497-315	57 BRIDLE PATH
J07-0109	DEITEL HARVEY M & BARBARA S		3 TRAILSIDE CIRCLE		SUDBURY	MA	01776	27677-584	3 TRAILSIDE CIR
J07-0110	YANZHEN JENNY & CAO YONG		11 TRAILSIDE CIR		SUDBURY	MA	01776	62252-156	11 TRAILSIDE CIR
J07-0111	CRANE ROBERT		17 TRAILSIDE CIRCLE		SUDBURY	MA	01776	63814-201	17 TRAILSIDE CIR
K06-0600	STONE ANNE TRS	THE STONE FAMILY IRREVOCABLE T RUST	554 BOSTON POST RD		SUDBURY	MA	01776	30097-114	BOSTON POST RD
K06-0602	STONE ANNE		554 BOSTON POST RD		SUDBURY	MA	01776	50662-74	554 BOSTON POST RD
K07-0001	BARTLETT DOROTHY M ET AL TRS	THI TRUST	578 BOSTON POST RD		SUDBURY	MA	01776	18121-384	559 BOSTON POST RD
K07-0002	BARTLETT DOROTHY M ET AL TRS	PAS TRUST	578 BOSTON POST RD		SUDBURY	MA	01776	18121-380	555 BOSTON POST RD
K07-0003	BISSON PAUL E & KRISTEN M		55 HIGHLAND AVE		SUDBURY	MA	01776	24728-151	55 HIGHLAND AVE
K07-0005	WELLYN INC	SUDB PLAZA C/O GRAVESTAR	160 SECOND ST		CAMBRIDGE	MA	02142	1409-92	505 BOSTON POST RD
K07-0011	RAYTHEON CO		PO BOX 660248 MS 336		DALLAS	TX	75266	13723-0417	526 BOSTON POST RD
K07-0012	TOWN OF SUDBURY FIRE STATION #2		BOSTON POST ROAD		SUDBURY	MA	01776	9668-219	540 BOSTON POST RD
K07-0013	RAYTHEON COMPANY		PO BOX 660248 MS 336		DALLAS	TX	75266	51383-258	528 BOSTON POST RD
K07-0014	MCCARTHY L B, KEIGHLEY M J, BA RTLETT J P	MDB TRUST	578 BOSTON POST RD		SUDBURY	MA	01776	27647-232	566 BOSTON POST RD
K07-0016	PAUL J CAVICCHI JR TR	P.N.J. 1995 REALTY TRUST	110 CODJER LN		SUDBURY	MA	01776	36489-033	UNION AVE
K07-0102	BORGHANI SAEID		57 HIGHLAND AVE		SUDBURY	MA	01776	41338-412	57 HIGHLAND AVE
K07-0103	CURRAN SEAN Q & KELLY K		59 HIGHLAND AVE		SUDBURY	MA	01776	39001-023	59 HIGHLAND AVE
K07-0404	CTIS PATRICIA A		24 WOODLAND RD		SUDBURY	MA	01776	22154-87	24 WOODLAND RD
K07-5000	MASS BAY TRANSPORTATION		10 PARK PLAZA		BOSTON	MA	02116	13117-113	RAILWAY

528 Boston Post Road, Sudbury - Abutter List 10.26.15

LEOFIED OWNED:

OCTOBER 28, 2015 JOHN J- 1815H

# PETITIONER'S BRIEF IN SUPPORT OF AN APPLICATION FOR A MAJOR COMMERCIAL PROJECT SPECIAL PERMIT AND SIGN SPECIAL PERMITS

## PROPOSED GROCERY STORE AT MEADOW WALK SUDBURY 526-528 BOSTON POST ROAD SUDBURY, MA

### NOVEMBER 10, 2015

For the reasons set forth below, BPR Development LLC (the "<u>Petitioner</u>"), an affiliate of National Development, respectfully requests that the Board of Appeals issue a Major Commercial Project Special Permit, three Sign Special Permits, and such other relief as the Board may deem necessary and proper for the proposed construction of an approximately 45,000 square foot high-end grocery store (the "<u>Proposed Grocery Store</u>") upon a portion of the property located at 526-528 Boston Post Road, Sudbury, MA (the "<u>Project Site</u>").

#### PROPERTY BACKGROUND

The Project Site comprises approximately fifty (50) acres, bounded by Route 20/Boston Post Road to the south and identified as assessor's parcels K07-0011 and K07-0013. The Project Site is currently owned by the Raytheon Company ("Raytheon") and contains a complex of office and research and development buildings and associated structures used by Raytheon in connection with its operations, as well as off-street parking for approximately 2,040 vehicles, and an on-site wastewater treatment facility (the "Existing Wastewater Treatment Facility"). In 2014 Raytheon announced the planned phased closure of essentially all of its facilities at the Project Site.

Based on the zoning maps to the Town of Sudbury Zoning Bylaw (the "**Zoning Bylaw**"), the Project Site is located in two separate zoning districts: the vast majority of the Project Site is located in the Limited Industrial District ("**LID**"); a much smaller portion of the Project Site is located in the Residential A-1 District. The portion of the Project Site upon which the Proposed Grocery Store will be constructed is located entirely in the LID.

#### PROPOSED PROJECT

Petitioner has entered into an agreement to purchase the Project Site from Raytheon in order to redevelop the Project Site as a multi-phased, mixed-use development to be known as "Meadow Walk Sudbury" (the "**Redevelopment Project**"). This petition relates to the Proposed Grocery Store and related signage elements, the initial component of the Redevelopment Project. Specifically, the Proposed Grocery Store will consist of construction of an approximately 45,000 square foot grocery store building, to be tenanted by a high-end grocer, with accessory off-street

parking and associated site improvements, as more particularly shown on the plan set entitled "Site Plans-Grocery Store at Meadow Walk Sudbury," dated November 10, 2015, prepared by Vanasse Hangen Brustlin, Inc. ("VHB"), a copy of which is included with this petition (the "Site Plans"). The Proposed Grocery Store will include a comprehensive signage program consisting of three internally illumined signs (the "Signs") of various sizes to be affixed above the building entrances to Proposed Grocery Store, as shown on the plans entitled "Grocery Store Exterior Wall Signs," dated October 27, 2015, revised November 10, 2015, prepared by Adart, a copy of which is included with this petition (the "Exterior Wall Sign Renderings"). The remainder of the Redevelopment Project will be permitted separately at a future date and is not the subject of this petition.

In addition to the requested relief, the Proposed Grocery Store and Signs will require reviews by other town bodies, including (i) Site Plan Review by the Town of Sudbury Planning Board, as required by Section 6310 of the Zoning Bylaw; (ii) advisory design review by the Town of Sudbury Design Review Board, as required by Section 6540 of the Zoning Bylaw; and (iii) a Stormwater Management Permit issued by the Planning Board pursuant to the Sudbury Stormwater Management Bylaw. The Proposed Grocery Store is also subject to review by the Town of Sudbury Conservation Commission under the Sudbury Wetlands Administration Bylaw and its accompanying regulations, and M.G.L. c. 131, § 40, the Wetlands Protection Act.

### ZONING RELIEF REQUESTED

Pursuant to Section 2230 and Appendix A to the Zoning Bylaw, the Proposed Grocery Store requires a Major Commercial Project Special Permit from the Board of Appeals because it involves construction of a commercial building containing more than 20,000 gross square feet.

In addition, the Signs will exceed some or all of the criteria set forth in Section 3200 of the Zoning Bylaw, requiring Sign Special Permits from the Board of Appeals pursuant to Section 3290 of the Zoning Bylaw.

#### STANDARDS FOR GRANT OF RELIEF

The Petitioner respectfully submits that the Proposed Grocery Store and Signs satisfy the general criteria for the grant of a special permit set forth in Section 6220 of the Zoning Bylaw, and the Signs satisfy the specific criteria for the grant of a Sign Special Permit set forth in Section 3290 of the Zoning Bylaw, and, therefore, the Board of Appeals should grant the relief requested.

I. THE PROPOSED GROCERY STORE AND SIGNS SATISFY THE GENERAL CRITERIA FOR THE GRANT OF A SPECIAL PERMIT UNDER SECTION 6220 OF THE ZONING BYLAW.

As set forth in Section 6220 of the Zoning Bylaw, the Board of Appeals shall grant a special permit only if the Board of Appeals finds that all the following conditions are met: (a) that the use is in harmony with the general purpose and intent of the bylaw; (b) that the use is in an appropriate location and is not detrimental to the neighborhood and does not significantly alter the character of the zoning district; (c) adequate and appropriate facilities will be provided for the proper operation of the proposed use; (d) that the proposed use would not be detrimental or offensive to the adjoining zoning districts and neighboring properties due to the effects of lighting, odors, smoke, noise, sewage, refuse materials or other visual nuisances; and (e) that the proposed use would not cause undue traffic congestion in the immediate area.

The Proposed Grocery Store and Signs satisfy these criteria.

### A. That the use is in harmony with the general purpose and intent of the bylaw.

The Proposed Grocery Store and Signs are in harmony with the general purpose and intent of the Zoning Bylaw, which is to promote the general welfare of the Town of Sudbury; to protect the health and safety of its inhabitants; to encourage the most appropriate use of land throughout the town; to preserve the cultural, historical and agricultural heritage of the community; to increase the amenities of the Town; and to reduce the hazard from fire by regulating the location and use of buildings and structures and the area of open space around them. *See* Zoning Bylaw, Sec. 1100.

The Proposed Grocery Store will replace a large portion of the existing defense industry facility with a grocery store that will provide a community convenience and introduce an important retail anchor as the first phase of the mixed-use redevelopment of the Project Site. In this way, the Proposed Grocery Store will serve to help maintain municipal tax revenues generated from the Project Site and provide a desirable amenity to the surrounding neighborhood. The proposed design, scale, and building materials for the Proposed Grocery Store and Signs have been designed so as to create an attractive and cohesive aesthetic which will be incorporated within a village retail component to activate the streetscape along this important section of the Route 20/Boston Post Road commercial corridor. The Proposed Grocery Store, as the anchor retail tenant, will serve as a catalyst to the redevelopment of the overall Project Site in accordance with the Town's planning goals set forth in the Route 20 Corridor Study and Housing Production Plan described in further detail below.

In addition, the Proposed Grocery Store will be served by adequate parking, access, vehicular circulation, and utilities, as documented in the plans, reports and materials included with this petition. The Proposed Grocery's Store's impacts have been adequately forecasted and addressed in these materials to be reviewed in further detail in connection with the design and site plan review processes. Accordingly, granting the requested special permits will not be injurious to the neighborhood or otherwise detrimental to the public welfare.

Finally, as addressed above, the Proposed Grocery Store has been designed to comply with all applicable zoning requirements and has been designed not to require any variances, further supporting the conclusion that the proposal is in harmony with the general purpose and intent of the Zoning Bylaw.

### B. That the use is in an appropriate location and is not detrimental to the neighborhood and does not significantly alter the character of the zoning district.

The Project Site is located on Route 20/Boston Post Road, an established commercial and industrial corridor, and is located in the immediate vicinity of numerous shopping complexes and retail- and service-oriented developments. The Project Site is an appropriate location for retail uses. In fact, *Route 20 Corridor: Urban Design Studies and Zoning Evaluations*, a March 2015 study prepared by The Cecil Group on behalf of the Sudbury Planning Board, specifically identifies the Project Site as a location particularly well-suited for retail and related uses.

As a redevelopment site, the Project Site provides an ideal location for the Proposed Grocery Store. The Proposed Grocery Store is compatible with the uses prevailing in the surrounding neighborhood, including the retail shops located immediately to the south of the Project Site across from Boston Post Road ("Sudbury Plaza"), and will be served by adequate parking, access, vehicular circulation, and utilities as documented in the materials submitted with this petition. Additionally, as the principal commercial corridor in the Town, Route 20 is an appropriate location for the Proposed Grocery Store in terms of surrounding land uses and vehicular access. Furthermore, the Proposed Grocery Store will serve as a convenient amenity both for the community and for the anticipated residential uses planned on the Project Site.

In addition, the Proposed Grocery Store and Signs are not detrimental to the neighborhood and do not significantly alter the character of the zoning district, rather they will enhance the prevailing industrial and commercial characteristic of the surrounding neighborhood by introducing a grocery store as a community amenity to initiate the redevelopment of the Project Site. This catalyst, in turn, will result in a more active and attractive pedestrian-oriented streetscape, generate new jobs and tax revenues, and encourage the further mixed-use development of the Route 20 Corridor, which is responsive to the Town's planning goals.

### C. Adequate and appropriate facilities will be provided for the proper operation of the proposed use.

Adequate and appropriate facilities will be provided for the proper operation of the Proposed Grocery Store and Signs. The proposed uses will incorporate first-class construction materials and design elements in compliance with all applicable building and health codes, replacing antiquated office and R&D facilities built by Raytheon in the 1950s through the 1980s, which are bordering on functional obsolescence and are grandfathered in many important respects in terms of building code and stormwater regulations. The Proposed Grocery Store will be professionally operated and maintained, and will provide adequate parking, loading, driving lanes, signage, wayfinding, lighting, landscaping, and adequate access for emergency vehicles so as to minimize potential hazards to patrons and pedestrians.

With respect to the proposed signs, all three signs will be installed as architecturally integrated elements of the exterior of the Proposed Grocery Store, with their mechanical elements hidden from plain view. As with the Proposed Grocery Store, the Signs will incorporate first-class construction materials and design elements in compliance with all applicable codes.

D. That the proposed use would not be detrimental or offensive to the adjoining zoning districts and neighboring properties due to the effects of lighting, odors, smoke, noise, sewage, refuse materials or other visual nuisances.

The Proposed Grocery Store and Signs will not be detrimental or offensive to the adjoining zoning districts and neighboring properties, nor will they constitute a nuisance. As discussed above, the proposed uses will incorporate high quality elements (including appropriate landscaping, lighting, signage, and other safety and security elements), and will be professionally operated and maintained in accordance with established business hours, thereby reducing any potential detrimental effects to adjoining properties.

Specifically, as shown on the Site Plans, the Proposed Grocery Store will provide adequate spacing and separation from surrounding properties, and exterior lighting has been designed to provide safe illumination while minimizing any impact on adjoining properties. As addressed in the attached traffic memorandum dated November 10, 2015, prepared by VHB (the "Traffic Memorandum"), the proposed uses will be served by adequate parking and will provide for safe and efficient vehicular circulation on the Project Site. Similarly, as addressed in the stormwater management memorandum, dated November 10, 2015, prepared by VHB (the "Stormwater Management Memorandum"), the proposed project will provide for improved water quality treatment in accordance with state and local requirements. In addition, there is adequate wastewater capacity in the existing on-site treatment plant to serve the Proposed Grocery Store.

With respect to the proposed signage program, the Signs have been designed in an integrated fashion with the Proposed Grocery Store's architecture and incorporate a design, scale, and materials suitable for a first-class retail development. The Signs will not have a detrimental impact on neighboring properties but, rather, will serve as an important identification and wayfinding tool for patrons of the Proposed Grocery Store as well as future land uses on the Project Site. Accordingly, granting the requested special permit will not be detrimental or offensive to the adjoining zoning districts and neighboring properties.

The Proposed Grocery Store will be the first step in the redevelopment of the Project Site. This important retail anchor tenant will serve as a catalyst to the development of a mix of uses on the Project Site and other benefits to the neighborhood and the Town. The Proposed Grocery Store will increase the vibrancy of its neighborhood, spark further new economic development, and create numerous local and regional jobs and tax revenues. Accordingly, the project's tangible benefits outweigh any burdens it could potentially impose on adjoining zoning districts and neighboring properties.

### E. That the proposed use would not cause undue traffic congestion in the immediate area.

The Proposed Grocery Store, with access afforded by Route 20, the Town's main commercial corridor, will not generate undue traffic on surrounding streets, nor will it pose a serious traffic hazard to the neighborhood. As addressed in the attached Traffic Memorandum, the Proposed Grocery Store will replace a portion of a large office and R&D facility on the Project Site, with a significant net reduction in average weekday peak hour trips. On the Project Site, the Proposed Grocery Store will be served by adequate parking, access, vehicular

circulation and will include appropriate driving lanes, striping, lighting, signage and other related safety and security elements that have been professionally engineered to be consistent with all relevant town, state, and federal regulations and other best practices. In addition, the Proposed Grocery Store will be professionally managed and maintained, thereby reducing any potential hazards to patrons, pedestrians, and drivers.

# II. IN ADDITION TO SATISFYING THE GENERAL CRITERIA FOR THE GRANT OF A SPECIAL PERMIT, THE PROPOSED GROCERY STORE SATISFIES THE SPECIFIC CRITERIA FOR THE GRANT OF A SIGN SPECIAL PERMIT UNDER SECTION 3290 OF THE ZONING BYLAW.

In addition to satisfying the general criteria for the grant of a special permit under Section 6220 of the Zoning Bylaw, the proposed Signs also satisfy the specific criteria for the grant of a Sign Special Permit. Pursuant to Section 3290 of the Zoning Bylaw, the Board of Appeals may issue Special Permits for signs other than as provided in Section 3200 of the Zoning Bylaw if it determines that: (a) the architecture of the building, the location of the building with reference to the street or the nature of the establishment is such that the sign should be permitted in the public interest; (b) the sign will not cause visual confusion, glare, or offensive lighting in the neighborhood; (c) the sign will not be a detriment to the surrounding area; (d) the sign will not significantly alter the character of the zoning district; (e) the sign will not interfere with traffic safety in the area; and (f) the sign will be consistent with the architecture of the building on the lot upon which the sign is to be located and of the surrounding area.

The proposed Signs satisfy each of these criteria.

## A. The architecture of the building, the location of the building with reference to the street or the nature of the establishment is such that the sign should be permitted in the public interest.

The Proposed Grocery Store will be set back more than 100 feet from Boston Post Road to the rear of the existing fire station. As a result, enhanced exterior signage is needed so that patrons can safely identify the Proposed Grocery Store from either direction in traveling along Boston Post Road. Similarly, the location of the proposed main entrance on Boston Post Road to the Proposed Grocery Store creates a need for a clear wayfinding reference to the Project Site's primary entrance, and a free-standing monument sign at that location would be in the public interest.

The proposed Signs have been designed so as to identify the Proposed Grocery Store's primary entrance. Employing high-quality materials typical of a first-class retail development, the proposed Signs will provide enhanced wayfinding while fitting within the existing streetscape and scale and architecture of the Proposed Grocery Store, as more particularly depicted on the Exterior Wall Sign Renderings. Accordingly, the proposed Signs further the public interest by enhancing safety and convenience.

### B. The sign will not cause visual confusion, glare, or offensive lighting in the neighborhood.

The proposed Signs will not cause visual confusion, glare, or offensive lighting in the neighborhood. As depicted on the Exterior Wall Sign Renderings, the Signs will use colors and fonts that clearly identify the proposed uses without causing undue glare or visual offense. The Signs will be internal illuminated to provide appropriate nighttime visibility. In addition, the Signs are intended principally as important identification and wayfinding elements for patrons to the Proposed Grocery Store and, in this way, they are designed to eliminate confusion and improve vehicular safety and convenience.

### C. The sign will not be a detriment to the surrounding area.

The proposed Signs will not be a detriment to the surrounding area; rather they will enhance safety and convenience and will compliment the Proposed Grocery Store's architecture, producing an integrated aesthetic. In addition, the proposed Signs will employ industry standard materials that comply with state building code requirements and are typical of first-class retail developments, providing enhanced wayfinding and promoting safety and convenience.

#### D. The sign will not significantly alter the character of the zoning district.

The proposed Signs will not significantly alter the character of the zoning district. The Project Site is located in the LID, a district dominated by commercial and industrial uses and in which retail and commercial signage is ubiquitous. The Signs have been designed to integrate with the Proposed Grocery Store as a coherent whole, and will complement the numerous other illumined retail signs that exist in the Project Site's immediate vicinity, most notably at the "Sudbury Plaza" shopping center directly across the Project Site.

### E. The sign will not interfere with traffic safety in the area.

The proposed Signs will not interfere with traffic safety in the area. The proposed Signs will employ shapes, colors, content, and fonts materially distinct from those used by traffic signs, signals, and other traffic control devices, thereby ensuring that the proposed Signs will not cause visual confusion or pose a threat to navigation. In addition, as previously noted, the proposed Signs will be located so as to provide enhanced wayfinding and guidance for motorists, reducing motorist uncertainty and confusion, and enhancing traffic safety in the area.

### F. The sign will be consistent with the architecture of the building on the lot upon which the sign is to be located and of the surrounding area.

As addressed above, the proposed Signs will incorporate first-class construction materials and design elements that harmonize seamlessly with the Proposed Grocery Store's architecture, producing an integrated aesthetic. The proposed Signs will also complement the numerous other illumined retail signs that exist in the Project Site's immediate vicinity, including those found at the "Sudbury Plaza" shopping center directly across the Project Site. Accordingly, the Signs will be consistent with the architecture of the Proposed Grocery Store and of the surrounding area.

#### CONCLUSIONS AND REQUESTED FINDINGS

For the foregoing reasons, the Petitioner respectfully submits that the Board of Appeals, acting under its discretionary power, should grant the requested Major Commercial Project Special Permit, three Sign Special Permits for the proposed Signs, and such other relief as the Board may deem necessary and proper.

Specifically, the Petitioner respectfully submits that the Board of Appeals should make the following findings:

### A. With respect to the Proposed Grocery Store and the three Signs, in accordance with Section 6220 of the Zoning Bylaw:

- (a) that the use is in harmony with the general purpose and intent of the bylaw;
- (b) that the use is in an appropriate location and is not detrimental to the neighborhood and does not significantly alter the character of the zoning district;
- (c) that adequate and appropriate facilities will be provided for the proper operation of the proposed use;
- (d) that the proposed use would not be detrimental or offensive to the adjoining zoning districts and neighboring properties due to the effects of lighting, odors, smoke, noise, sewage, refuse materials or other visual nuisances; and
- (e) that the proposed use would not cause undue traffic congestion in the immediate area.

### B. With respect to the three Signs, in accordance with Section 3290 of the Zoning Bylaw:

- (a) the architecture of the building, the location of the building with reference to the street or the nature of the establishment is such that the sign should be permitted in the public interest;
- (b) the sign will not cause visual confusion, glare, or offensive lighting in the neighborhood;
- (c) the sign will not be a detriment to the surrounding area;
- (d) the sign will not significantly alter the character of the zoning district;
- (e) the sign will not interfere with traffic safety in the area; and
- (f) the sign will be consistent with the architecture of the building on the lot upon which the sign is to be located and of the surrounding area.



To: Town of Sudbury Planning Board Date: November 10, 2015 Memorandum

Project #: 13125.00

From: Vinod Kalikiri, PE, PTOE Re: Proposed Grocery Store at Meadow Walk Sudbury

526-528 Boston Post Road, Sudbury, Massachusetts

TRAFFIC MEMORANDUM

On behalf of BPR Development LLC an affiliate of National Development (the Proponent), VHB has prepared this memorandum to summarize the traffic characteristics of the existing 561,000 square foot (sf) office and R&D facility on an approximately 50-acre parcel at 526-528 Boston Post Road (the "Site") and the planned initial phase of development on the Site of the demolition of the existing improvements and the construction of a proposed 45,000± square foot grocery store (the "Project"). The memorandum also includes a discussion of the planned access improvements for the Site that would enable not only the initial grocery store phase of the overall project but also the remaining development phases, the specifics of which are still being developed in conjunction with a zoning amendment being considered by the Town of Sudbury. A detailed traffic impact and access study (TIAS) for the full development program is currently being prepared in conformance with the Massachusetts Department of Transportation (MassDOT) guidelines for inclusion in an upcoming Massachusetts Environmental Policy Act (MEPA) filing. The TIAS will also be submitted to the Town of Sudbury for review concurrent with the MEPA filing. This memorandum is provided to support the Planning Board's initial review of the grocery store plans and associated permit applications while the detailed TIAS is prepared for the entire Project.

Overall, replacement of the existing 561,000 sf office and R&D facility with the initial development phase of a 45,000 sf grocery store use would result in an initial reduction of traffic which in turn would have a beneficial effect on traffic operations. Additionally, the access improvements planned as part of the initial development phase includes the construction of a fully actuated traffic signal control along with geometric improvements which will result in safer and more efficient vehicular and pedestrian operations for not only the initial grocery use but also the future development phases. Detailed capacity analysis and supporting analytical data for the full redevelopment of the Site and the proposed traffic improvements will be included in the forthcoming TIAS.

### **Project Background**

Greg Russell, PE

The Site is currently occupied by an approximately 561,000 sf Raytheon facility that includes a mix of office and R&D space, supported by approximately 2,040 parking spaces. Three unsignalized driveways serve the Site. The easterly driveway serves as the primary access and egress. A police officer assists traffic exiting this driveway during the evening peak period on weekdays. A second full-access driveway is located along the west edge of the property. The third driveway is limited to "right-out only" and is located in between the other two driveways. An unsignalized pedestrian crosswalk exists between the Site and Sudbury Plaza located on the south side of Route 20. The Site has direct access onto Boston Post Road. Therefore the Project's traffic impacts will be subject to the review of Massachusetts Department of Transportation (MassDOT) in addition to the on-going review by the Town of Sudbury.

As part of the overall redevelopment, all existing buildings on the Site (with the exception of approximately 15,000± sf of support space) would be eventually demolished and a new mixed-use development comprising of the components noted below would be constructed in multiple construction phases. The subject of this memorandum is the initial implementation phase of the overall project which includes a 45,000± sf grocery store and supporting parking and

101 Walnut Street PO Box 9151 Watertown, MA 02472-4026 P 617.924.1770

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circulation improvements as well as access improvements on Route 20 that would eventually support the full redevelopment of the Site.

As currently envisioned, the full build-out of the Site will include the following components:

- > 75,000 to 80,000 sf of mixed retail (including the subject 45,000 ± sf grocery store);
- > A residential development with 250 apartment units;
- An active adult (age-restricted) residential development with up to 60 housing units; and
- An assisted living/memory care facility with up to 54 beds.

### **MassDOT Scoping Process**

Since the Site abuts a state highway and exceeds certain traffic thresholds, redevelopment of the Site and any access improvements on Route 20 will require an Access Permit from MassDOT. Prior to MassDOT issuing an Access Permit for any phase of the development, the Project will also need to undergo MEPA review. Accordingly, and concurrent with pursuing the local review process, the Proponent has also initiated preparation of a filing for MEPA review. As a precursor to the MEPA filing, a Transportation Scoping Letter (TSL) was submitted to MassDOT on October 5, 2015 to outline the scope of the traffic study and the analysis methodology for the overall development that will be presented in the MEPA filing. MassDOT provided their written response on October 20, 2015, summarily concurring with the proposed study methodology for the bull build-out. As noted earlier, this memorandum has been prepared to support the Planning Board's initial review of the grocery store plans and associated permit applications while the detailed TIAS is prepared for the entire Project in conformance with the MassDOT scoping response.

#### **Traffic Volumes**

Traffic volumes for a majority of the study area locations identified in the MassDOT scope confirmation letter were collected in May 2015. Data collection at the remaining locations is scheduled to be completed during the second week of November 2015. All of the count data will be included in the forthcoming TIAS document that will be included in the MEPA filing and provided to the town at that time. Peak hour turning movement and classification (TMC) counts are collected during the weekday morning from 7:00 AM to 9:00 AM, weekday evening from 4:00 PM to 6:00 PM, and Saturday midday from 11:00 AM to 2 PM.

In addition to the TMC data, an automatic traffic recorder (ATR) count was conducted on Route 20 in May 2015. The ATR count data is summarized below in Table 1.

The ATR count indicates that on a typical weekday, approximately 20,500 vehicles per day (vpd) travel along Boston Post Road, adjacent to the Site. The traffic volumes along Boston Post Road reflect a typical commuter travel pattern with heavier volumes in the eastbound direction during the weekday morning and heavier in the westbound direction during the weekday evening. Traffic volumes on a typical Saturday is approximately 17,600 vpd. Saturday midday peak hour traffic volume is more directionally balanced than during the weekday commuter peak hours.

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Table 1: 2015 Daily Traffic Volume on Boston Post Road

	Daily <sup>a</sup>		day Morn eak Hour	ing		day Even eak Hour	ing	Daily <sup>a</sup>		rday Mido eak Hour	day
Location	Weekday	Volume <sup>b</sup>	K Factor <sup>c</sup>	Dir. Dist. <sup>d</sup>	Volume	K Factor	Dir. Dist.	Saturday	Volume	K Factor	Dir. Dist.
Route 20 West of Highland Avenue	20,500	1,275	6%	67% EB	1,585	8%	65% WB	17,600	1,430	8%	56% WB

Source: Precision Data Industries, LLC Based on automatic traffic recorder (ATR) counts conducted in May 2015

- a average daily traffic (ADT) volume expressed in vehicles per day
- b peak period traffic volumes expressed in vehicles per hour
- c percent of daily traffic that occurs during the peak period
- d directional distribution of peak period traffic

Note: peak hours do not necessarily coincide with the peak hours of the individual intersection turning movement counts

### **Crash history**

To identify crash trends along the Site frontage, the most current crash data were obtained from MassDOT for a five-year period (2009 through 2013). A summary of the data is presented in Table 2.

According to MassDOT, the year 2010 District 3 average crash rate is 0.66 for unsignalized intersections. The crash rates represent the number of reported crashes for every million vehicles that pass through an intersection. As shown in Table 2, three of the four locations included in the table have crash rates that are currently below the respective District 3 averages. The intersection of Route 20 at Highland Avenue and the Sudbury Plaza west driveway has an average crash rate of 0.80, which is higher than the District 3 average. It is expected that the proposed access improvements for the Project will result in a significant improvement in both the operations of the side street approaches as well as the safety characteristics of this intersection.

The TIAS that will be part of the MEPA filing will include crash data for other study locations reviewed as part of the full build-out analysis of the Project.

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Table 2: Vehicle Crash Summary (2009-2013)

	Existing Site Driveway (West) at Route 20	Highland Avenue and Sudbury Plaza Driveway (West) at Route 20	Sudbury Plaza Driveway (East) at Route 20	Existing Site Driveway (East) at Route 20
Year				
2009	0	11	1	1
2010	0	6	0	0
2011	0	6	0	0
2012	0	3	0	5
<u>2013</u>	<u>0</u>	<u>5</u>	<u>1</u>	<u>0</u>
Total	0	31	2	6
Collision Type				
Angle	0	11	0	1
Rear-end	0	11	1	4
Sideswipe, opposite direction	0	2	1	1
Single vehicle crash	0	5	0	0
Unknown	0	1	0	0
Not reported	0	1	0	0
Crash Severity				
Fatal injury	0	0	0	0
Non-fatal injury	0	9	1	1
Property damage only (none injured)	0	21	1	5
Not Reported	0	1	0	0
Time of Day				
Weekday, 7:00 AM - 9:00 AM	0	2	0	1
Weekday, 4:00 PM - 6:00 PM	0	9	1	2
Saturday, 11:00 AM - 2:00 PM	0	2	0	0
Weekday, other time	0	15	1	3
Weekend, other time	0	3	0	0
Pavement Conditions				
Dry	0	21	2	4
Wet	0	7	0	1
Ice	0	0	0	1
Sand, mud, dirt, oil, gravel	0	2	0	0
Not reported	0	1	0	0
Non Motorist (Bike, Pedestrian)	0	2	0	0
MassDOT Crash Rates	0.00	0.80	0.05	0.16

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### **Sight Distance Analysis**

A sight distance analysis, in conformance with guidelines of the American Association of State Highway and Transportation Officials (AASHTO)<sup>1</sup> was performed at the unsignalized Site driveway that will be maintained. The analysis is discussed below.

Stopping Sight Distance (SSD) is the distance required for a vehicle approaching an intersection from either direction to perceive, react and come to a complete stop before colliding with an object in the road, in this case the exiting vehicle from a driveway. In this respect, SSD can be considered as the minimum visibility criterion for the safe operation of an unsignalized intersection.

Intersection Sight Distance (ISD) is based on the time required for perception, reaction and completion of the desired critical exiting maneuver (typically, a left turn) once the driver on a minor street approach (or a driveway) decides to execute the maneuver. Calculation for the critical ISD include the time to (1) turn left, and to clear the near half of the intersection without conflicting with the vehicles approaching from the left; and (2) upon turning left, to accelerate to the operating speed on the roadway without causing approaching vehicles on the main road to unduly reduce their speed. In this context, ISD can be considered as a desirable visibility criterion for the operation of an unsignalized intersection.

An additional criterion that is used especially in built-up areas with sight line constraints in proximity to driveways, is the use of "minimum ISD". This essentially involves the comparison of the available ISD to the SSD measurement to ensure that if the available ISD is not sufficient to cause approaching vehicles on the main road to only reduce their speed (as in the case of desirable ISD), that it is at least adequate for the approaching vehicle to come to a stop at the driveway, if necessary.

Table 3 summarizes the sight distance analysis for the westerly Site driveway located in proximity to the westerly property line, approximately 550 feet west of Highland Avenue.

Table 3: Sight Distance Analysis: Route 20 at West Site Driveway

Intersecting	Stoppin	g Sight Distai	nce (SSD)		Intersection	Sight Distance	e (ISD)
Street	Traveling	Required <sup>a</sup>	Measured <sup>c</sup>	Looking	Desired <sup>a</sup>	Minimum <sup>b</sup>	Measured <sup>c</sup>
Route 20	Westbound	290′	>500′	Right	430′	290'	445′
Route 20	Eastbound	290′	>500′	Left	430′	290'	>500

- a calculated sight distance, expressed in feet, based on observed travel speeds of 39 mph
- b Minimum ISD = SSD
- c measured sight distance, expressed in feet

<sup>1</sup> A Policy on the Geometric Design of Highways and Streets; American Association of State Highway and Transportation Officials; Washington, D.C.; 2004.

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Table 3 indicates that adequate SSD and ISD are available for traffic approaching the unsignalized Site drive intersection along Route 20 in both the eastbound and westbound directions. Field observations indicate that when looking to the right, the view is somewhat obscured by overgrown vegetation located the back of the sidewalk. Selective trimming/pruning of this vegetation would result in the further improved ISD in that direction. Based on sight distance considerations, no turn restrictions will be necessary for the operation of the driveway. The Project team will continue to work with the Town of Sudbury's Engineering Department and Fire Department to determine an appropriate configuration for the westerly Site driveway (with the possibility of restricting left turns exiting the driveway if the Town concludes that it is a more desirable configuration) based on other considerations such as the future availability of a fully signalized driveway to the east of the unsignalized driveway, vehicle queuing, street light conditions, etc.

### Trip Generation (Initial Development Phase)

Raytheon has begun its relocation process and plans to wind down its operations over the next two years. If Proponent did not construct the proposed mixed-use Project after Raytheon vacates the property, other office/R&D tenant(s) would likely be identified to move in and use the entire 561,000 sf space and 2,040 parking spaces that currently exist on the Site. Therefore, as discussed in the MassDOT TSL, for the purpose of calculating the increase in daily trips under the future conditions when compared to the current conditions, estimated trips for the existing office/R&D space were calculated using Institute of Transportation Engineers (ITE) Trip Generation Manual<sup>2</sup> for comparison to the future trip estimates. Based on information provided by the Proponent, approximately 75% of the current space on the Site is categorized as office, 20% as R&D and the remaining 5% as industrial/manufacturing uses. The ITE land use codes (LUC) used for the existing conditions trip generation estimates include ITE LUC 710 (General Office Building), ITE LUC 760 (R&D) and LUC 140 (Manufacturing).

For comparison purposes future conditions trip generation estimates for the proposed grocery store is based on ITE LUC 850 (Supermarket). The peak hour trip generation summary is presented in Table 4.

Using ITE trip generation rates, the peak hour trip generation estimates in Table 4 demonstrates that, compared to the reuse of the existing office and R&D space on the Site, the proposed grocery store use represents a substantial reduction in peak hour, especially during the peak hours on weekdays. Also, as shown in the table, increase in traffic during the Saturday midday peak hour is expected to be relatively nominal.

<sup>2 &</sup>lt;u>Trip Generation</u>: Ninth Edition; Institute of Transportation Engineers (ITE); Washington D.C.; 2012

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Table 4: Peak Hour Trip Generation Summary<sup>a</sup>

	EXISTING	INITI	AL DEVELOPMENT PI	HASE	DIFFERENCE
Time Period	Re-use of existing space	Grocery Store	Pass-By Trips <sup>b</sup>	New Trips	Net New Trips
ITE LUC Size Weekday Morning	710 + 760 + 140 561,000± sf	850 45,000± sf			
Enter Exit Total	667 <u>101</u> 768	95 <u>58</u> 153	25 <u>25</u> 50	70 <u>33</u> 103	-597 <u>-68</u> -665
Weekday Evening Enter <u>Exit</u> Total	124 <u>587</u> 711	220 <u>211</u> 431	75 <u>75</u> 150	145 <u>136</u> 281	21 <u>-451</u> -430
Saturday Midday Enter <u>Exit</u> Total	117 <u>99</u> 216	292 <u>280</u> 572	105 <u>105</u> 210	187 <u>175</u> 362	70 <u>76</u> 146

a vehicle trips per hour

### ITE vs. Empirical Peak Hour Trip Generation Rates for retail Uses

It is noted that since the initial development phase only includes a grocery store, future trip generation estimates in Table 4 were developed based on ITE guidelines for the purpose of preparing this memorandum. However, during the MassDOT scoping process, MassDOT acknowledged that actual trip generation rates of retail uses in the region have been found to be consistently lower than ITE estimates. For this reason, MassDOT agreed that trip generation for the retail component of the overall project can be estimated using empirical data collected at comparable existing retail uses. VHB is currently in the process of collecting traffic count data at existing supermarket anchored retail plazas in the area. The TIAS that will be included in the MEPA filing will be based on empirical trip rates for the retail use and ITE rates for all other uses as agreed to by MassDOT.

### **Traffic Operations Analysis**

The full TIAS that is currently under preparation will include detailed capacity analysis results for all study locations under the full build-out condition. For the initial development phase that is discussed in this memorandum, it can be

b Based on a pass-by traffic of 36 percent

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expected that during the weekday morning and evening peak periods, traffic operations with just the grocery store would be better than the fully occupied existing use due to the reduction vehicular traffic noted in Table 4.

### **Proposed Access Improvements**

A Site Plan for the initial development phase of the Project is included in the attachment to this memorandum. The plan also shows a conceptual layout of the intersection improvement for the primary Site driveway. As shown in the Site Plan, the existing westerly driveway will be maintained at its current location, albeit modified to accommodate truck turning maneuvers. The other two driveways will be eliminated and replaced by a single new driveway that aligns with the existing westerly driveway for Sudbury Plaza.

It is noted that the Proponent is currently in conversations with the owner of Sudbury Plaza to determine the exact location of the signalized intersection. While the conversations regarding the exact location of the traffic signal are still on-going, it is expected that the final configuration of the intersection and its control will generally be consistent with the features depicted in attached Site Plan. Specifically, the proposed signalized intersection will have the following features.

- > The signal will be installed at a location on Route 20 that will serve both the Site and Sudbury Plaza.
- ➤ Boston Post Road will be widened to create left-turn lane pockets in both the eastbound and westbound directions. The widened section of roadway will have a three lane cross-section one through lane in each direction and a left turn lane in either direction.
- Reconfiguration of a portion of the Sudbury Plaza parking lot may be required to ensure that the plaza driveway can adequately serve as the fourth leg of the signalized intersection.
- At the signalized location shown in the concept, the Highland Avenue approach to Route 20 will be integrated into the signal operations, with a dedicated, actuated signal phase serving that roadway.
- > A push button actuated pedestrian crossing will be provided across Route 20.
- The existing sidewalk on the north side of Route 20 will be widened to six feet.

A review of the intersection traffic volumes, available crash data and the operational configuration of the signal control indicate that a new traffic signal at this location and the proposed geometry will serve multiple purposes. It will,

- Provide a long desired traffic signal in this section of Route 20 which enhances the redevelopment potential of a very valuable, visible and significant property in the Town of Sudbury;
- > Enhance the operations of an existing major retail plaza in town by incorporating its driveway into the new traffic signal;
- Limit the effect of turning traffic on the through traffic flow on Boston Post Road by means of exclusive turn lanes;
- Minimize vehicular backup and congestion on the Site;

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- > Help to reduce angle crashes for vehicles entering and exiting the both the Site and Sudbury Plaza driveways;
- > Provide safe pedestrian access between the Site and Sudbury Plaza; and,
- > As noted below, enables the consideration of a preemption traffic control for the fire station.

Sudbury Fire Department has expressed a desire to fulfill its long term goal of implementing preemption traffic signal control on Route 20, in front of the fire station that is located along the Site frontage. The proximity of the fire station to the proposed new traffic signal at the site driveway requires that the fire station preemption signal be integrated into the proposed driveway signal for the Project. The specific details of how the preemption can be accommodated into the overall intersection design will be worked out with the fire department during later stages of design development.

As the design progresses and advances to the 25% MassDOT submittal, the geometry will be optimized further to minimize roadside impacts while balancing the need to provide an enhanced roadway cross-section.

### **Signal Warrant Analysis**

Preliminary traffic signal Warrant analyses were prepared for the initial development phase (i.e., demolition of the existing improvements and the construction of a 45,000± sf grocery store) to determine if the projected traffic volumes at the intersection exceed the thresholds for the installation of a traffic signal. The Manual on Uniform Traffic Control Devices<sup>3</sup> (MUTCD) is the established standard for Warrant analyses. The Warrants consider the roadway geometry, traffic volume entering the intersection, and speeds. Specifically, the traffic projections were evaluated for following three volume-based Warrants:

- ➤ Warrant 1 (Eight Hour Vehicular Volume) Warrant 1 is based on any eight hours of a day where the traffic entering the intersection reaches a threshold that warrants considering signal control.
- **Warrant 2 (Four Hour Vehicular Volume) –** Warrant 2 is for any four hours of a day.
- Warrant 3 (Peak Hour) Warrant 3 is for the peak hour of any given day.

The preliminary traffic signal Warrant analysis worksheet included in the attachment to this memorandum indicates that the projected future intersection approach traffic volumes under the initial development phase would satisfy all three traffic volume-based Warrants for the installation of a traffic signal.

#### Conclusion

The information presented in this memorandum supports the following findings.

The initial development phase of the Site (a 45,000± sf grocery store) would generate less traffic during the critical weekday peak hours when compared to a fully occupied 561,000± sf existing office and R&D space.

<sup>&</sup>lt;sup>3</sup> Manual on Uniform Traffic Control Devices, Federal Highway Administration, Washington DC, 2003.

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- > The redevelopment of the Site will involve the implementation of a long desired traffic signal control in the section of Route 20 which enhances the redevelopment potential of a very valuable, visible and significant property in the Town of Sudbury while enhancing the operations of Sudbury Plaza by incorporating one of its driveways into the traffic signal.
- > The new traffic signal enables the consideration of a preemption traffic control for the nearby fire station.

A detailed traffic impact and access study is currently being prepared in conformance with the Massachusetts Department of Transportation (MassDOT) guidelines for inclusion in an upcoming MEPA filing. The TIAS will also be submitted to the Town of Sudbury for review concurrent with the MEPA filing. This memorandum is provided to support the Planning Board's initial review of the grocery store plans and associated permit applications while the detailed TIAS is prepared for the entire Project.

#### **ATTACHMENTS**

- > ATR count sheets
- Crash data
- > Sight distance worksheet
- > Trip generation worksheets
- Traffic signal warrant analysis
- Site Plan (11x17)

# ATTACHMENT A AUTOMATIC TRAFFIC RECORDER (ATR) DATA



P.O.Box 301 Berlin, MA 01503 Office: 508.481.3999 Fax: 508.545.1234 Email: datarequests@pdillc.com 154459 A Volume Site Code: TBA

Start		WB				EB				Comb	in		28-May-	
Time	A.M.		P.M.		A.M.		P.M.		A.M.	ed	P.M.		15 Thu	
12:00	9		191		5		126		14		317	,	1110	
12:15	15		144		7		150		22		294			
12:30	11		156		4		150		15		306			
12:45	11	46	165	656	1	17	138	564	12	63	303	1220		
01:00	9	70	142	000	3	.,	135	00-1	12	00	277	1220		
01:15	8		173		2		145		10		318			
01:30	1		177		3		136		4		313			
01:45	4	22	174	666	3	11	141	557	7	33	315	1223		
02:00	6	22	172	000	3		124	551	9	55	296	1220		
02:00	6		177		2		162		8		339			
02:13	1		189		2		154		3		343			
02:30	0	13	187	725	6	13	156	596	6	26	343	1321		
03:00		13		123		13		390		20		1321		
03.00	3		223		5 5		124		8		347			
03:15	2 2		205		5		142		7		347			
03:30	2	_	243	000	4	00	124	500	6	00	367	4.440		
03:45	2	9	237	908	6	20	142	532	8	29	379	1440		
04:00	1		255		8		134		9		389			
04:15	4		269		13		130		17		399			
04:30	4	00	234	000	16		148	550	20		382	4544		
04:45	11	20	230	988	20	57	141	553	31	77	371	1541		
05:00	9		246		38		132		47		378			
05:15	13		283		68		126		81		409			
05:30	19		252		105		134		124		386			
05:45	24	65	257	1038	140	351	156	548	164	416	413	1586		
06:00	22		239		198		131		220		370			
06:15	55		257		221		114		276		371			
06:30	55		239		264		115		319		354			
06:45	87	219	236	971	249	932	99	459	336	1151	335	1430		
07:00	80		217		248		90		328		307			
07:15	75		203		205		100		280		303			
07:30	65		196		210		70		275		266			
07:45	58	278	138	754	218	881	81	341	276	1159	219	1095		
08:00	86		172		233		101		319		273			
08:15	94		133		221		65		315		198			
08:30	123		121		191		56		314		177			
08:45	104	407	114	540	220	865	59	281	324	1272	173	821		
09:00	105		126		219		52		324		178			
09:15	121		89		182		39		303		128			
09:30	124		84		181		51		305		135			
09:45	122	472	77	376	153	735	30	172	275	1207	107	548		
10:00	128		62		160		30		288		92			
10:15	128		65		180		36		308		101			
10:30	115		44		145		26		260		70			
10:45	128	499	38	209	145	630	23	115	273	1129	61	324		
11:00	148		46		136		19	-	284	-	65			
11:15	161		28		120		11		281		39			
11:30	176		22		133		13		309		35			
11:45	177	662	21	117	145	534	17	60	322	1196	38	177		
Total	2712		7948		5046		4778		7758		12726			
Percent	35.0%		62.5%		65.0%		37.5%				0			
ay Total		106	60			982	24			204	84			
Peak	11:00	_	05:00	_	06:15	_	02:00	_	08:15	_	05:00	_	-	
Vol.	662	-	1038	-	982	-	596	-	1277	-	1586	-	-	



P.O. Box 301 Berlin, MA 01503 Office: 508.481.3999 Fax: 508.545.1234 Email: datarequests@pdillc.com 154459 A Volume Site Code: TBA

Start		WB				EB				Comb		,	30-May-	
Time	A.M.		P.M.		A.M.		P.M.		A.M.	ed	P.M.		15 Sat	
12:00	27	-	216		12		155		39		371		Jai	
12:15	15		196		9		153		24		349			
12:30	19		199		6		148		25		347			
12:45	18	79	204	815	8	35	154	610	26	114	358	1425		
01:00	18	7.5	193	010	4	55	145	010	22	117	338	1420		
01:15	15		184		5		142		20		326			
01:30	17		167		5		148		22		315			
01:45	4	54	183	727	8	22	143	578	12	76	326	1305		
02:00	10	34	209	121	0	22	167	376	10	70	376	1303		
					7									
02:15 02:30	4		179 180		4		134		11		313			
02:45	9 7	30	183	751	4	15	175	630	13 11	45	355 337	1381		
		30		751		15	154	630		45		1301		
03:00	10		198		1		163		11		361			
03:15	2		181		7		143		9		324			
03:30	3	40	181	700	5	4-7	136	500	8	0.5	317	4000		
03:45	3	18	169	729	4	17	151	593	7	35	320	1322		
04:00	8		173		3		122		11		295			
04:15	5		177		4		144		9		321			
04:30	6		155		6		133		12		288			
04:45	0	19	176	681	12	25	136	535	12	44	312	1216		
05:00	4		168		12		112		16		280			
05:15	7		134		14		118		21		252			
05:30	11		161		35		109		46		270			
05:45	8	30	148	611	48	109	116	455	56	139	264	1066		
06:00	19		145		43		107		62		252			
06:15	23		153		64		115		87		268			
06:30	25		118		118		120		143		238			
06:45	41	108	127	543	110	335	113	455	151	443	240	998		
07:00	35		138		65		100		100		238			
07:15	55		111		102		94		157		205			
07:30	37		108		129		82		166		190			
07:45	78	205	90	447	136	432	80	356	214	637	170	803		
08:00	78		103		118		73		196		176			
08:15	86		90		95		59		181		149			
08:30	86		112		138		74		224		186			
08:45	114	364	111	416	145	496	69	275	259	860	180	691		
09:00	130		98		136		64		266		162			
09:15	109		96		176		59		285		155			
09:30	132		91		178		62		310		153			
09:45	133	504	61	346	163	653	45	230	296	1157	106	576		
10:00	127		79	2.0	147		42		274		121	•		
10:15	130		76		163		31		293		107			
10:30	124		49		180		24		304		73			
10:45	167	548	42	246	180	670	36	133	347	1218	78	379		
11:00	178	5-10	46	10	164	3, 0	29	.00	342		75	010		
11:15	182		43		157		18		339		61			
11:30	201		41		163		23		364		64			
11:45	187	748	30	160	157	641	14	84	344	1389	44	244		
Total	2707	7 40	6472	100	3450	U <del>-1</del> 1	4934	04	6157	1303	11406	477		
Percent	44.0%		56.7%		56.0%		43.3%		0137		11400			
Day Total		917	79			838	84			175	663			
Peak	11:00		12:00	_	10:15		02:30		10.45	_	12:00		_	_
Vol.	748	-	12:00 815	-	687	-	635	-	10:45 1392	-	1425	-	-	-
P.H.F.	0.930	-	0.943	-	0.954	-	0.907	-	0.956	-	0.960	-	-	-
1 .11.1 .	0.000		0.040		0.004		0.001		0.000		0.000			



P.O.Box 301 Berlin, MA 01503 Office: 508.481.3999 Fax: 508.545.1234 Email: datarequests@pdillc.com 154459 A Speed Site Code: TBA

WB								arequests@pdi							Site Ct	ue. IDA
Start	1	15	20	25	30	35	40	45	50	55	60	65	70	Total	85th	Ave
Time	14	19	24	29	34	39	44	49	54	59	64	69	9999	Total	% ile	Speed
05/28/		- 10			<u> </u>				<u> </u>	- 00		- 00	0000		70 110	Орсса
15	0	0	1	0	13	26	6	0	0	0	0	0	0	46	38	36
01:00	0	0	1	4	7	6	3	0	1	0	0	0	0	22	40	34
02:00	0	0	0	0	1	8	2	2	0	0	0	0	0	13	44	39
03:00	0	0	0	0	6	2	1	0	0	0	0	0	0	9	38	34
04:00	0	0	0	1	7	6	6	0	0	0	0	0	0	20	41	36
05:00	0	0	3	1	6	27	27	1	0	0	0	0	0	65	42	38
06:00	0	0	12	12	54	107	34	0	0	0	0	0	0	219	39	35
07:00	1	5	100	45	71	44	11	1	0	0	0	0	0	278	35	28
08:00	0	2	65	44	141	131	23	0	1	0	0	0	0	407	37	32
09:00	0	2	25	73	172	178	22	0	0	0	0	0	0	472	37	33
10:00	0	1	33	91	184	163	25	2	0	0	0	0	0	499	37	33
11:00	0	8	33	128	281	183	27	2	0	0	0	0	0	662	37	32
12 PM	0	7	37	137	300	155	19	1	0	0	0	0	0	656	36	32
13:00	4	5	43	126	302	164	21	1	0	0	0	0	0	666	36	32
14:00	0	6	48	133	318	199	18	2	1	0	0	0	0	725	36	32
15:00	0	5	70	242	374	200	17	0	0	0	0	0	0	908	36	31
16:00	0	7	122	429	369	58	3	0	0	0	0	0	0	988	32	29
17:00	0	2	79	380	483	88	6	0	0	0	0	0	0	1038	33	30
18:00	0	3	63	299	457	140	9	0	0	0	0	0	0	971	34	31
19:00	0	1	36	122	315	238	42	0	0	0	0	0	0	754	37	33
20:00	0	1	21	44	262	190	20	2	0	0	0	0	0	540	37	33
21:00	0	2	20	36	177	130	9	1	1	0	0	0	0	376	37	33
22:00	0	2	10	15	71	95	15	1	0	0	0	0	0	209	38	34
23:00	0 5	60	828	2376	40 4411	2585	373	<u>2</u> 18	0 4	0	0	0	0	117 10660	38	34_
Total %	0.0%	0.6%	0∠0 7.8%	2376	41.4%	2363	3.5%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	10000		
AM										0.0%	0.0%	0.0%	0.0%			
Peak	07:00	11:00	07:00	11:00	11:00	11:00	06:00	02:00	01:00					11:00		
Vol.	1	8	100	128	281	183	34	2	1					662		
PM	<u>'</u> _									-						
Peak	13:00	12:00	16:00	16:00	17:00	19:00	19:00	14:00	14:00					17:00		
Vol.	4	7	122	429	483	238	42	2	1					1038		

Stats

15th Percentile: 25 MPH 50th Percentile: 31 MPH 85th Percentile: 36 MPH 95th Percentile: 38 MPH

Mean Speed(Average): 32 MPH 10 MPH Pace Speed: 30-39 MPH Number in Pace: 6996 Percent in Pace: 65.6%

Number of Vehicles > 35 MPH: 2463 Percent of Vehicles > 35 MPH: 23.1%



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WB								arequests@pdi							Site Ct	ue. IDA
Start	1	15	20	25	30	35	40	45	50	55	60	65	70	Total	85th	Ave
Time	14	19	24	29	34	39	44	49	54	59	64	69	9999	rotai	% ile	Speed
05/30/															70 110	Ороса
15	0	1	3	10	27	33	5	0	0	0	0	0	0	79	37	34
01:00	0	1	8	2	17	21	5	0	0	0	0	0	0	54	38	33
02:00	0	0	3	3	6	11	7	0	0	0	0	0	0	30	40	35
03:00	0	0	1	1	4	6	4	2	0	0	0	0	0	18	43	37
04:00	0	0	0	1	6	11	1	0	0	0	0	0	0	19	38	35
05:00	0	0	0	0	1	16	12	1	0	0	0	0	0	30	42	39
06:00	0	1	3	5	31	50	14	4	0	0	0	0	0	108	39	36
07:00	0	2	7	10	47	101	37	1	0	0	0	0	0	205	39	36
08:00	0	3	19	25	108	163	45	1	0	0	0	0	0	364	38	35
09:00	0	6	41	78	190	161	27	0	0	0	1	0	0	504	37	32
10:00	0	4	47	108	192	167	28	2	0	0	0	0	0	548	37	32
11:00	0	1	50	204	321	160	12	0	0	0	0	0	0	748	35	31
12 PM	0	9	65	234	315	171	19	2	0	0	0	0	0	815	36	31
13:00	0	2	37	102	305	237	42	2	0	0	0	0	0	727	37	33
14:00	0	1	43	129	324	224	27	1	2	0	0	0	0	751	37	32
15:00	0	6	50	110	281	249	32	1	0	0	0	0	0	729	37	33
16:00	0	2	24	66	255	288	43	3	0	0	0	0	0	681	38	34
17:00	0	0	29	67	248	233	32	2	0	0	0	0	0	611	37	33
18:00	0	3	27	51	199	225	37	1	0	0	0	0	0	543	38	34
19:00	0	0	21	30	151	199	44	2	0	0	0	0	0	447	38	34
20:00	0	3	10	28	211	152	12	0	0	0	0	0	0	416	37	33
21:00	0	1	11	27	177	123	7	0	0	0	0	0	0	346	37	33
22:00	0	1	10	18	105	105	7	0	0	0	0	0	0	246	37	34
23:00	0	1_	6	7	59	77	8_	2	0	0	0	0	0	160	38	34_
Total	0	48	515	1316	3580	3183	507	27	2	0	1	0	0	9179		
%	0.0%	0.5%	5.6%	14.3%	39.0%	34.7%	5.5%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM		09:00	11:00	11:00	11:00	10:00	08:00	06:00			09:00			11:00		
Peak		0	<b>50</b>	20.4	204	407	45	4						740		
Vol. PM		6	50	204	321	167	45	4			1_			748		
Pivi Peak		12:00	12:00	12:00	14:00	16:00	19:00	16:00	14:00					12:00		
Vol.		9	65	234	324	288	44	3	2					815		
voi.		9	03	254	324	200	44	<u> </u>						013		

Stats

15th Percentile: 27 MPH 50th Percentile: 32 MPH 85th Percentile: 37 MPH 95th Percentile: 39 MPH

Mean Speed(Average): 33 MPH 10 MPH Pace Speed: 30-39 MPH Number in Pace: 6763

Percent in Pace: 73.7%

Number of Vehicles > 35 MPH: 3083

Percent of Vehicles > 35 MPH: 33.6%



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154459 A Speed Site Code: TBA

EB								arequests@pdi							Site Ct	oue. TDA
Start	1	15	20	25	30	35	40	45	50	55	60	65	70	Total	85th	Ave
Time	14	19	24	29	34	39	44	49	54	59	64	69	9999	rotai	% ile	Speed
05/28/											<u> </u>				70	
15	0	0	1	0	4	9	3	0	0	0	0	0	0	17	39	36
01:00	0	0	0	0	4	3	4	0	0	0	0	0	0	11	41	37
02:00	0	0	0	0	4	4	3	2	0	0	0	0	0	13	44	38
03:00	0	0	1	1	4	8	5	1	0	0	0	0	0	20	42	36
04:00	0	0	2	1	6	32	14	2	0	0	0	0	0	57	41	37
05:00	0	0	3	11	37	180	106	14	0	0	0	0	0	351	42	38
06:00	7	24	64	84	288	385	77	3	0	0	0	0	0	932	38	33
07:00	242	188	280	113	51	7	0	0	0	0	0	0	0	881	25	18
08:00	127	132	197	107	174	113	14	1	0	0	0	0	0	865	33	24
09:00	5	16	59	120	248	249	38	0	0	0	0	0	0	735	37	32
10:00	2	15	54	114	221	177	43	4	0	0	0	0	0	630	37	32
11:00	4	21	40	74	168	190	36	1	0	0	0	0	0	534	37	32
12 PM	1	13	37	85	193	185	47	3	0	0	0	0	0	564	38	33
13:00	4	6	39	60	193	194	57	4	0	0	0	0	0	557	38	33
14:00	7	3	30	100	189	215	49	3	0	0	0	0	0	596	38	33
15:00	6	11	43	47	166	224	32	3	0	0	0	0	0	532	37	33
16:00	16	23	89	153	151	105	14	2	0	0	0	0	0	553	35	29
17:00	13	18	74	159	184	89	9	2	0	0	0	0	0	548	35	29
18:00	6	9	30	107	140	131	34	2	0	0	0	0	0	459	37	32
19:00	1	1	9	34	65	162	60	9	0	0	0	0	0	341	40	36
20:00	0	4	19	18	75	125	37	3	0	0	0	0	0	281	38	34
21:00	0	2	9	22	41	70	28	0	0	0	0	0	0	172	39	34
22:00	0	2	7	5	14	59	24	4	0	0	0	0	0	115	41	36
23:00	2	0	1_	6	12	23_	12	4	0	0	0	0	0	60	41	35_
Total	443	488	1088	1421	2632	2939	746	67	0	0	0	0	0	9824		
%_	4.5%	5.0%	11.1%	14.5%	26.8%	29.9%	7.6%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00	07:00	07:00	09:00	06:00	06:00	05:00	05:00						06:00		
Vol.	242	188	280	120	288	385	106	14						932		
PM Peak	16:00	16:00	16:00	17:00	12:00	15:00	19:00	19:00						14:00		
Vol.	16	23	89	159	193	224	60	9						596		

Stats

15th Percentile: 21 MPH 50th Percentile: 31 MPH 85th Percentile: 37 MPH 95th Percentile: 41 MPH

32.2%

Mean Speed(Average): 31 MPH 10 MPH Pace Speed: 30-39 MPH Number in Pace : 5571 Percent in Pace : 56.7% Number of Vehicles > 35 MPH: Percent of Vehicles > 35 MPH: 3164



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EB								arequests@pdi							Oile Oc	ue. IDA
Start	1	15	20	25	30	35	40	45	50	55	60	65	70	Total	85th	Ave
Time	14	19	24	29	34	39	44	49	54	59	64	69	9999		% ile	Speed
05/30/									<u> </u>		<u> </u>				70	<u> </u>
15	0	1	2	1	9	15	7	0	0	0	0	0	0	35	40	35
01:00	0	0	0	0	5	6	10	1	0	0	0	0	0	22	42	39
02:00	0	0	0	0	0	8	7	0	0	0	0	0	0	15	42	39
03:00	0	0	0	0	2	8	5	1	0	1	0	0	0	17	43	40
04:00	0	0	2	0	1	13	7	2	0	0	0	0	0	25	42	38
05:00	0	0	5	5	6	56	26	10	1	0	0	0	0	109	42	38
06:00	0	2	11	19	47	159	84	12	1	0	0	0	0	335	41	37
07:00	0	4	12	42	63	214	90	7	0	0	0	0	0	432	40	36
08:00	2	6	29	63	104	202	82	7	1	0	0	0	0	496	39	34
09:00	10	9	61	111	202	213	45	2	0	0	0	0	0	653	37	32
10:00	9	19	61	106	225	206	40	4	0	0	0	0	0	670	37	32
11:00	3	27	65	120	228	147	48	3	0	0	0	0	0	641	37	31
12 PM	9	11	59	121	197	176	35	2	0	0	0	0	0	610	37	31
13:00	0	6	19	56	174	230	89	3	1	0	0	0	0	578	39	35
14:00	0	4	26	76	200	249	72	3	0	0	0	0	0	630	38	34
15:00	8	6	37	73	139	241	78	11	0	0	0	0	0	593	39	34
16:00	0	0	24	33	119	234	112	12	1	0	0	0	0	535	40	36
17:00	1	8	28	28	82	170	117	21	0	0	0	0	0	455	41	36
18:00	2	5	23	36	91	200	86	11	1	0	0	0	0	455	40	35
19:00	0	1	19	33	63	164	67	9	0	0	0	0	0	356	40	36
20:00	0	3	15	20	91	107	36	2	1	0	0	0	0	275	38	34
21:00	0	3	11	13	63	114	24	1	1	0	0	0	0	230	38	35
22:00	1	0	0	6	34	66	22	3	1	0	0	0	0	133	40	36
23:00	0	0	3	6	14	46	12	2	1	0	0	0	0	84	40	36_
Total	45	115	512	968	2159	3244	1201	129	10	1	0	0	0	8384		
% AM	0.5%	1.4%	6.1%	11.5%	25.8%	38.7%	14.3%	1.5%	0.1%	0.0%	0.0%	0.0%	0.0%			
Peak	09:00	11:00	11:00	11:00	11:00	07:00	07:00	06:00	05:00	03:00				10:00		
Vol.	10	27	65	120	228	214	90	12	1	1				670		-
PM Peak	12:00	12:00	12:00	12:00	14:00	14:00	17:00	17:00	13:00					14:00		
Vol.	9	11	59	121	200	249	117	21	1					630		

Stats

15th Percentile: 27 MPH 50th Percentile: 34 MPH 85th Percentile: 39 MPH 95th Percentile: 42 MPH

 Mean Speed(Average):
 34 MPH

 10 MPH Pace Speed:
 30-39 MPH

 Number in Pace:
 5403

 Percent in Pace:
 64.4%

Number of Vehicles > 35 MPH : 3936 Percent of Vehicles > 35 MPH : 46.9%

# ATTACHMENT B CRASH DATA

Crash ID	Town	Year Crash Date	Crash Time	Crash Severity	Total Vehicles	Total Injured	Total Fatals		Road Surface	Lighting	Weather Street	Intersection	Distance From Nearest Intersection	Vehicles Travel Directions	Most Harmful Events	Vehicle Action Prior to Crash	Vehicle Configuration	Non Motorist Type	X Coordinate		Crash Data Id
2515616	SUDBURY	2009 9/14/20	09 5:50 PM	Property damage only (none injured)	2	2	0	0 Rear-end	Dry	Daylight	Clear		501 BOSTON POST ROAD	V1:Westbound / V2:Westbound		V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V2:Passenger car		205791.2156	901061.7816	3324175
2699431	SUDBURY	2011 1/6/20	11 1:39 PM	Property damage only (none injured)	2	2	0	0 Angle	Dry	Daylight	Clear		501 BOSTON POST ROAD	V1:Westbound / V2:Westbound		V1: Entering traffic lane / V2:Travelling straight ahead	V1: Not reported / V2:Not reported		205791.2156	901061.7816	3646799
2699258	SUDBURY	2011 1/25/20	11 6:27 PM	Property damage only (none injured)	2	2	0	0 Rear-end	Ice	Dark - lighted roadway	Cloudy		501 BOSTON POST ROAD Rte 20 W	V1:Westbound / V2:Westbound		V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1: Not reported / V2:Not reported		205791.2156	901061.7816	3669640
2699272	SUDBURY	2011 1/28/20	11 11:31 AN	Property damage only (none injured)	;	3	0	Sideswipe, opposite direction	Wet	Daylight	Cloudy		501 BOSTON POST ROAD	V1:Westbound / V2:Eastbound / V3:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with parked motor vehicle / V3: Collision with parked motor vehicle	V1: Travelling straight ahead / V2:Parked / V3:Parked	V1: Not reported / V2:Passenger car / V3:Light truck(van, mini-van, panel, pickup, sport utility) with only four tires		205791.2156	901061.7816	3669644
2926818	SUDBURY	2011 7/28/20	11 7:40 PM	Property damage only (none injured)	2	2	0	0 Rear-end	Dry	Daylight	Clear		501 BOSTON POST ROAD	V1:Not reported / V2:Westbound		V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1: Passenger car / V2:Passenger car		205791.2156	901061.7816	3669789
2915397	SUDBURY	2011 10/5/20	11 7:35 AM	Non-fatal injury		2	1	0 Rear-end	Dry	Daylight	Clear		501 BOSTON POST ROAD Rte 20 E	V1:Eastbound / V2:Eastbound		V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V2:Passenger car		205791.2156	901061.7816	3669823

Crash ID Town	Year	Crash Date Crash	Crash Severity	Total	Total	Total	Collision manner	Road	Lighting	Weather	Street	Intersection	Distance From Nearest	Vehicles Travel	Most Harmful Events	Distance from	Vehicle Action Prior to Crash	Vehicle	Non Motorist	X Coordinate	Y Coordinate	Crash
		Time		Vehicles	Injured	Fatals	i	Surface					Intersection	Directions		Nearest Landmark		Configuration	Type			Data Id
2494666 SUDBURY	2009	6/4/2009 6:01 PM	Non-fatal injury	2	2	3 (	0 Rear-end	Dry	Daylight	Clear/Cloudy	,		495 BOSTON POST	V1:Westbound /	V1: Collision with motor vehicle in traffic / V2:		V1: Slowing or stopped in traffic /	V1: Passenger car /		205852.111	901051.9383	3 3322929
													ROAD Rte 20 W	V2:Westbound	Collision with motor vehicle in traffic		V2:Travelling straight ahead	V2:Passenger car				
3398956 SUDBURY	2013	3/1/2013 3:23 PM	Property damage only	2	2	0 (	0 Sideswipe, opposi	e Dry	Daylight	Clear/Clear				V1:Northbound /	V1: Collision with motor vehicle in traffic / V2:	SHAWS PLAZA	V1: Slowing or stopped in traffic /	V1: Passenger car /		205866.1579	901050.9388	3 3919070
			(none injured)				direction							V2:Eastbound	Collision with motor vehicle in traffic		V2:Turning right	V2:Passenger car				

Crash ID Town	Year C	rash Date	Crash	Crash Severity		Total Injured		Collision manner	Road Surface	Lighting	Weather	Street	Intersection	Distance From Nearest Intersection		Most Harmful Events	Distance from Nearest Landmark	Vehicle Action Prior to Crash	Vehicle Configuration	Non Motorist Type	X Coordinate	Y Coordinate	Crash Data Id
2440163 SUDBURY	2009	2/11/2009	1:57 PM	Not Reported	venicies	2		0 Unknown	Not reported	Daylight	Clear			505 BOSTON POST ROAD	V1:Southbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	Nearest Landmark	V1: Backing / V2:Slowing or stopped in traffic	V1: Single-unit truck (2-axle, 6-tire) / V2:Light truck(van, mini-van, panel, pickup, sport utility)		205751.2093	901071.3434	3322891
																		,	with only four tires				
2491841 SUDBURY	2009	6/23/2009	3:12 PM	Property damage only (none injured)		3	0	0 Rear-end	Wet	Daylight	Cloudy/Rain			505 BOSTON POST ROAD / Rte 20	V1:Eastbound / V2:Eastbound /	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic / V3:		V1: Travelling straight ahead / V2:Travelling straight ahead /	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V2:Light		205751.2093	901071.3434	3324119
				(none injured)										ROAD / Rie 20	V3:Westbound	Collision with motor vehicle in traffic		V3:Travelling straight ahead	truck(van, mini-van, panel, pickup, sport utility) with only four tires / V3:Passenger car				
2515844 SUDBURY	2009	7/15/2009	1:20 PM	Non-fatal injury		2	1	0 Rear-end	Dry	Daylight	Clear			505 BOSTON POST	V1:Eastbound /	V1: Collision with motor vehicle in traffic / V2:	SUDBURY PLAZA	V1: Travelling straight ahead /	V1: Passenger car / V2:Passenger car		205751.2095	901071.3433	3324129
2651187 SUDBURY	2009	7/25/2000	1:20 DM	Non-fatal injury		2	2	0 Rear-end	Dry	Daylight	Clear			ROAD Rte 20 505 BOSTON POST	V2:Eastbound	Collision with motor vehicle in traffic V1: Not reported / V2: Not reported	-	V2:Slowing or stopped in traffic	V1: Not reported / V2:Not reported		205751.2095	901071.3433	3324142
2031107 30DB0K1	2009	112312009	1.20 F W	Non-latal injury		2	-	o Real-ello	Diy	Daylight	Clear			ROAD	reported reported	V1. Not reported / V2. Not reported		V2:Travelling straight ahead	V1. Not reported / V2.Not reported		203731.2093	901071.3433	3324142
2515785 SUDBURY	2009	8/21/2009	1:57 PM	Property damage only (none injured)		2	0	0 Angle	Dry	Daylight	Clear			505 BOSTON POST ROAD Rte 20 E	V1:Northbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic		V1: Turning left / V2:Travelling straight ahead	V1: Passenger car / V2:Light truck(van, mini-van panel, pickup, sport utility) with only four tires		205751.2095	901071.3433	3324164
2559498 SUDBURY	2009	11/7/2009	11:04 AM	Property damage only	-	2	0	0 Angle	Dry	Daylight	Clear			505 BOSTON POST	V1:Northbound /	V1: Collision with motor vehicle in traffic / V2:		V1: Turning left / V2:Travelling	V1: Passenger car / V2:Light truck(van, mini-van		205751.2095	901071.3433	3324491
				(none injured)					,	.,,,,				ROAD / Rte 20	V2:Eastbound	Collision with motor vehicle in traffic		straight ahead	panel, pickup, sport utility) with only four tires				
2562238 SUDBURY	2009	11/25/2009	10:08 AM	Property damage only (none injured)		2	0	0 Angle	Wet	Daylight	Cloudy			505 BOSTON POST ROAD / Rte 20	V1:Northbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic		V1: Turning left / V2:Travelling straight ahead	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V2:Passenger		205751.2095	901071.3433	3324508
				1 1					_										car				
2562223 SUDBURY	2009	12/1/2009	5:04 PM	Non-fatal injury		1	1	0 Single vehicle	Dry	Dark - roadway not lighted	Clear			528 BOSTON POST ROAD / Rte 20	V1:Southbound	V1: Collision with pedestrian		V1: Turning right	V1: Passenger car	P2:Pedestrian	205731.4458	901076.3325	3324513
2562217 SUDBURY	2009	12/2/2009	5:17 PM	Property damage only		2	0	0 Angle	Dry	Dark - lighted	Clear			509 BOSTON POST	V1:Eastbound /	V1: Collision with motor vehicle in traffic / V2:		V1: Travelling straight ahead /	V1: Passenger car / V2:Light truck(van, mini-van		205716.1967	901078.4842	3324514
				(none injured)						roadway				ROAD / Rte 20	V2:Northbound	Collision with motor vehicle in traffic		V2:Turning right	panel, pickup, sport utility) with only four tires				
2562211 SUDBURY	2009	12/3/2009	6:07 PM	Property damage only (none injured)		2	0	0 Angle	Dry	Dark - lighted roadway	Clear			528 BOSTON POST ROAD / Rte 20	V1:Westbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic		V1: Travelling straight ahead / V2:Entering traffic lane	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V2:Passenger		205731.4458	901076.3325	3324516
				, ,														-	car				
2562177 SUDBURY	2009	12/8/2009	6:29 PM	Property damage only (none injured)		2	0	0 Not reported	Dry	Dark - lighted roadway	Clear			528 BOSTON POST ROAD / Rte 20	V1:Eastbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic		V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1: Passenger car / V2:Light truck(van, mini-van panel, pickup, sport utility) with only four tires		205731.4458	901076.3325	3324521
				, , ,																			
2577579 SUDBURY	2010	2/3/2010	12:10 PM	Property damage only (none injured)		2	0	0 Rear-end	Dry	Daylight	Clear			528 BOSTON POST ROAD	V1:Westbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic		V1: Travelling straight ahead / V2:Travelling straight ahead	V1: Not reported / V2:Not reported		205731.4458	901076.3325	3551008
2577581 SUDBURY	2010	2/4/2010	4:16 PM	Property damage only		1	0	0 Single vehicle	Sand, mud, dirt	Daylight	Clear			509 BOSTON POST	V1:Westbound	V1: Collision with highway traffic sign post		V1: Travelling straight ahead	V1: Not reported		205716.1967	901078.4841	3551011
2607806 SUDBURY	2010	6/3/2010	12:32 PM	(none injured) Non-fatal injury		3	1	0 Rear-end	oil, gravel Dry	Davlight	Clear			ROAD 526 BOSTON POST	V1:Eastbound /	V1: Collision with motor vehicle in traffic / V2:	+	V1: Slowing or stopped in traffic /	V1: Passenger car / V2:Passenger car /		205747.9118	901072.245	3551086
	'			, , ,					,	', '				ROAD / Rte 20	V2:Eastbound /	Collision with motor vehicle in traffic / V3:		V2:Slowing or stopped in traffic /	V3:Passenger car				
2654956 SUDBURY	2010	8/20/2010	12:13 DM	Property damage only		2	0	0 Angle	Dry	Daylight	Clear			528 BOSTON POST	V3:Eastbound V1:Southbound /	Collision with motor vehicle in traffic V1: Collision with motor vehicle in traffic / V2:		V3:Slowing or stopped in traffic V1: Turning left / V2:Travelling	V1: Passenger car / V2:Passenger car		205731.4458	901076.3325	3551146
2004000 000001(1	2010	0/20/2010	12.101 W	(none injured)		-	١ .	o Angic	Diy	Daylight	Olcai			ROAD	V2:Westbound	Collision with motor vehicle in traffic		straight ahead	VI. I assenger car / V2.1 assenger car		203731.4430	301070.3323	3331140
2688524 SUDBURY	2010	12/9/2010	2:46 PM	Property damage only (none injured)		2	0	0 Angle	Dry	Daylight	Not Reported			509 BOSTON POST ROAD Rte 20	V1:Eastbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic		V1: Travelling straight ahead / V2:Slowing or stopped in traffic	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V2:Passenger		205716.1967	901078.4841	3551240
2688760 SUDBURY	2010	12/15/2010	11:52 AM	Property damage only (none injured)		2	0	0 Angle	Dry	Daylight	Cloudy			505 BOSTON POST ROAD	V1:Eastbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic		V1: Travelling straight ahead / V2:Turning left	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V2:Passenger		205751.2095	901071.3433	3551249
2699438 SUDBURY	2011	1/4/2011	3:43 PM	Property damage only		2	0	0 Angle	Drv	Daylight	Clear			528 BOSTON POST	V1:Eastbound /	V1: Collision with motor vehicle in traffic / V2:		V1: Travelling straight ahead /	car V1: Not reported / V2:Not reported		205731.4458	901076.3325	3646797
				(none injured)					, , , , , , , , , , , , , , , , , , , ,					ROAD	V2:Eastbound	Collision with motor vehicle in traffic		V2:Turning left					
2735272 SUDBURY	2011	2/10/2011	3:29 PM	Non-fatal injury		2	1	0 Angle	Sand, mud, dirt oil, gravel	, Daylight	Clear			528 BOSTON POST ROAD / Rte 20	V1:Northbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic		V1: Turning left / V2:Travelling straight ahead	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V2:Passenger		205731.4458	901076.3325	3669664
2735275 SUDBURY	2011	2/12/2011	5:47 PM	Property damage only		2	0	0 Sideswipe,	Dry		Clear			509 BOSTON POST	V1:Eastbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2:		V1: Travelling straight ahead /	V1: Light truck(van, mini-van, panel, pickup,		205716.1967	901078.4841	3669667
				(none injured)				opposite direction		roadway				ROAD / Rte 20	V2:Northbound	Collision with motor vehicle in traffic		V2:Entering traffic lane	sport utility) with only four tires / V2:Passenger car				
2733745 SUDBURY	2011	5/16/2011	2:44 PM	Property damage only (none injured)		2	0	0 Angle	Wet	Daylight	Cloudy			509 BOSTON POST ROAD	V1:Eastbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	SHAWS PLAZA	V1: Travelling straight ahead / V2:Entering traffic lane	V1: Passenger car / V2:Passenger car		205716.1967	901078.4841	3669723
2733756 SUDBURY	2011	5/9/2011	4:16 PM	Non-fatal injury		1	1	0 Single vehicle	Dry	Daylight	Cloudy			528 BOSTON POST	V1:Southbound	V1: Collision with cyclist (bicycle, tricycle,	RAYTHEON	V1: Turning right	V1: Passenger car	P2:Pedalcyclist (bicycle,	205731.4458	901076.3325	3669724
2919209 SUDBURY	2011	12/1/2011	3:24 PM	Property damage only		1	0	0 Single vehicle	Dry	Daylight	Clear			ROAD Rte 20 528 BOSTON POST	V1:Westbound	unicvcle. pedal car) V1: Collision with utility pole		V1: Travelling straight ahead	V1: Passenger car	tricvcle. unicvcle. pedal car)	205731.4458	901076.3325	3669862
3246350 SUDBURY	2012	4/25/2012	4:13 PM	(none injured) Non-fatal injury		2	1	crash 0 Sideswipe,	Dry	Daylight	Clear/Cloudy			ROAD Rte 20 W 509 BOSTON POST	V1:Eastbound /	V1: Collision with motor vehicle in traffic / V2:		V1: Travelling straight ahead /	V1: Passenger car / V2:Passenger car		205716.274	901078.4732	3798930
								opposite direction						ROAD	V2:Westbound	Collision with motor vehicle in traffic		V2:Turning left					
3246361 SUDBURY	2012	5/9/2012	6:57 AM	Non-fatal injury		3	1	0 Rear-end	Wet	Daylight	Clear			528 BOSTON POST ROAD Rte 20 E	V1:Eastbound / V2:Eastbound / V3:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic / V3: Collision with motor vehicle in traffic		V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic / V3:Travelling straight ahead	V1: Passenger car / V2:Passenger car / V3:Light truck(van, mini-van, panel, pickup, sport utility) with only four tires		205720.8803	901077.8233	3798942
3291750 SUDBURY	2012	9/1/2012	7:45 PM	Property damage only		1	0	0 Single vehicle	Dry		Cloudy			509 BOSTON POST	V1:Eastbound	V1: Collision with guardrail		V1: Turning right	V1: Passenger car		205716.274	901078.4732	3799017
3400306 SUDBURY	2013	2/7/2013	8:38 AM	(none injured) Property damage only		2	0	crash 0 Rear-end	Dry	roadway Daylight	Clear	HIGHLAND AVENUE	HIGHLAND AVENUE	ROAD / Rte 20	V1:Eastbound /	V1: Collision with motor vehicle in traffic / V2:		V1: Slowing or stopped in traffic /	V1: Light truck(van, mini-van, panel, pickup,		205719.6292	901078.4294	3919097
				(none injured)		-		1				BOSTON POST	BOSTON POST		V2:Eastbound	Collision with motor vehicle in traffic		V2:Travelling straight ahead	sport utility) with only four tires / V2:Light				
												ROAD Rte 20 E	ROAD Rte 20 E						truck(van, mini-van, panel, pickup, sport utility) with only four tires				
3658676 SUDBURY	2013	7/26/2013	4:04 PM	Property damage only		2	0	0 Rear-end	Wet	Daylight	Cloudy/Rain			528 BOSTON POST	V1:Westbound /	V1: Collision with motor vehicle in traffic / V2:		V1: Travelling straight ahead /	V1: Passenger car / V2:Light truck(van, mini-van		205720.8803	901077.8233	3919194
				(none injured)										ROAD / Rte 20	V2:Westbound	Collision with motor vehicle in traffic		V2:Slowing or stopped in traffic	panel, pickup, sport utility) with only four tires				
3655866 SUDBURY	2013	9/6/2013	4:04 PM	Non-fatal injury		2	2	0 Rear-end	Dry	Daylight	Clear			509 BOSTON POST ROAD	V1:Westbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic		V1: Turning left / V2:Travelling straight ahead	V1: Passenger car / V2:Unknown vehicle configuration		205716.274	901078.4732	3919213
3742715 SUDBURY	2013	11/12/2013	8:49 AM	Property damage only		2	0	0 Rear-end	Wet	Daylight	Cloudy			528 BOSTON POST	V1:Eastbound /	V1: Collision with motor vehicle in traffic / V2:	SUDBURY PLAZA	V1: Travelling straight ahead /	V1: Light truck(van, mini-van, panel, pickup,		205720.8803	901077.8233	3919253
				(none injured)										ROAD Rte 20 E	V2:Eastbound	Collision with motor vehicle in traffic	ENTRANCE	V2:Slowing or stopped in traffic	sport utility) with only four tires / V2:Passenger car				
3743199 SUDBURY	2013	12/22/2013	12:49 PM	Property damage only (none injured)		2	0	0 Rear-end	Wet	Daylight	Cloudy			528 BOSTON POST ROAD Rte 20 E	V1:Eastbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic		V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V2:Passenger		205720.8803	901077.8233	3919308
				(											cooloodiiu			g oxalgit allead	car				



### INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Sudbury				COUNT DAT	ΓΕ:	May 21, 2015
DISTRICT: 3	UNSIGN	IALIZED :	Х	SIGNA	LIZED :	
		~ IN	TERSECTION	I DATA ~		
MAJOR STREET :	Route 20					
MINOR STREET(S):	Highland Ave	enue				
	Shaws					
INTERSECTION	North					
DIAGRAM (Label Approaches)		Route 20			Route 20	
			Highland Avenue	Shaws		
			PEAK HOUR	R VOLUMES		
APPROACH:	1	2	3	4	5	Total Peak Hourly
DIRECTION:	WB	NB1	NB2	EB		Approach Volume
PEAK HOURLY VOLUMES (AM/PM) :	1,021	83	2	600		1,706
"K" FACTOR:	0.080	INTERS	ECTION ADT APPROACH	, ,	L DAILY	21,325
TOTAL # OF CRASHES :	31	# OF YEARS :	5	CRASHES	GE#OF PERYEAR( ):	6.20
CRASH RATE CALCU	LATION :	0.80	RATE =	( A * 1,0	000,000 ) * 365 )	
Comments :Project Title & Date:						



### INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Sudbury	_			COUNT DAT	ΓE:	May 21, 2015
DISTRICT: 3	UNSIGN	IALIZED :	Х	SIGNA	LIZED :	
		~ IN	TERSECTION	DATA ~		
MAJOR STREET :	Route 20					
MINOR STREET(S):	Highland Ave	enue				_
	Shaws					
	$\bigcap$					
INTERSECTION	∐ North					
DIAGRAM	NOITH	IJ				
(Label Approaches)		Route 20	I		Route 20	
			Shaws Main	٧a٧		
			aws	Driveway		
			S.			
			PEAK HOUR	VOLUMES		
APPROACH:	1	2	3	4	5	Total Peak Hourly
DIRECTION:	WB	NB	EB			Approach Volume
PEAK HOURLY VOLUMES (AM/PM) :	1,009	130	695			1,834
"K" FACTOR:	0.080	INTERS	ECTION ADT APPROACH		L DAILY	22,925
TOTAL # OF CRASHES :	2	# OF YEARS :	5	CRASHES	GE#OF PERYEAR( ):	0.40
CRASH RATE CALCU	LATION :	0.05	RATE =	( A * 1,0	000,000 ) * 365 )	
Comments :			1			
Project Title & Date:						

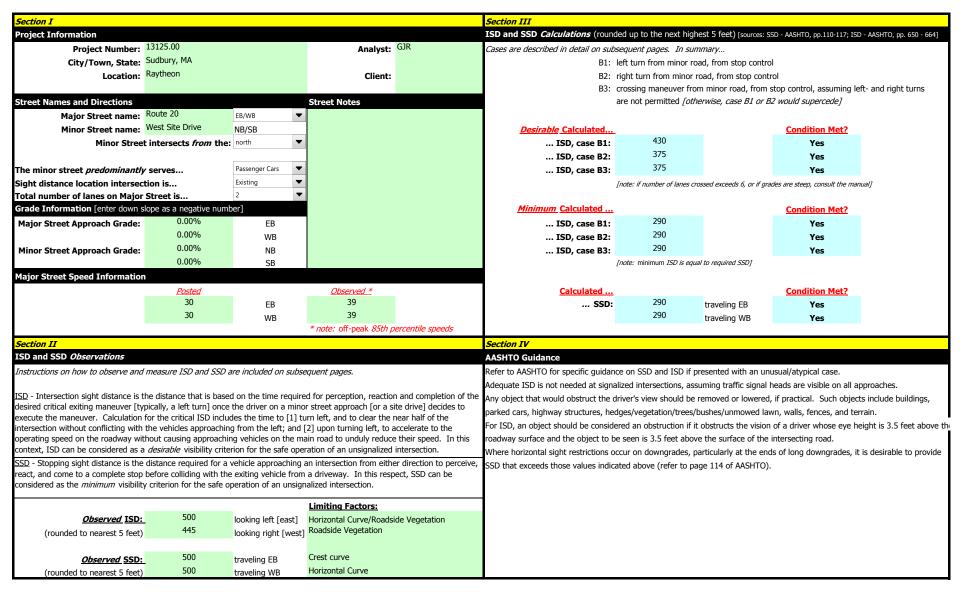


## INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Sudbury	_			COUNT DA	ΓE:	May 21, 2015
DISTRICT: 3	UNSIGN	IALIZED :	Х	SIGNA	LIZED :	
~ INTERSECTION DATA ~						
MAJOR STREET :	Route 20					
MINOR STREET(S):	Existing Site	Existing Site Driveway (East)				
INTERSECTION DIAGRAM (Label Approaches)	North	Route 20	Existing Site	Driveway (East)	Route 20	
			PEAK HOUR	R VOLUMES		Total Peak
APPROACH:	1	2	3	4	5	Hourly
DIRECTION:	WB	SB	EB			Approach Volume
PEAK HOURLY VOLUMES (AM/PM) :	495	200	940			1,635
"K" FACTOR:	0.080	INTERS	ECTION ADT APPROACH		AL DAILY	20,438
TOTAL # OF CRASHES :	6	# OF YEARS :	5	CRASHES	GE#OF PERYEAR( .):	1.20
CRASH RATE CALCU	LATION :	0.16	RATE =	( A * 1,1	000,000 ) * 365 )	
Comments :			- 			
Project Title & Date:						

# ATTACHMENT C SIGHT DISTANCE CALCULATIONS

## Stopping Sight Distance and Intersection Sight Distance Calculator [v0.97] Based on 'A Policy on Geometric Design of Highways and Streets', AASHTO, 2004



# ATTACHMENT D PEAK HOUR TRIP GENERATION

Project Information						
Project Name:	Raytheon Phase I - Supermarket					
No:						
Date:	10/26/2015					
City:						
State/Province:						
Zip/Postal Code:						
Country:						
Client Name:						
Analyst's Name:	GJR					
Edition:	ITE-TGM 9th Edition					

Land Use	Size	Weekday, Peak Hour of Adjacent Street Traff	ic, One Hour Between 7 and 9 a.m.	Weekday, Peak Hour of Adjacent Street Traff	ic, One Hour Between 4 and 6 p.m.	Saturday, Peak Hou	r of Generator
		Entry	Exit	Entry	Exit	Entry	Exit
850 - Supermarket	45 1000 Sq. Feet Gross Floor Area	95	58	220	211	292	280
Reduction		0	0	0	0	0	0
Internal		0	0	0	0	0	0
Pass-by		34	21	79	76	105	101
Non-pass-by		61	37	141	135	187	179
Total		95	58	220	211	292	280
Total Reduction		0	0	0	0	0	0
Total Internal		0	0	0	0	0	0
Total Pass-by		34	21	79	76	105	101
Total Non-pass-by		61	37	141	135	187	179

Project Information	
Project Name:	Raytheon Redevelopment - Existing
No:	
Date:	9/9/2015
City:	Sudbury
State/Province:	MA
Zip/Postal Code:	
Country:	
Client Name:	
Analyst's Name:	GJR
Edition:	ITE-TGM 9th Edition

Land Use Size		Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.		Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.		Saturday, Peak Hour of Generator	
		Entry	Exit	Entry	Exit	Entry	Exit
710 - General Office Building	421.3 1000 Sq. Feet Gross Floor Area	532	73	94	456	98	83
Reduction		0	0	0	C	0	0
Internal		0	0	0	C	0	0
Pass-by		0	0	0	C	0	0
Non-pass-by		532	73	94	456	98	83
760 - Research and Development Center	112 1000 Sq. Feet Gross Floor Area	119	24	22	123	8	0
Reduction		0	0	0	C	0	0
Internal		0	0	0	O	0	0
Pass-by		0	0	0	C	0	0
Non-pass-by		119	24	22	123	8	0
140 - Manufacturing	28 1000 Sq. Feet Gross Floor Area	16	4	8	8	B C	, 0
Reduction		0	0	0	C	0	, 0
Internal		0	0	0	O	0	0
Pass-by		0	0	0	O	0	0
Non-pass-by		16	4	8	8	C	0
Total		667	101	124	587	98	83
Total Reduction		0	0	0	C	0	0
Total Internal		0	0	0	C	0	0
Total Pass-by		0	0	0	C	0	0
Total Non-pass-by		667	101	124	587	98	83

# ATTACHMENT E SIGNAL WARRANT WORKSHEET

### **2009 MUTCD**

### TRAFFIC SIGNAL WARRANT ANALYSIS (VOLUME BASED)

Intersection:

Major Street Direction: Eastbound-Westbound ▼

Year: 2015 Condition: Phase 1 (Grocery Store) - Left Turning Volumes from Site Drive

Operating speed on major roadway: 38 mph Required

Number of approaches: 4 approach volumes

Warrant 1	EIGHT-HOUR VEHICULAR VOLUME	Minimum*	Adjusted Minimum**
Warrant 1A	MINIMUM VEHICULAR VOLUME (8 hours of day)		
	Major Street: 1 Lane(s) on each approach	500	500
	Minor Street : 1 Lane(s) on each approach	150	150
Warrant 1B	INTERRUPTION OF CONTINUOUS TRAFFIC (8 hours of day)		
	Major Street: 1 Lane(s) on each approach	750	750
	Minor Street : 1 Lane(s) on each approach	75	75
80 PERCEN	T SATISFACTION OF WARRANT 1A AND WARRANT 1B	Warrant 1A	Warrant 1B
	Major Street: 1 Lane(s) on each approach	400	600
	Minor Street: 1 Lane(s) on each approach	120	60

Warrant 2 FOUR HOUR VEHICULAR VOLUME

Major Street: 1 Lane(s) on each approach If "verify" indicated, see Figure 4C-1 or 4C-2.

Minor Street: 1 Lane(s) on each approach 25 = accuracy of regression equations

 Warrant 3
 PEAK HOUR VOLUME

 Major Street :
 1 Lane(s) on each approach
 If "verify" indicated, see Figure 4C-3 or 4C-4.

 Minor Street :
 1 Lane(s) on each approach
 25 = accuracy of regression equations

			Entering Vol.	Entering Vol.	on Major Road	Tot. Ent. Vol.	Mee	ets the follov	ving volume-base	ed warrants	s?
Н	lour		Minor Road+	Eastbound	Westbound	On Major Rd	1A	1B	80%(1A&1B)	2	3
6:00 -			12	932	219	1151	No	No	No	No	No
7:00 -	8:0	0 AM	40	881	278	1159	No	No	No	No	No
8:00 -	9:0	0 AM	48	865	407	1272	No	No	No	No	No
9:00 -	10:0	0 AM	26	735	472	1207	No	No	No	No	No
10:00 -	11:0	0 AM	62	630	499	1129	No	No	No	No	No
11:00 -	12:0	0 AM	91	534	662	1196	No	Yes	No	Verify	No
12:00 -	1:0	0 PM	100	564	656	1220	No	Yes	No	Yes	No
1:00 -	2:0	0 PM	96	557	666	1223	No	Yes	No	Yes	No
2:00 -	3:0	0 PM	102	596	725	1321	No	Yes	No	Yes	No
3:00 -	4:0	0 PM	111	532	908	1440	No	Yes	No	Yes	Verify
4:00 -	5:0	0 PM	128	553	988	1541	No	Yes	Yes	Yes	Yes
5:00 -	6:0	0 PM	124	548	1038	1586	No	Yes	Yes	Yes	Yes
6:00 -	7:0	0 PM	118	459	971	1430	No	Yes	No	Yes	Verify
			•	•	•		No	Yes	No	Yes	Yes
						Warrants		1		2	3
						Met?		Yes		Yes	Yes

<sup>\*</sup>From the criteria described for the warrant in the MUTCD.

### **NON-VOLUME-BASED WARRANTS**

Warrant 4, Minimum Pedestrian Volume: No Peak Four Hour Pedestrian Volumes: 0 Warrant 5, School Crossing: See MUTCD for details.

0

0

Warrant 7, Crash Experience: No

# of accidents "correctable by

Warrant 6, Coordinated Signal System: signalization" occuring in the last 12 months: 0

Soo MITCD for dot

See MUTCD for details.

(non-concurrent)

Warrant 8, Roadway Network:

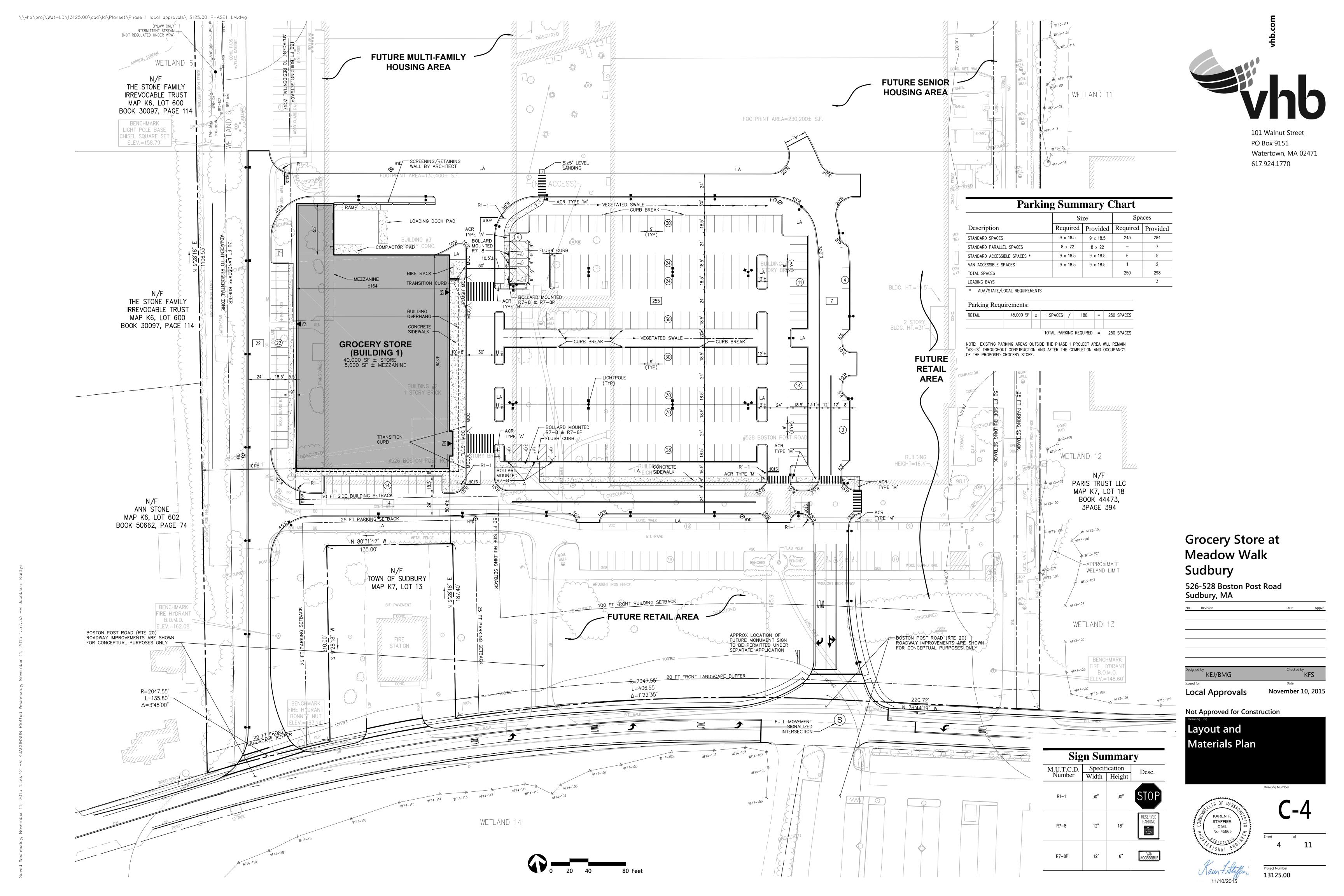
See MUTCD for details.

Source: Manual on Uniform Traffic Control Devices (MUTCD); 2003 Edition [2003]

<sup>\*\*</sup>If the operating speed is higher than 40mph then the volumes can be adjusted to 70%. (If no adjusted minimum, the minimum from the previous column is shown)

<sup>+</sup>If more than one approach, report the approach that has the higher volume.

# ATTACHMENT F SITE PLAN



Latest Issue

November 10, 2015

# **Grocery Store at** Meadow Walk Sudbury

526-528 Boston Post Road Sudbury, MA

## Owner

Raytheon Company 870 Winter Street Waltham, MA 02451

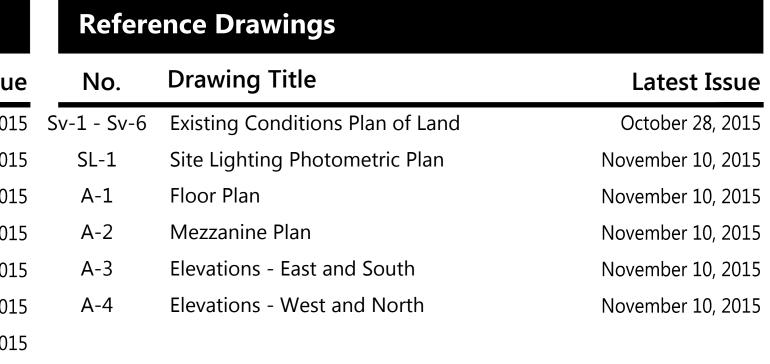
## **Applicant**

**BPR Development LLC** c/o National Development 2310 Washington Street Newton Lower Falls, MA 02462

Assessor's Map: K07-0011 and **K07-0013** 



	Sheet Index				Reference Drawings		
	No.	Drawing Title	Latest Issue	No.	Drawing Title		
	C-1	Legend And General Notes	November 10, 2015	Sv-1 - Sv-6	<b>Existing Conditions</b>		
	C-2	Overall Site Plan	November 10, 2015	SL-1	Site Lighting Photor		
	C-3	Site Preparation Plan	November 10, 2015	A-1	Floor Plan		
	C-4	Layout and Materials Plan	November 10, 2015	A-2	Mezzanine Plan		
	C-5	Grading and Drainage Plan	November 10, 2015	A-3	Elevations - East and		
	C-6	Utility Plan	November 10, 2015	A-4	Elevations - West ar		
C-	7.1 - C-7.3	Site Details	November 10, 2015				
	L-1.1	Planting Plan	November 10, 2015				
	L-2.1	Planting Notes and Details	November 10, 2015				





**Wetlands Scientist Site Civil Engineer Transportation Engineer Landscape Architect** 

PO Box 9151

617.924.1770

Watertown, MA 02471

## **Architect**

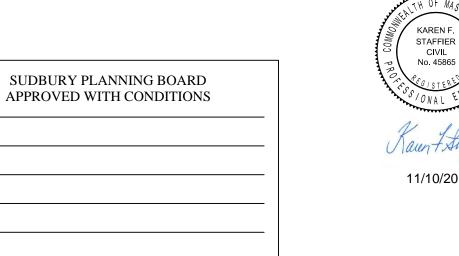
Jacobs Engineering Group One Broadway, 10th Floor Cambridge, MA 02142

## **Geotechnical Engineer**

Sanborn Head & Associates, Inc. 1 Technology Park Drive Westford, MA 01886 (978) 392-0900

## **Lighting Consultant**

Engineering Advantage, Inc. 880 Main Street 5th Floor Waltham, MA 02451



13125.00 Local Appr VHB Project : Issued for :

ACCESSIBLE PARKING

VAN-ACCESSIBLE PARKING

## **Abbreviations**

## General

ABAN A

ABAN ABANDON

ACR ACCESSIBLE CURB RAMP

ADJ ADJUST

APPROX APPROXIMATE

BS BOTTOM OF SLOPE

BWLL BROKEN WHITE LANE LINE

BITUMINOUS

CONC CONCRETE

DYCL DOUBLE YELLOW CENTER LINE

EL ELEVATION

ELEV ELEVATION
EXIST EXISTING

TDN FOUNDATION

FE FIRST FLOOR ELEVATION

GRAN GRANITE

GTD GRADE TO DRAIN

LA LANDSCAPE AREA

LOD LIMIT OF DISTURBANCE

MAX MAXIMUM

MIN MINIMUM

NIC NOT IN CONTRACT

NTS NOT TO SCALE

PERF PERFORATED

REM REMOVE

PROP

RET RETAIN

R&D REMOVE AND DISPOSE

PROPOSED

R&R REMOVE AND RESET

SWEL SOLID WHITE LANE LINE

SWLL SOLID WHITE LANE LINE

TOP OF SLOPE

TYP TYPICAL

TIF TIFICA

## **Utility**

CB CATCH BASIN

CMP CORRUGATED METAL PIPE

CO CLEANOUT

DCB DOUBLE CATCH BASIN

DMH DRAIN MANHOLE

CIP CAST IRON PIPE

COND CONDUIT

DIP DUCTILE IRON PIPE

FES FLARED END SECTION

FM FORCE MAIN

F&G FRAME AND GRATE

F&C FRAME AND COVER

GI GUTTER INLET

GT GREASE TRAP

HDPE HIGH DENSITY POLYETHYLENE PIPE

HANDHOLE

W HEADWALL

YD HYDRANT

IV INVERT ELEVATION

INV INVERT ELEVATION

I INVERT ELEVATION

LP LIGHT POLE

MES METAL END SECTION

WW PAVED WATER WAY

VC POLYVINYLCHLORIDE PIPE
V POST INDICATOR VALVE

P REINFORCED CONCRETE PIPE

REINFORCED CONCRETE F

SMH SEWER MANHOLE

SV TAPPING SLEEVE, VALVE AND BOX

UNDERGROUND

UTILITY POLE

## **Notes:**

## General

- CONTRACTOR SHALL NOTIFY "DIG-SAFE" (1-888-344-7233) AT LEAST 72 HOURS BEFORE EXCAVATING.
- CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. CONSTRUCTION
  ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
- ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.

  3. ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS AND WALKWAYS SHALL BE
- CONSTRUCTED IN CONFORMANCE WITH THE FEDERAL AMERICANS WITH DISABILITIES ACT AND WITH STATE AND LOCAL LAWS AND REGULATIONS (WHICHEVER ARE MORE STRINGENT).
- 4. AREAS DISTURBED DURING CONSTRUCTION AND NOT RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC.) SHALL RECEIVE 6 INCHES LOAM AND SEED.
- 5. WITHIN THE LIMITS OF THE BUILDING FOOTPRINT, THE SITE CONTRACTOR SHALL PERFORM EARTHWORK OPERATIONS REQUIRED UP TO SUBGRADE ELEVATIONS.
- 6. WORK WITHIN THE LOCAL RIGHTS-OF-WAY SHALL CONFORM TO LOCAL MUNICIPAL STANDARDS. WORK WITHIN STATE RIGHTS-OF-WAY SHALL CONFORM TO THE LATEST EDITION OF THE STATE HIGHWAY DEPARTMENTS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
- 7. UPON AWARD OF CONTRACT, CONTRACTOR SHALL MAKE NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN NECESSARY PERMITS, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK INDICATED ON THE DRAWINGS, IN THE SPECIFICATIONS, AND IN THE CONTRACT DOCUMENTS. DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, AND FIRE HYDRANTS, WITHOUT APPROPRIATE PERMITS.
- 8. TRAFFIC SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- 9. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
- 10. IN THE EVENT THAT SUSPECTED CONTAMINATED SOIL, GROUNDWATER, AND OTHER MEDIA ARE ENCOUNTERED DURING EXCAVATION AND CONSTRUCTION ACTIVITIES BASED ON VISUAL, OLFACTORY, OR OTHER EVIDENCE, THE CONTRACTOR SHALL STOP WORK IN THE VICINITY OF THE SUSPECT MATERIAL TO AVOID FURTHER SPREADING OF THE MATERIAL, AND SHALL NOTIFY THE OWNER IMMEDIATELY SO THAT THE APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN.
- 11. CONTRACTOR SHALL PREVENT DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS.
- 12. DAMAGE RESULTING FROM CONSTRUCTION LOADS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
- 13. CONTRACTOR SHALL CONTROL STORMWATER RUNOFF DURING CONSTRUCTION TO PREVENT ADVERSE IMPACTS TO OFF SITE AREAS, AND SHALL BE RESPONSIBLE TO REPAIR RESULTING DAMAGES, IF ANY, AT NO COST TO OWNER.
- 14. THIS PROJECT DISTURBS MORE THAN ONE ACRE OF LAND AND FALLS WITHIN THE NPDES CONSTRUCTION GENERAL PERMIT (CGP) PROGRAM AND EPA JURISDICTION. PRIOR TO THE START OF CONSTRUCTION CONTRACTOR IS TO FILE A CGP NOTICE OF INTENT WITH THE EPA AND PREPARE A STORMWATER POLLUTION PREVENTION PLAN IN ACCORDANCE WITH THE NPDES REGULATIONS. CONTRACTOR SHALL CONFIRM THE OWNER HAS ALSO FILED A NOTICE OF INTENT WITH THE EPA.

## Utilities

- THE LOCATIONS, SIZES, AND TYPES OF EXISTING UTILITIES ARE SHOWN AS AN APPROXIMATE REPRESENTATION ONLY. THE OWNER OR IT'S REPRESENTATIVE(S) HAVE NOT INDEPENDENTLY VERIFIED THIS INFORMATION AS SHOWN ON THE PLANS. THE UTILITY INFORMATION SHOWN DOES NOT GUARANTEE THE ACTUAL EXISTENCE, SERVICEABILITY, OR OTHER DATA CONCERNING THE UTILITIES, NOR DOES IT GUARANTEE AGAINST THE POSSIBILITY THAT ADDITIONAL UTILITIES MAY BE PRESENT THAT ARE NOT SHOWN ON THE PLANS. PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY AND DETERMINE THE EXACT LOCATIONS, SIZES, AND ELEVATIONS OF THE POINTS OF CONNECTIONS TO EXISTING UTILITIES AND, SHALL CONFIRM THAT THERE ARE NO INTERFERENCES WITH EXISTING UTILITIES AND THE PROPOSED UTILITY ROUTES, INCLUDING ROUTES WITHIN THE PUBLIC RIGHTS OF WAY.
- 2. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, OR EXISTING CONDITIONS DIFFER FROM THOSE SHOWN SUCH THAT THE WORK CANNOT BE COMPLETED AS INTENDED, THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED IN WRITING TO THE OWNER'S REPRESENTATIVE FOR THE RESOLUTION OF THE CONFLICT AND CONTRACTOR'S FAILURE TO NOTIFY PRIOR TO PERFORMING ADDITIONAL WORK RELEASES OWNER FROM OBLIGATIONS FOR ADDITIONAL PAYMENTS WHICH OTHERWISE MAY BE WARRANTED TO RESOLVE THE CONFLICT.
- 3. SET CATCH BASIN RIMS, AND INVERTS OF SEWERS, DRAINS, AND DITCHES IN ACCORDANCE WITH ELEVATIONS ON THE GRADING AND UTILITY PLANS.
- 4. RIM ELEVATIONS FOR DRAIN AND SEWER MANHOLES, WATER VALVE COVERS, GAS GATES, ELECTRIC AND TELEPHONE PULL BOXES, AND MANHOLES, AND OTHER SUCH ITEMS, ARE APPROXIMATE AND SHALL BE SET/RESET AS FOLLOWS:
- A. PAVEMENTS AND CONCRETE SURFACES: FLUSH
- B. ALL SURFACES ALONG ACCESSIBLE ROUTES: FLUSH
- C. LANDSCAPE, LOAM AND SEED, AND OTHER EARTH SURFACE AREAS: ONE INCH ABOVE SURROUNDING AREA AND TAPER EARTH TO THE RIM ELEVATION.
- 5. THE LOCATION, SIZE, DEPTH, AND SPECIFICATIONS FOR CONSTRUCTION OF PROPOSED PRIVATE UTILITY SERVICES SHALL BE INSTALLED ACCORDING TO THE REQUIREMENTS PROVIDED BY, AND APPROVED BY, THE RESPECTIVE UTILITY COMPANY (GAS, TELEPHONE, ELECTRIC, FIRE ALARM, ETC.). FINAL DESIGN LOADS AND LOCATIONS TO BE COORDINATED WITH OWNER AND ARCHITECT.
- 6. CONTRACTOR SHALL MAKE ARRANGEMENTS FOR POLE RELOCATION AND FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE, FIRE ALARM, AND ANY OTHER PRIVATE UTILITIES, WHETHER WORK IS PERFORMED BY CONTRACTOR OR BY THE UTILITIES COMPANY.
- 7. UTILITY PIPE MATERIALS SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED ON THE PLAN:
- A. WATER PIPES SHALL BE CEMENT LINED DUCTILE IRON (DI).
- B. SANITARY SEWER PIPES SHALL BE POLYVINYL CHLORIDE (PVC) SDR—35 SEWER PIPE.

  C. STORM DRAINAGE PIPES SHALL BE HIGH DENSITY POLYETHYLENE (HDDE)
- C. STORM DRAINAGE PIPES SHALL BE HIGH DENSITY POLYETHYLENE (HDPE).

  D. PIPE INSTALLATION AND MATERIALS SHALL COMPLY WITH THE STATE PLUMBING CODE WHERE
- APPLICABLE. CONTRACTOR SHALL COORDINATE WITH LOCAL PLUMBING INSPECTOR PRIOR TO BEGINNING WORK.

  8. CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR AND SHALL FURNISH EXCAVATION,
- INSTALLATION, AND BACKFILL OF ELECTRICAL FURNISHED SITEWORK RELATED ITEMS SUCH AS PULL BOXES, CONDUITS, DUCT BANKS, LIGHT POLE BASES, AND CONCRETE PADS. SITE CONTRACTOR SHALL FURNISH CONCRETE ENCASEMENT OF DUCT BANKS IF REQUIRED BY THE UTILITY COMPANY AND AS INDICATED ON THE DRAWINGS.
- 9. CONTRACTOR SHALL EXCAVATE AND BACKFILL TRENCHES FOR GAS IN ACCORDANCE WITH GAS COMPANY'S REQUIREMENTS.
- 10. ALL DRAINAGE AND SANITARY STRUCTURE INTERIOR DIAMETERS (4' MIN.) SHALL BE DETERMINED BY THE MANUFACTURER BASED ON THE PIPE CONFIGURATIONS SHOWN ON THESE PLANS AND LOCAL MUNICIPAL STANDARDS. FOR MANHOLES THAT ARE 20 FEET IN DEPTH AND GREATER, THE MINIMUM DIAMETER SHALL BE 5 FEET.
- 11. PRIVATE UTILITY SIZING AND LOCATIONS ARE SUBJECT TO FINAL DESIGN BY THE UTILITY COMPANY.

Layout and Materials

ON THE PLANS.

- 1. DIMENSIONS ARE FROM THE FACE OF CURB, FACE OF BUILDING, FACE OF WALL, AND CENTER LINE
- 2. CURB RADII ARE 3 FEET UNLESS OTHERWISE NOTED.

OF PAVEMENT MARKINGS, UNLESS OTHERWISE NOTED.

- CURBING SHALL BE PRECAST CONCRETE CURB (PCC) WITHIN THE SITE UNLESS OTHERWISE INDICATED.
- 4. SEE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS AND DETAILS CONTIGUOUS TO THE BUILDING, INCLUDING SIDEWALKS, RAMPS, BUILDING ENTRANCES, STAIRWAYS, UTILITY PENETRATIONS, CONCRETE DOOR PADS, COMPACTOR PAD, LOADING DOCKS, BOLLARDS, ETC.
- 5. PROPOSED BOUNDS AND ANY EXISTING PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE SET OR RESET BY A PROFESSIONAL LICENSED SURVEYOR.
- 6. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL VERIFY EXISTING PAVEMENT ELEVATIONS AT INTERFACE WITH PROPOSED PAVEMENTS, AND EXISTING GROUND ELEVATIONS ADJACENT TO DRAINAGE OUTLETS TO ASSURE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED FACILITIES.

## Demolition

- 1. CONTRACTOR SHALL REMOVE AND DISPOSE OF EXISTING MANMADE SURFACE FEATURES WITHIN THE LIMIT OF WORK INCLUDING BUILDINGS, STRUCTURES, PAVEMENTS, SLABS, CURBING, FENCES, UTILITY POLES, SIGNS, ETC. UNLESS INDICATED OTHERWISE ON THE DRAWINGS. REMOVE AND DISPOSE OF EXISTING UTILITIES, FOUNDATIONS AND UNSUITABLE MATERIAL BENEATH AND FOR A DISTANCE OF 10 FEET BEYOND THE PROPOSED BUILDING FOOTPRINT INCLUDING EXTERIOR COLUMNS.
- 2. EXISTING UTILITIES SHALL BE TERMINATED, UNLESS OTHERWISE NOTED, IN CONFORMANCE WITH LOCAL, STATE AND INDIVIDUAL UTILITY COMPANY STANDARD SPECIFICATIONS AND DETAILS. THE CONTRACTOR SHALL COORDINATE UTILITY SERVICE DISCONNECTS WITH THE UTILITY REPRESENTATIVES.
- 3. CONTRACTOR SHALL DISPOSE OF DEMOLITION DEBRIS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND STATUTES.
- THE DEMOLITION LIMITS DEPICTED IN THE PLANS IS INTENDED TO AID THE CONTRACTOR DURING THE BIDDING AND CONSTRUCTION PROCESS AND IS NOT INTENDED TO DEPICT EACH AND EVERY ELEMENT OF DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THE DETAILED SCOPE OF DEMOLITION BEFORE SUBMITTING ITS BID/PROPOSAL TO PERFORM THE WORK AND SHALL MAKE NO CLAIMS AND SEEK NO ADDITIONAL COMPENSATION FOR CHANGED CONDITIONS OR UNFORESEEN OR LATENT SITE CONDITIONS RELATED TO ANY CONDITIONS DISCOVERED DURING EXECUTION OF THE
- 5. UNLESS OTHERWISE SPECIFICALLY PROVIDED ON THE PLANS OR IN THE SPECIFICATIONS, THE ENGINEER HAS NOT PREPARED DESIGNS FOR AND SHALL HAVE NO RESPONSIBILITY FOR THE PRESENCE, DISCOVERY, REMOVAL, ABATEMENT OR DISPOSAL OF HAZARDOUS MATERIALS, TOXIC WASTES OR POLLUTANTS AT THE PROJECT SITE. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY CLAIMS OF LOSS, DAMAGE, EXPENSE, DELAY, INJURY OR DEATH ARISING FROM THE PRESENCE OF HAZARDOUS MATERIAL AND CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ANY CLAIMS MADE IN CONNECTION THEREWITH. MOREOVER, THE ENGINEER SHALL HAVE NO ADMINISTRATIVE OBLIGATIONS OF ANY TYPE WITH REGARD TO ANY CONTRACTOR AMENDMENT INVOLVING THE ISSUES OF PRESENCE, DISCOVERY, REMOVAL, ABATEMENT OR DISPOSAL OF ASBESTOS OR OTHER HAZARDOUS MATERIALS.

## Erosion Control

- 1. PRIOR TO STARTING ANY OTHER WORK ON THE SITE, THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES AND SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS IDENTIFIED IN FEDERAL, STATE, AND LOCAL APPROVAL DOCUMENTS PERTAINING TO THIS PROJECT.
- 2. CONTRACTOR SHALL INSPECT AND MAINTAIN EROSION CONTROL MEASURES ON A WEEKLY BASIS (MINIMUM) OR AS REQUIRED PER THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). THE CONTRACTOR SHALL ADDRESS DEFICIENCIES AND MAINTENANCE ITEMS WITHIN TWENTY—FOUR HOURS OF INSPECTION. CONTRACTOR SHALL PROPERLY DISPOSE OF SEDIMENT SUCH THAT IT DOES NOT ENCUMBER OTHER DRAINAGE STRUCTURES AND PROTECTED AREAS.
- 3. CONTRACTOR SHALL BE FULLY RESPONSIBLE TO CONTROL CONSTRUCTION SUCH THAT SEDIMENTATION SHALL NOT AFFECT REGULATORY PROTECTED AREAS, WHETHER SUCH SEDIMENTATION IS CAUSED BY WATER, WIND, OR DIRECT DEPOSIT.
- 4. CONTRACTOR SHALL PERFORM CONSTRUCTION SEQUENCING SUCH THAT EARTH MATERIALS ARE EXPOSED FOR A MINIMUM OF TIME BEFORE THEY ARE COVERED, SEEDED, OR OTHERWISE STABILIZED TO PREVENT EROSION.
- 5. UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER, CONTRACTOR SHALL REMOVE AND DISPOSE OF EROSION CONTROL MEASURES AND CLEAN SEDIMENT AND DEBRIS FROM ENTIRE DRAINAGE AND SEWER SYSTEMS.

## Existing Conditions Information

1. BASE PLAN: REFER TO SHEETS NUMBERED SV-1 THROUGH SV-6 TITLED "EXISTING CONDITIONS PLAN OF LAND" PREPARED BY VHB FOR #526-528 BOSTON POST ROAD, SUDBURY, MASSACHUSETTS DATED OCTOBER 28, 2015.

B. FLAGS MARKING THE WETLANDS WERE LOCATED BY: VHB SURVEY ON SEPTEMBER 15 AND 24,

- A. DELINEATION OF THE WETLANDS AND PLACEMENT OF THE FLAGS WAS PERFORMED BY: VHB
- 2015.
- TOPOGRAPHY: ELEVATIONS ARE BASED ON NAVD 1988.
   GEOTECHNICAL DATA INCLUDING TEST PIT AND BORING LOCATIONS AND ELEVATIONS WERE OBTAINED
- IN MAY 2015 FROM SANBORN HEAD & ASSOCIATES. RECORD BORING/WELL INSTALLATION LOGS BY GZA WERE OBTAINED FROM FEBRUARY—MARCH 1990, SEPTEMBER 1991, AUGUST 2007 & 2008, AND SEPTEMBER 2008.

## Document Use

1. THESE PLANS AND CORRESPONDING CADD DOCUMENTS ARE INSTRUMENTS OF PROFESSIONAL SERVICE, AND SHALL NOT BE USED, IN WHOLE OR IN PART, FOR ANY PURPOSE OTHER THAN FOR WHICH IT WAS CREATED WITHOUT THE EXPRESSED, WRITTEN CONSENT OF VHB. ANY UNAUTHORIZED USE, REUSE, MODIFICATION OR ALTERATION, INCLUDING AUTOMATED CONVERSION OF THIS DOCUMENT

SHALL BE AT THE USER'S SOLE RISK WITHOUT LIABILITY OR LEGAL EXPOSURE TO VHB.

- 2. CONTRACTOR SHALL NOT RELY SOLELY ON ELECTRONIC VERSIONS OF PLANS, SPECIFICATIONS, AND DATA FILES THAT ARE OBTAINED FROM THE DESIGNERS, BUT SHALL VERIFY LOCATION OF PROJECT FEATURES IN ACCORDANCE WITH THE PAPER COPIES OF THE PLANS AND SPECIFICATIONS THAT ARE SUPPLIED AS PART OF THE CONTRACT DOCUMENTS.
- SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SCALED TO THEIR ACTUAL DIMENSIONS OR LOCATIONS ON THE DRAWINGS. THE CONTRACTOR SHALL REFER TO THE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.



101 Walnut Street PO Box 9151 Watertown, MA 02471 617.924.1770

## Grocery Store at Meadow Walk Sudbury

526-528 Boston Post Road Sudbury, MA

No. Revision

Local Approvals November 10, 2015

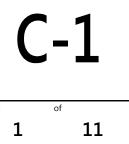
Not Approved for Construction

KEJ/BMG

Legend and
General Notes



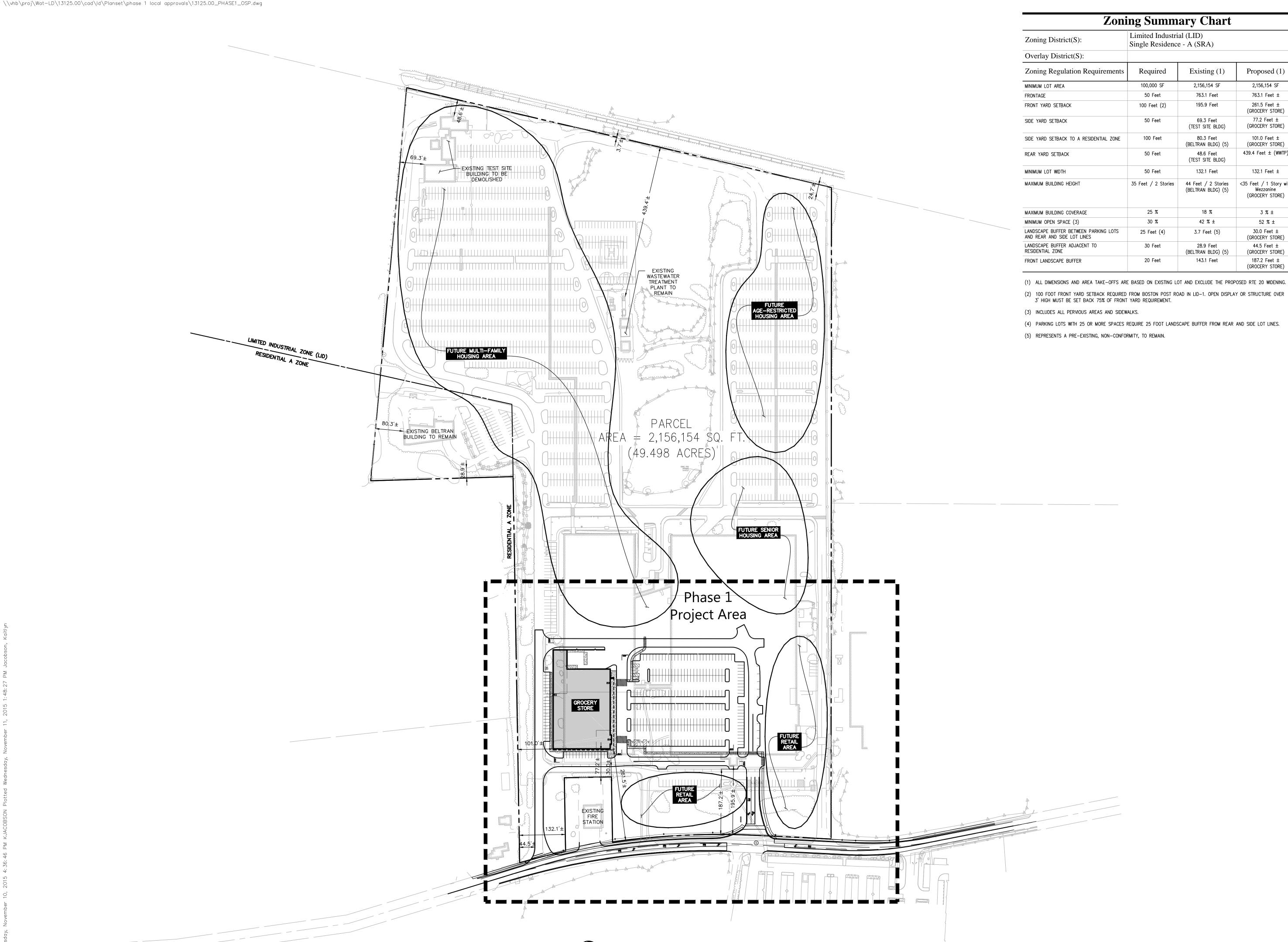
11/10/2015



KFS

Project Number 13125.00

Drawing Number





Watertown, MA 02471

617.924.1770

Existing (1)

2,156,154 SF

763.1 Feet

195.9 Feet

69.3 Feet

(TEST SITE BLDG)

80.3 Feet

(BELTRAN BLDG) (5)

48.6 Feet

132.1 Feet

44 Feet / 2 Stories

(BELTRAN BLDG) (5)

18 %

42 % ±

3.7 Feet (5)

28.9 Feet

(BELTRAN BLDG) (5) 143.1 Feet

(TEST SITE BLDG)

439.4 Feet ± (WWTP)

132.1 Feet ±

<35 Feet / 1 Story with

(GROCERY STORE)

3 % ±

52 % ±

30.0 Feet  $\pm$ 

(GROCERY STORE)

44.5 Feet ±

(GROCERY STORE)

187.2 Feet ±

(GROCERY STORE)

- (4) PARKING LOTS WITH 25 OR MORE SPACES REQUIRE 25 FOOT LANDSCAPE BUFFER FROM REAR AND SIDE LOT LINES.
- (5) REPRESENTS A PRE-EXISTING, NON-CONFORMITY, TO REMAIN.

# Grocery Store at Meadow Walk Sudbury

526-528 Boston Post Road Sudbury, MA

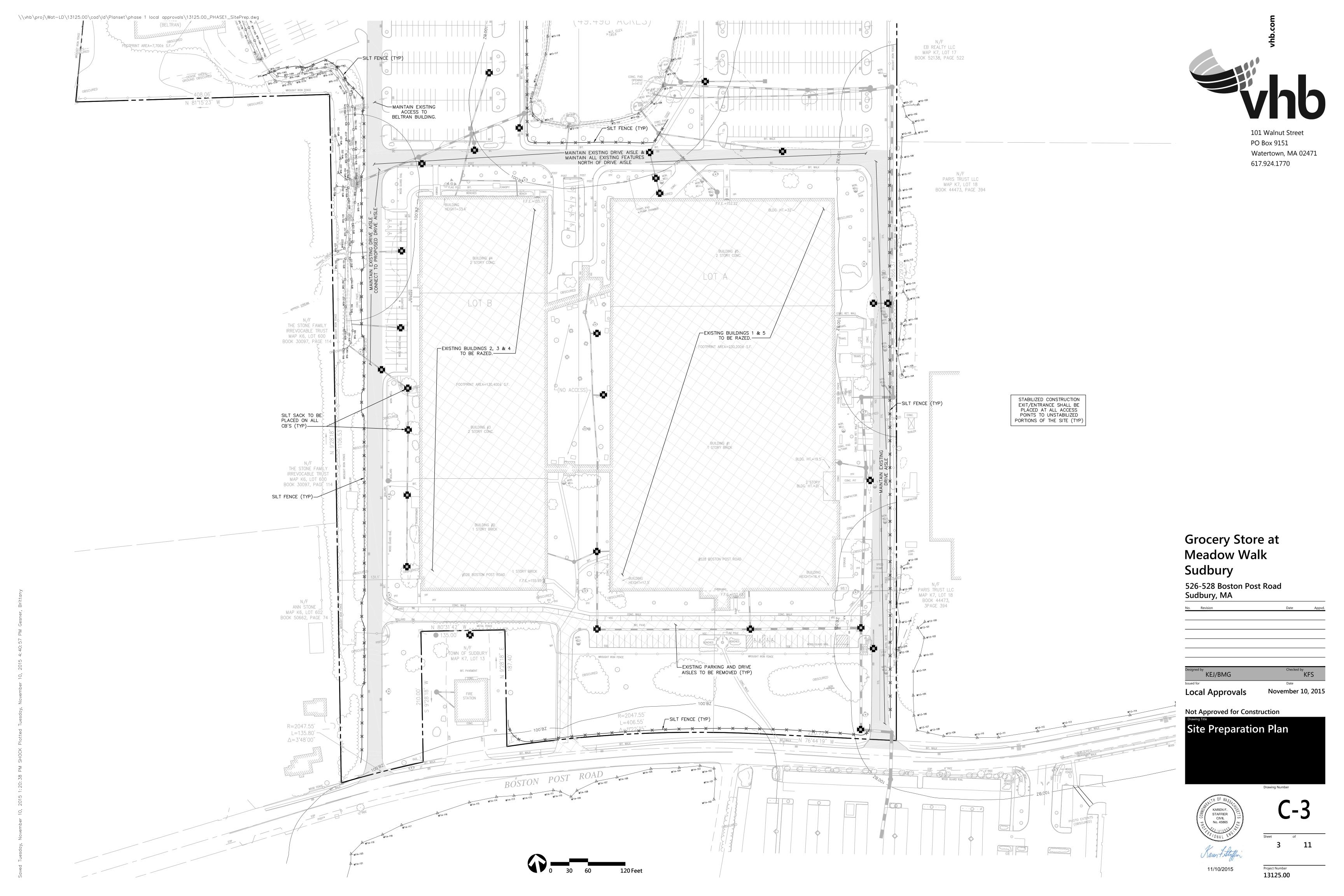
KEJ/BMG

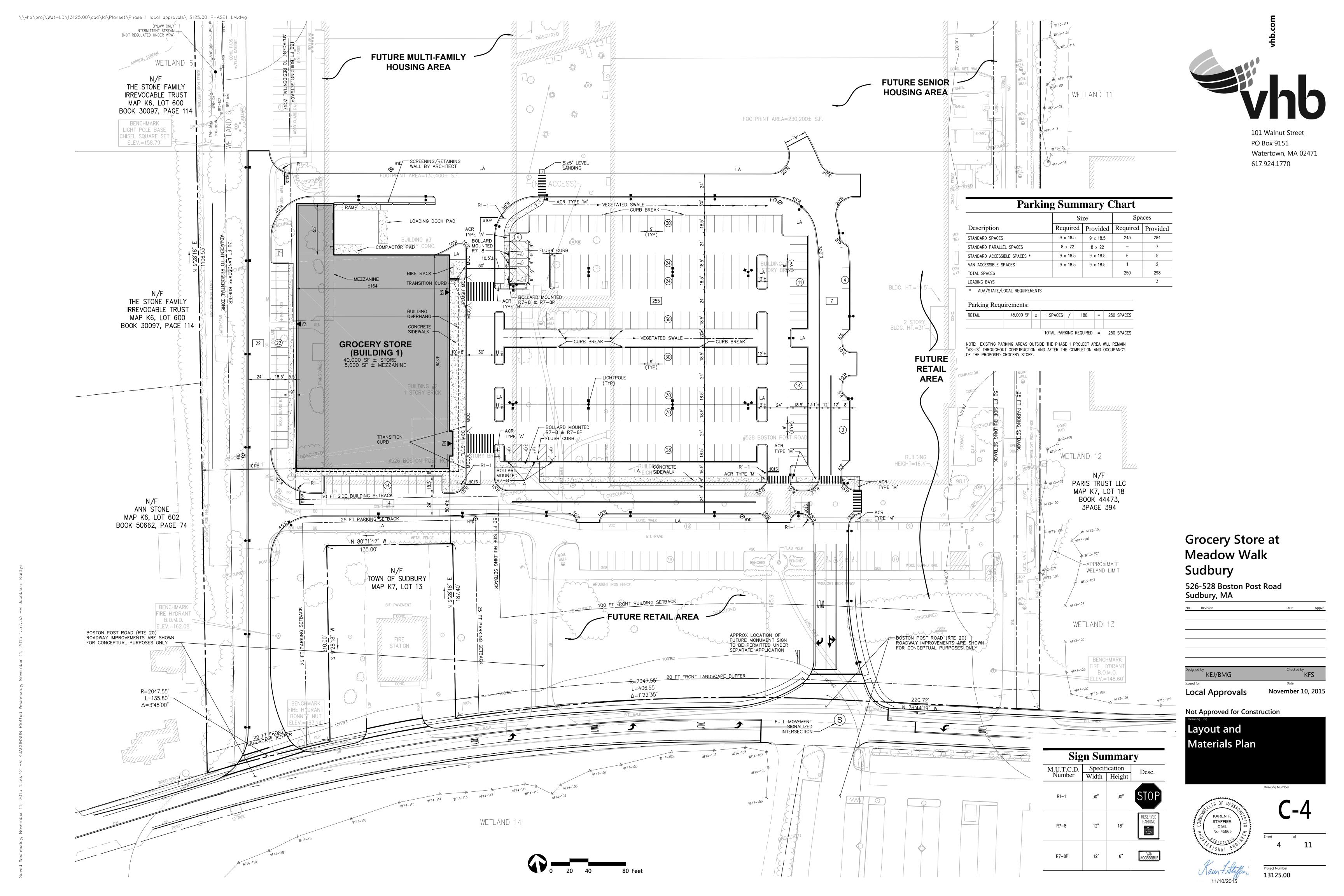
November 10, 2015 **Local Approvals** 

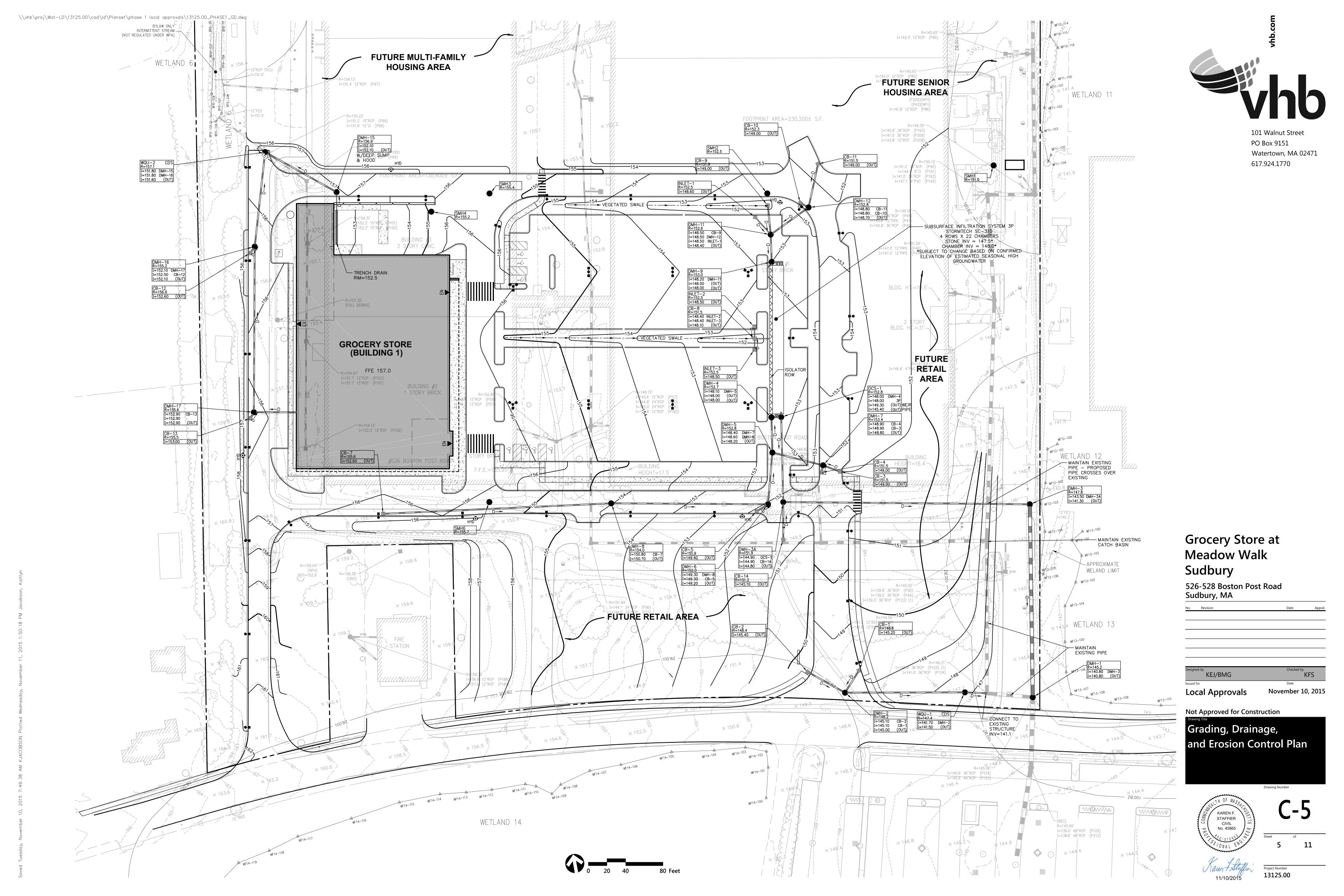
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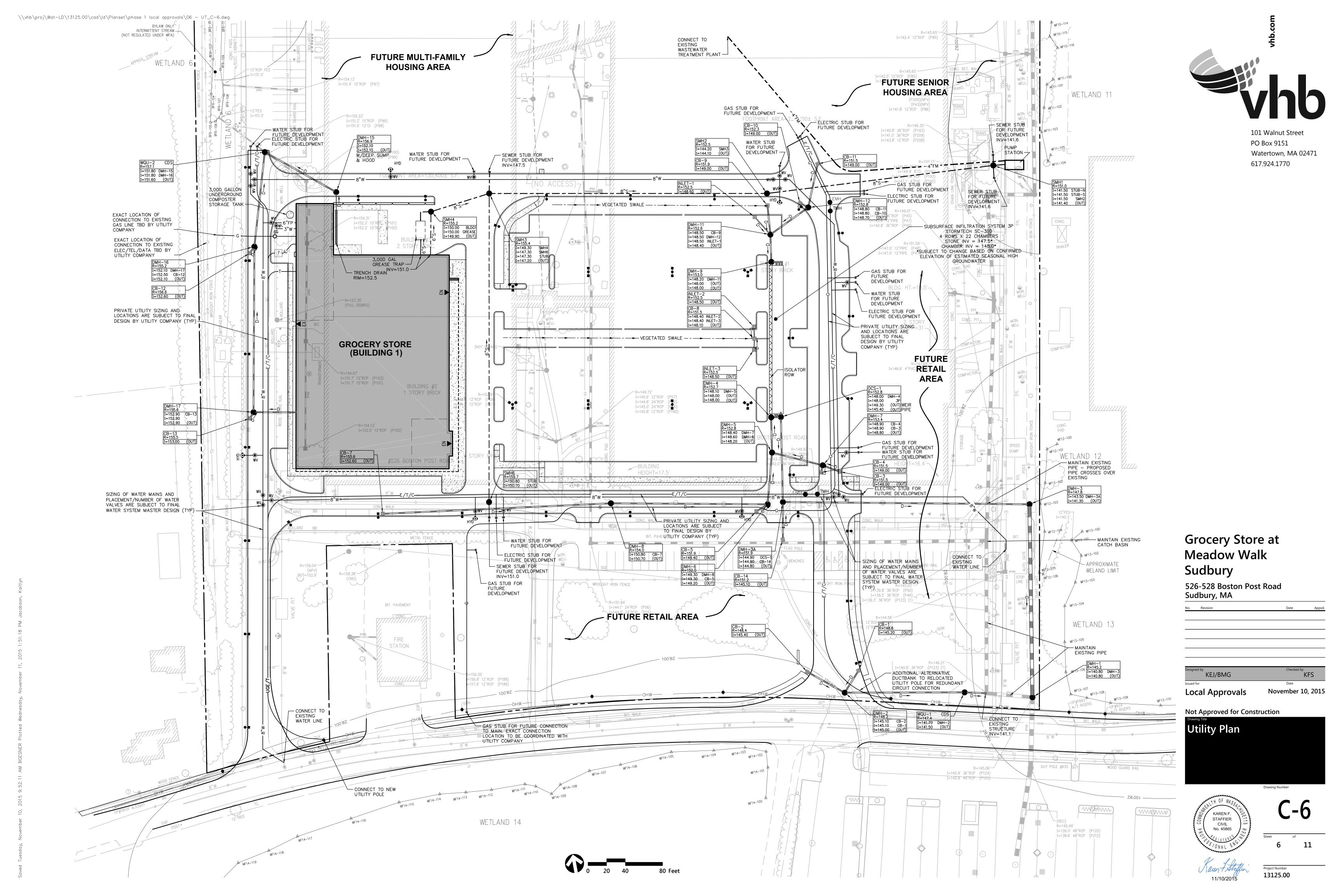








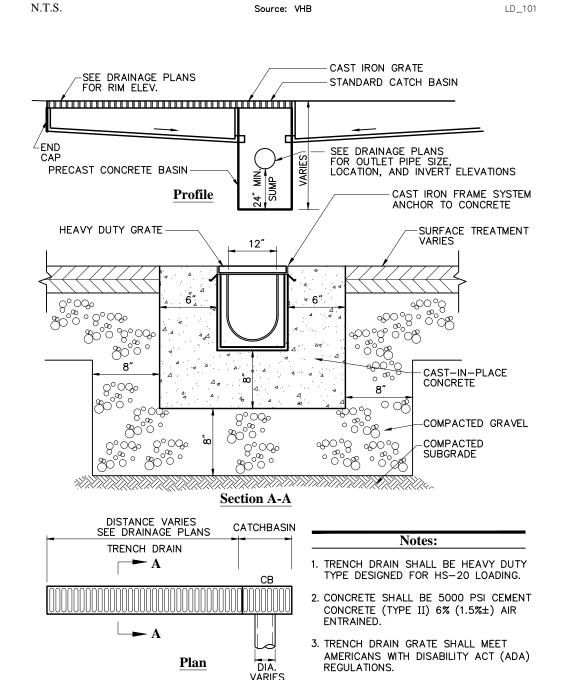




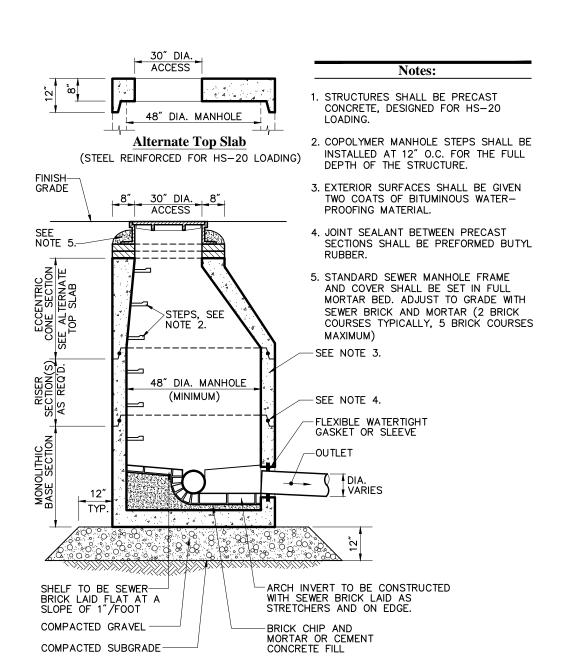
Catch Basin (CB) With Oil/Debris Trap

Trench Drain (Truck Dock)

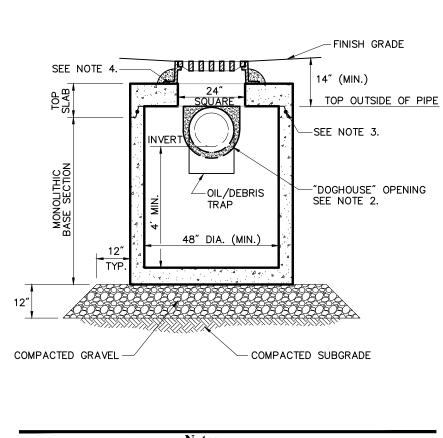
**Sanitary Sewer Manhole (SMH)** 



6/08

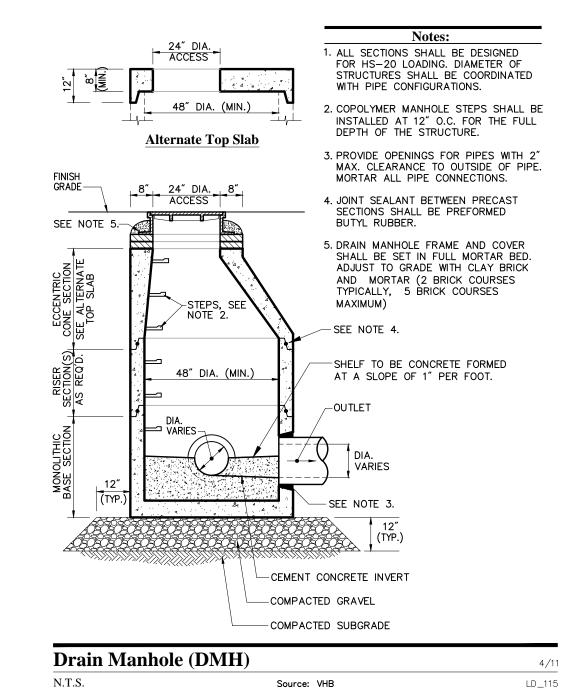


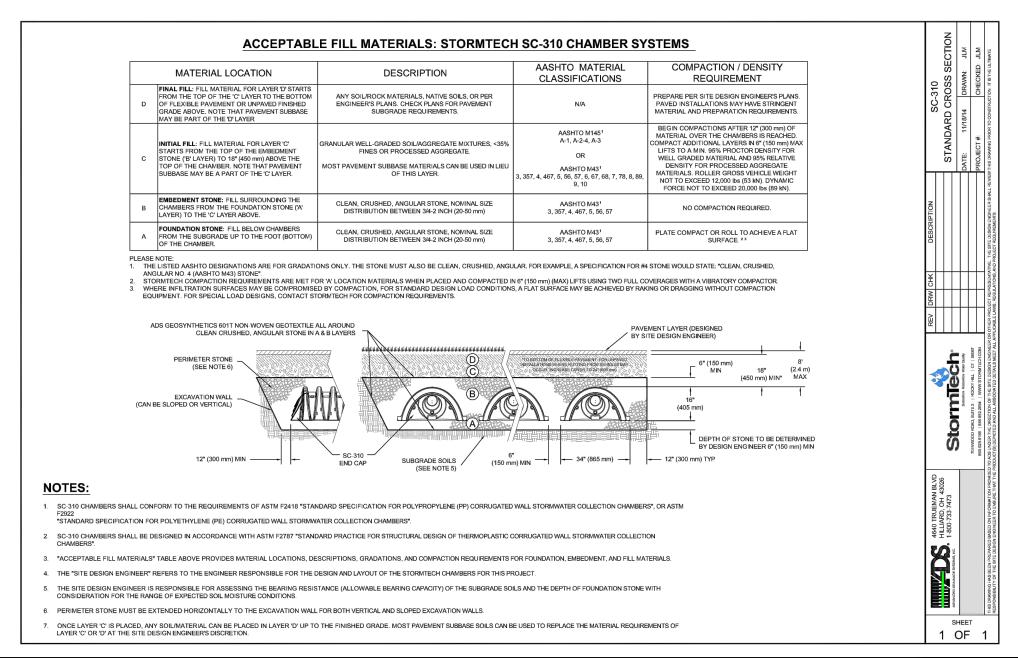
Source: VHB

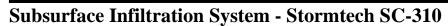


- 1. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
- 2. PROVIDE DOGHOUSE OPENING FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. TOP SLAB SHALL NOT REST DIRECTLY ON PIPE. GROUT ALL PIPE CONNECTIONS (NON-SHRINK GROUT).
- 3. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL
- 4. CATCH BASIN FRAME AND GRATE (4"DEPTH) SHALL BE SET IN FULL MORTAR
- 5. ADJUST TO FINISH GRADE WITH CLAY BRICK AND MORTAR AS REQUIRED.

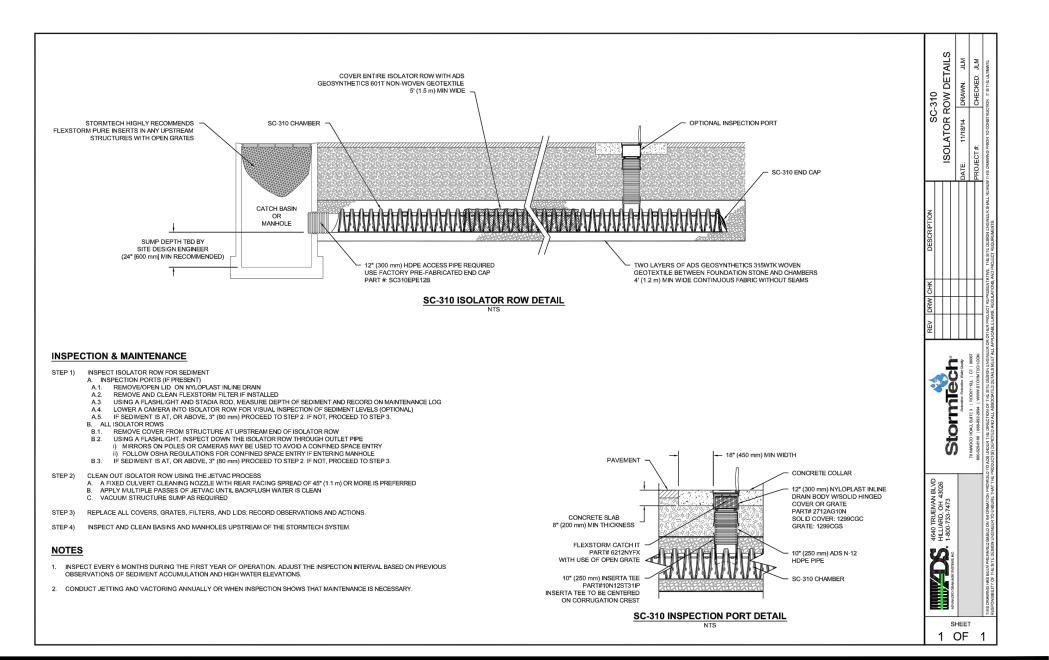
Catch Basin (CB) Shallow Cover with Oil/Debris Trap 6/08 N.T.S. LD\_105 Source: VHB



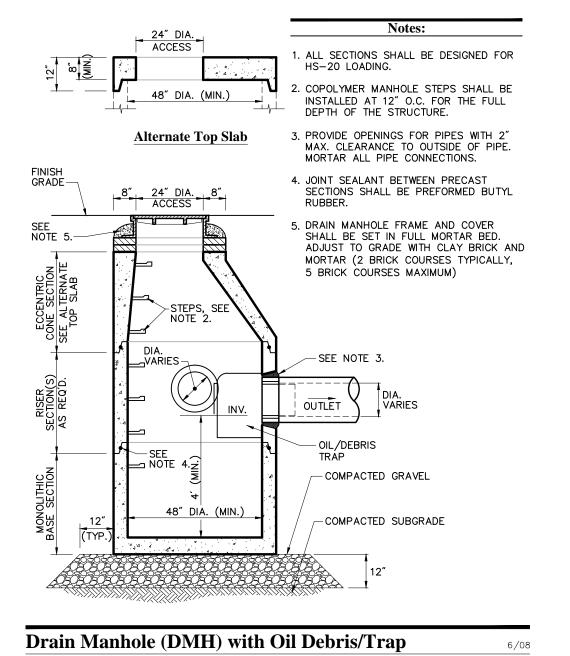




Source: STORMTECH

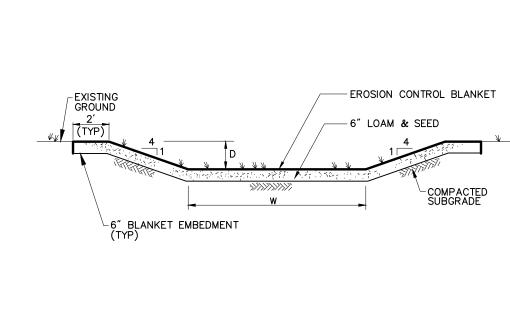


**Isolator Row - Stormtech SC-310** 

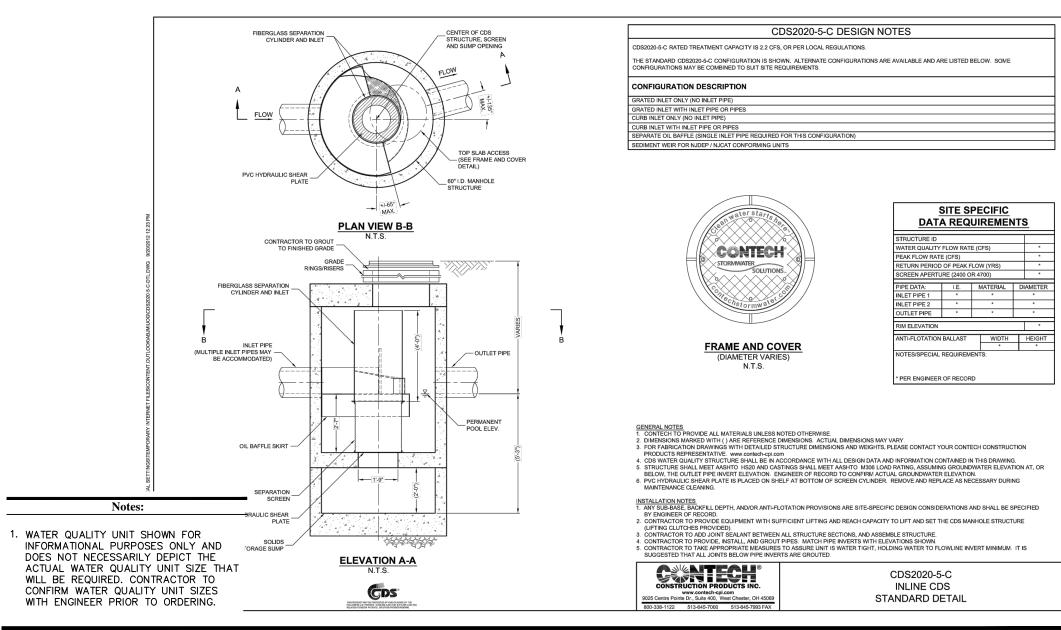


Source: VHB

N.T.S.



Source: VHB



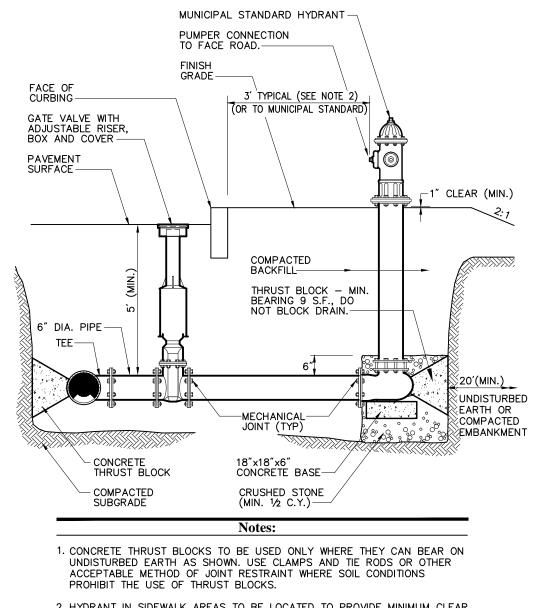
LD\_116

**Vegetated Swale** 

N.T.S.



Source: Contech

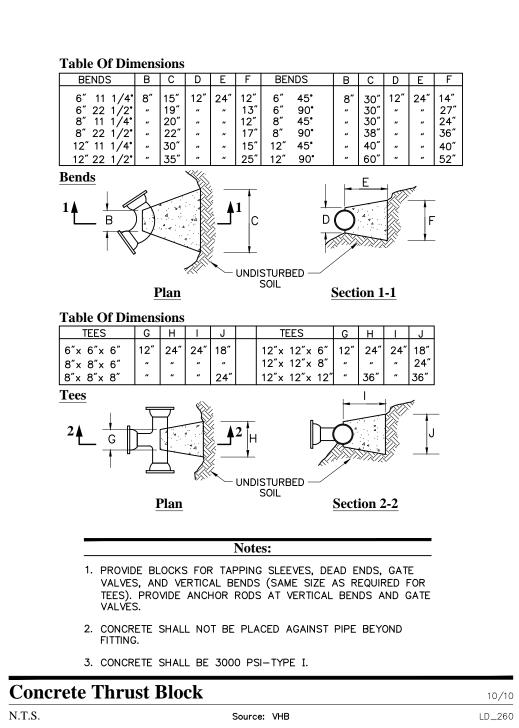


2. HYDRANT IN SIDEWALK AREAS TO BE LOCATED TO PROVIDE MINIMUM CLEAR SIDEWALK PASSAGE WIDTH OF 3 FEET AT HYDRANT.

LD\_250

**Hvdrant Construction** 6/08 N.T.S.

Source: VHB





526-528 Boston Post Road Sudbury, MA

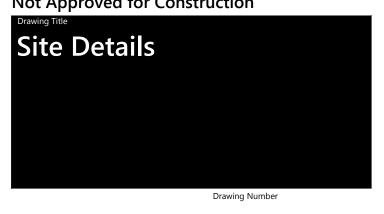
Designed by KEJ/BMG	Checked by KFS		
Issued for	Date		
Local Approvals	November 10, 2015		
Not Approved for Const	ruction		
Not Approved for Construction			

101 Walnut Street

Watertown, MA 02471

PO Box 9151

617.924.1770





11/10/2015

Project Number

13125.00

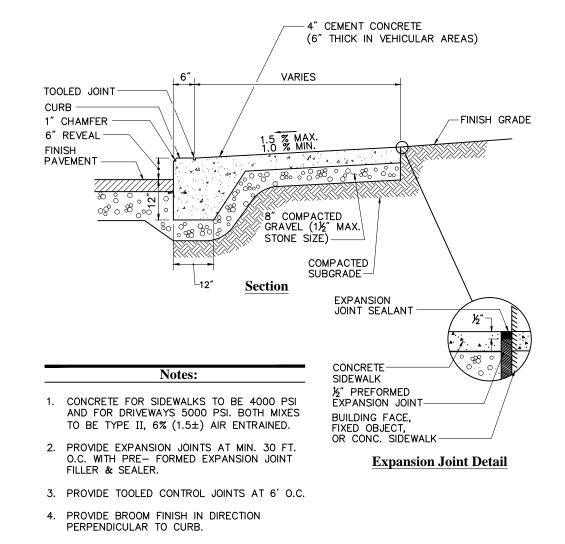
6/08 N.T.S. LD\_200

N.T.S.

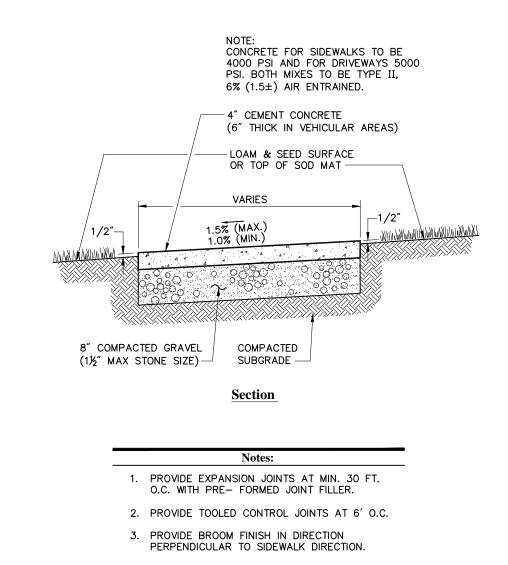
LD\_190-B

Source: STORMTECH

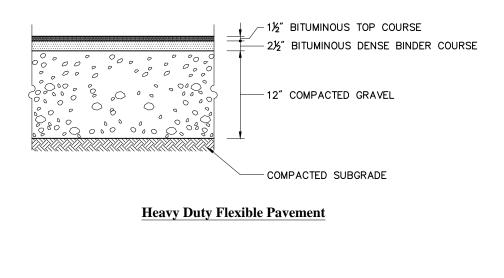


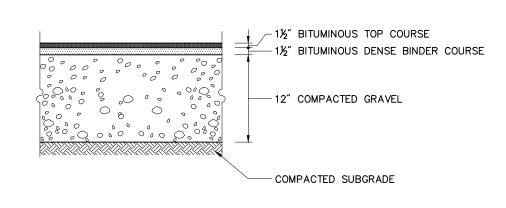


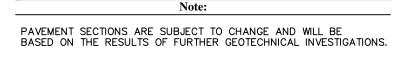






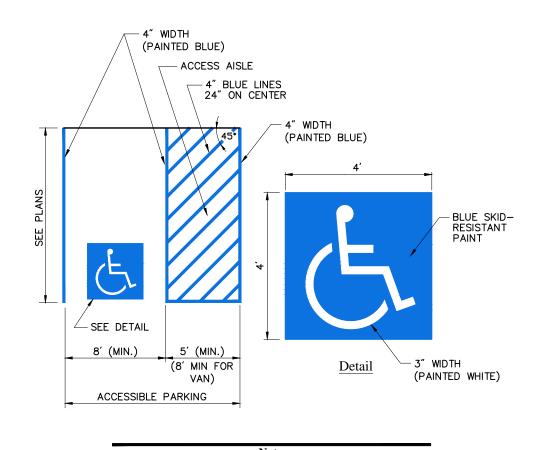






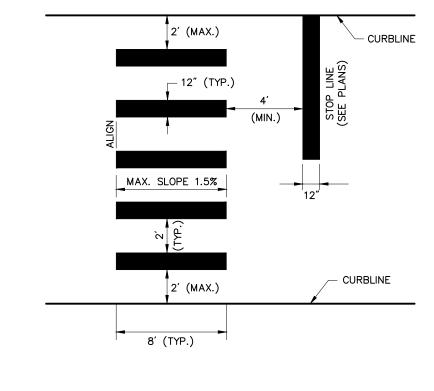
**Standard Duty Flexible Pavement** 





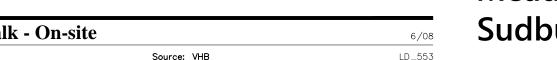
- 1. ALL DIMENSIONS TO EDGES OF 4" PAVEMENT STRIPING.
- 8' STALL WIDTH REFERS TO 8' CLEAR BETWEEN INSIDE EDGES OF PAVEMENT MARKINGS.
- ALL SLOPES THROUGHOUT THE ACCESSIBLE PARKING AND AISLE AREAS SHALL NOT EXCEED 1.5%.
- ACCESS AISLE MEASURED BETWEEN OUTSIDE EDGES OF PAVEMENT MARKINGS.

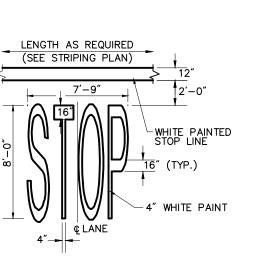
Accessible Parl	12/14	
N.T.S.	Source: VHB	LD_552b



- 1. TWELVE INCH (12") LINES SHALL BE APPLIED IN ONE APPLICATION, NO COMBINATION OF LINES (TWO 6 INCH LINES) WILL BE ACCEPTED.
- 2. LONGITUDINAL CROSSWALK LINES TO BE PARALLEL TO CURBLINE.
- ALL LONGITUDINAL CROSSWALK LINES TO BE THE SAME LENGTH AND PROPERLY ALIGNED. 4. CROSS WALK SIDESLOPE SHALL NOT EXCEED 1.5%.

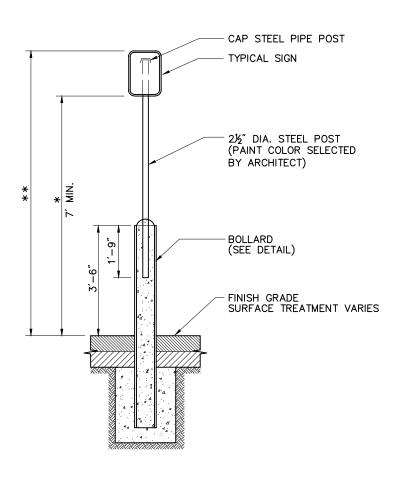
Crosswalk - On-site		6/08	
N.T.S.	Source: VHB	LD_553	



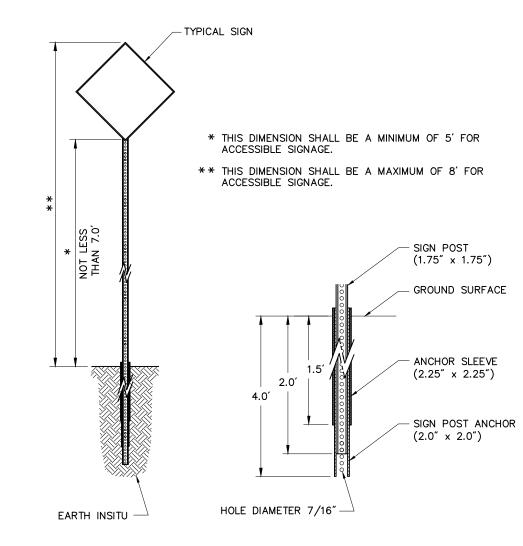


1. PAVEMENT MARKINGS TO BE INSTALLED FOR ON SITE WORK IN LOCATIONS SHOWN.

Painted Paver	nent Markings - On Site	6/08
N.T.S.	Source: VHB	LD 554



- \* THIS DIMENSION SHALL BE A MINIMUM OF 5' FOR ACCESSIBLE SIGNAGE. \*\* THIS DIMENSION SHALL BE A A MAXIMUM OF 8' FOR ACCESSIBLE SIGNAGE.
- **Bollard Mounted Sign** 4/12 N.T.S. Source: VHB LD\_703







101 Walnut Street

Watertown, MA 02471

PO Box 9151

617.924.1770

526-528 Boston Post Road Sudbury, MA

Date	Appv
	(FS
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Date	
November 10	). 201
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Site Details



Project Number

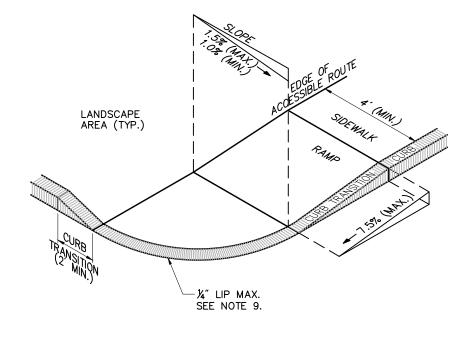
11/10/2015

Matage	

- 1. THE MAXIMUM ALLOWABLE SIDEWALK AND CURB RAMP CROSS SLOPES SHALL BE 1.5 (1% MIN.).
- 2. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE EXCLUDING CURB RAMPS SHALL BE 5%. 3. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE AT CURB RAMPS SHALL BE 7.5%.
- 4. A MINIMUM OF 3 FEET CLEAR SHALL BE MAINTAINED AT ANY PERMANENT OBSTACLE IN ACCESSIBLE ROUTE (I.E., HYDRANTS, UTILITY POLES, TREE WELLS, SIGNS, ETC.).
- 5. CURB TREATMENT VARIES, SEE PLANS FOR CURB TYPE. 6. RAMP, CURB, AND ADJACENT PAVEMENTS SHALL BE GRADED TO PREVENT PONDING.
- 7. SEE TYPICAL SIDEWALK SECTION FOR RAMP CONSTRUCTION.
- 8. WHERE ACCESSIBLE ROUTES ARE LESS THAN 5' IN WIDTH (EXCLUDING CURBING) A 5'  $\times$  5' PASSING AREA SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 200 FEET.
- 9. ELIMINATE CURBING AT RAMP (OTHER THAN VERTICAL CURBING, WHICH SHALL BE SET FLUSH) WHERE IT ABUTS ROADWAY.

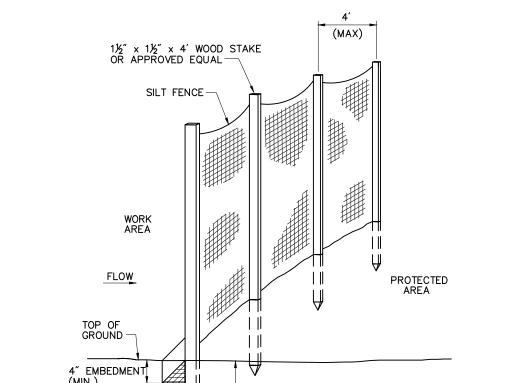
Accessible Curb Ramp (ACR) Type 'A'	11

LD\_500



- 1. THE MAXIMUM ALLOWABLE SIDEWALK AND CURB RAMP CROSS SLOPES SHALL BE 1.5 (1% MIN.).
- 2. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE EXCLUDING CURB RAMPS SHALL BE 5%. 3. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE AT CURB RAMPS SHALL BE 7.5%.
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- 7. SEE TYPICAL SIDEWALK SECTION FOR RAMP CONSTRUCTION.
- 8. WHERE ACCESSIBLE ROUTES ARE LESS THAN 5' IN WIDTH (EXCLUDING CURBING) A 5'  $\times$  5' PASSING AREA SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 200 FEET.
- 9. ELIMINATE CURBING AT RAMP WHERE IT ABUTS ROADWAY, EXCEPT WHERE VERTICAL CURBING IS INDICATED ON THE DRAWINGS TO BE INSTALLED AND SET FLUSH.





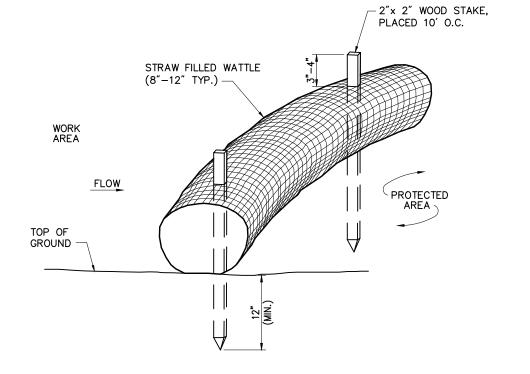
Silt Fence Barrier		6/0
N.T.S.	Source: VHB	LD_65

STAPLE

Wood Stake

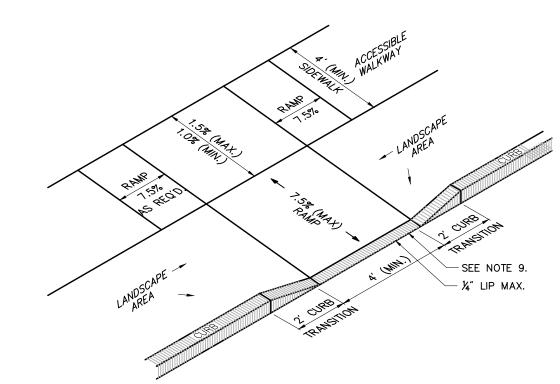
Joint Detail

PLACE 4" OF FABRIC ALONG TRENCH AWAY FROM PROTECTED AREA BACKFILL AND COMPACT—



- 1. STRAW WATTLE SHALL BE AS MANUFACTURED BY EARTHSAVER
- OR APPROVED EQUAL.
- 2. STRAW WATTLES SHALL OVERLAP A MINIMUM OF 12 INCHES.
- 3. STRAW WATTLE SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS, AND REPAIR OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.
- 4. TEMPORARY STRAW WATTLES TO BE REMOVED BY CONTRACTOR. ALL OTHERS TO REMAIN IN PLACE UNLESS DIRECTED OTHERWISE BY ENGINEER.
- 5. IF NON BIODEGRADABLE NETTING IS USED THE NETTING SHALL BE COLLECTED AND DISPOSED OF OFFSITE.

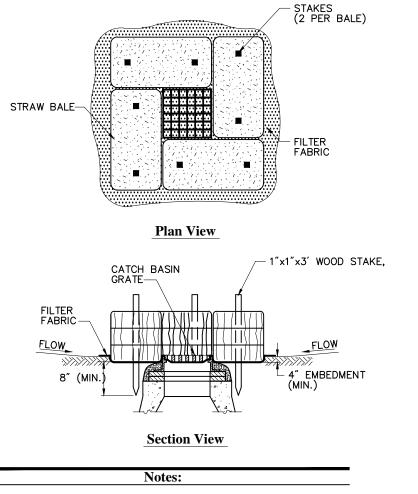
**Straw Wattle - Erosion Control Barrier** 8/12 N.T.S.





- 1. THE MAXIMUM ALLOWABLE SIDEWALK AND CURB RAMP CROSS SLOPES SHALL BE 1.5 (1% MIN.). 2. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE EXCLUDING CURB RAMPS SHALL BE 5%.
- 3. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE AT CURB RAMPS SHALL BE 7.5%. 4. A MINIMUM OF 3 FEET CLEAR SHALL BE MAINTAINED AT ANY PERMANENT OBȘTACLE IN ACCESSIBLE ROUTE (I.E., HYDRANTS, UTILITY POLES, TREE WELLS, SIGNS, ETC.).
- 5. CURB TREATMENT VARIES, SEE PLANS FOR CURB TYPE. 6. RAMP, CURB AND ADJACENT PAVEMENTS SHALL BE GRADED TO PREVENT PONDING.
- 7. TYPICAL SIDEWALK SECTION FOR RAMP SECTION CONSTRUCTION.
- 8. WHERE ACCESSIBLE ROUTES ARE LESS THAN 5' IN WIDTH (EXCLUDING CURBING) A 5' x 5' PASSING AREA SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 200 FEET.
- 9. ELIMINATE CURBING (OTHER THAN VERTICAL CURBING, WHICH SHALL BE SET FLUSH) WHERE IT ABUTS ROADWAY.

Accessible Cur	b Ramp (ACR)	Type 'K'	11/10
N.T.S.	Source:	VHB	LD_510



- 1. ENCLOSE STRUCTURE WITH HAYBALES IMMEDIATELY AFTER CATCH BASIN CONSTRUCTION. MAINTAIN UNTIL PAVING BINDER COURSE IS COMPLETE OR A PERMANENT STAND OF GRASS HAS BEEN ESTABLISHED.
- 2. IF GRATE IS AGAINST EXISTING CURB THEN BALES ARE TO BE PLACED AROUND THREE SIDES OF GRATE ONLY.
- 3. GRATE TO BE PLACED OVER FILTER FABRIC.

CATCH BASIN GRATE-

SILTSACK -

CATCH BASIN GRATE-

SILTSACK -

2. GRATE TO BE PLACED OVER SILTSACK.

AREAS HAVE BEEN PERMANENTLY STABILIZED

4. BALES SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND REPAIR OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.

PERFORMED PROMPILE AS NEEDED.		
Catch Basin Se	diment Trap	2/11
N.T.S.	Source: VHB	LD_673

Plan View

**Section View** 

. INSTALL SILTSACK IN ALL CATCH BASINS WHERE INDICATED ON THE PLAN BEFORE COMMENCING WORK OR IN PAVED AREAS

3. SILTSACK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED. MAINTAIN UNTIL UPSTREAM

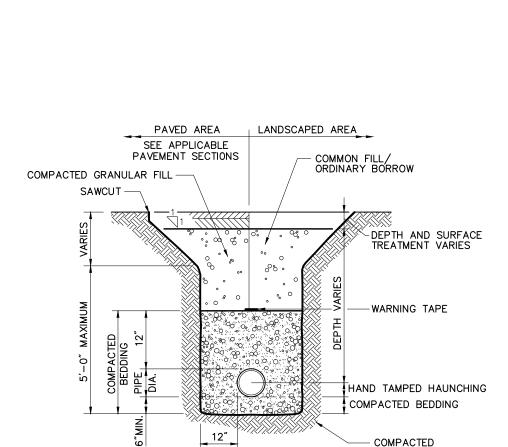
AFTER BINDER COURSE IS PLACED AND HAY BALES HAVE BEEN

—1" REBAR FOR BAG REMOVAL

-EXPANSION RESTRAINT

6/08

LD\_674



1. THE MAXIMUM ALLOWABLE SIDEWALK AND CURB RAMP CROSS SLOPES SHALL BE 1.5 (1% MIN.).

3. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE AT CURB RAMPS SHALL BE 7.5%.

8. WHERE ACCESSIBLE ROUTES ARE LESS THAN 5' IN WIDTH (EXCLUDING CURBING) A 5'  $\times$  5'

9. ELIMINATE CURBING (OTHER THAN VERTICAL CURBING, WHICH SHALL BE SET FLUSH) WHERE IT

Source: VHB

11/10

LD\_512

4. A MINIMUM OF 3 FEET CLEAR SHALL BE MAINTAINED AT ANY PERMANENT OBSTACLE IN ACCESSIBLE ROUTE (I.E., HYDRANTS, UTILITY POLES, TREE WELLS, SIGNS, ETC.).

6. RAMP, CURB AND ADJACENT PAVEMENTS SHALL BE GRADED TO PREVENT PONDING.

PASSING AREA SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 200 FEET.

5. CURB TREATMENT VARIES, SEE PLANS FOR CURB TYPE.

7. TYPICAL SIDEWALK SECTION FOR RAMP SECTION CONSTRUCTION.

Accessible Curb Ramp (ACR) Type 'M'

N.T.S.

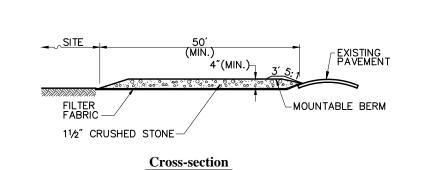
2. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE EXCLUDING CURB RAMPS SHALL BE 5%.

. WHERE UTILITY TRENCHES ARE CONSTRUCTED THROUGH DETENTION BASIN BERMS OR OTHER SUCH SPECIAL SECTIONS, PLACE TRENCH BACKFILL WITH MATERIALS SIMILAR TO THE SPECIAL SECTION REQUIREMENTS.

2. USE METALLIC TRACING/WARNING TAPE OVER ALL PIPES.

<b>Utility Trench</b>		8/11
N.T.S.	Source: VHB	LD_300

# Plan View



Notes: 1. ENTRANCE WIDTH SHALL BE A TWENTY-FIVE (25) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.

2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY. BERM SHALL BE PERMITTED. PERIODIC INSPECTION AND MAINTENANCE SHALL BE

3. STABILIZED CONSTRUCTION EXIT SHALL BE REMOVED PRIOR TO FINAL FINISH MATERIALS BEING INSTALLED.

### **Stabilized Construction Exit** N.T.S. LD\_682 Source: VHB

PROVIDED AS NEEDED.



526-528 Boston Post Road Sudbury, MA

Revision	Date	Appv
	Revision	Revision Date

101 Walnut Street

Watertown, MA 02471

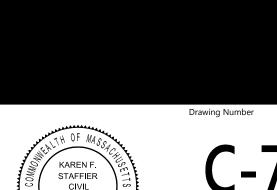
PO Box 9151

617.924.1770

KEJ/BMG KFS November 10, 2015

**Local Approvals** 

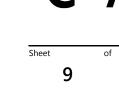
Not Approved for Construction **Site Details** 





11/10/2015

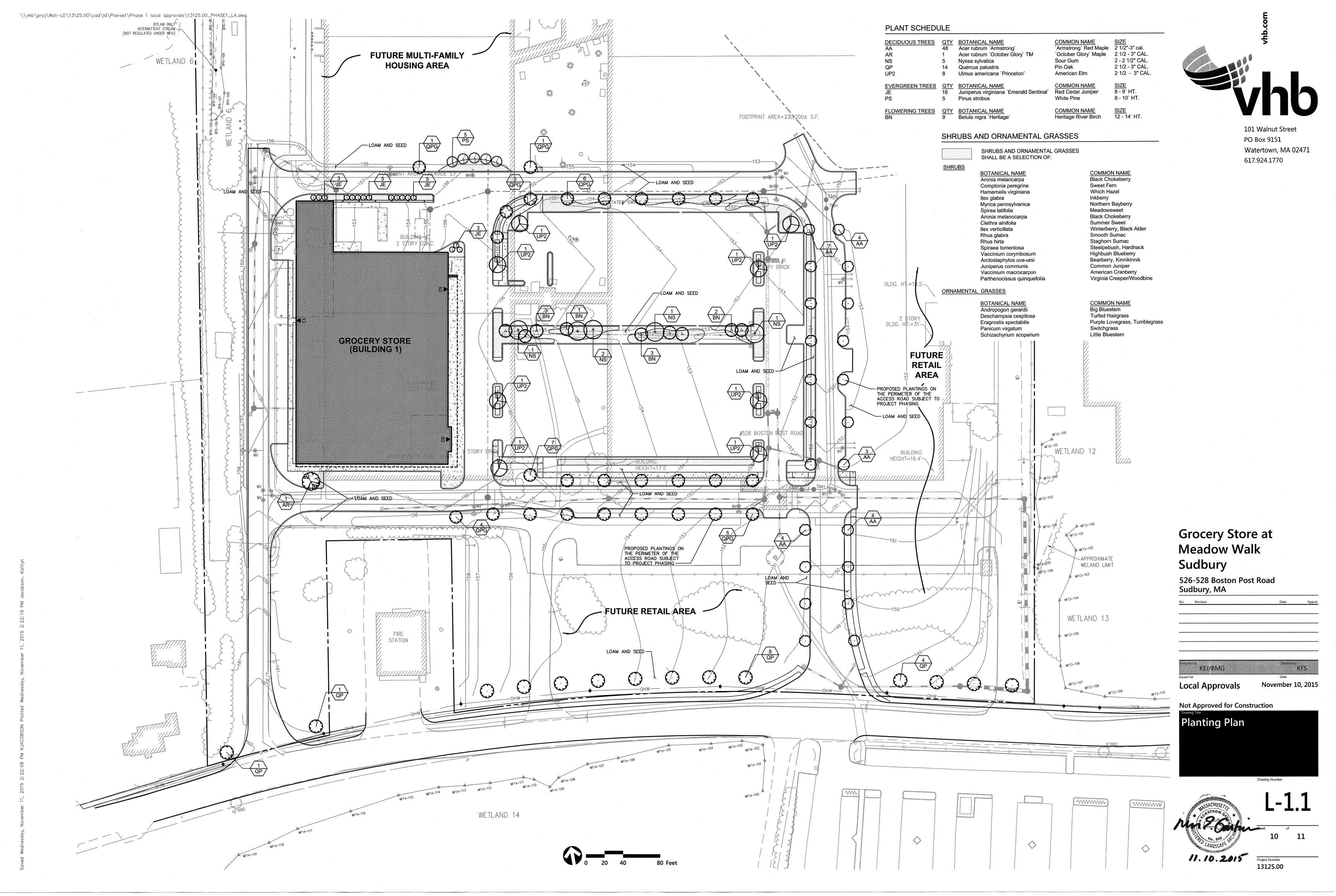
6/08



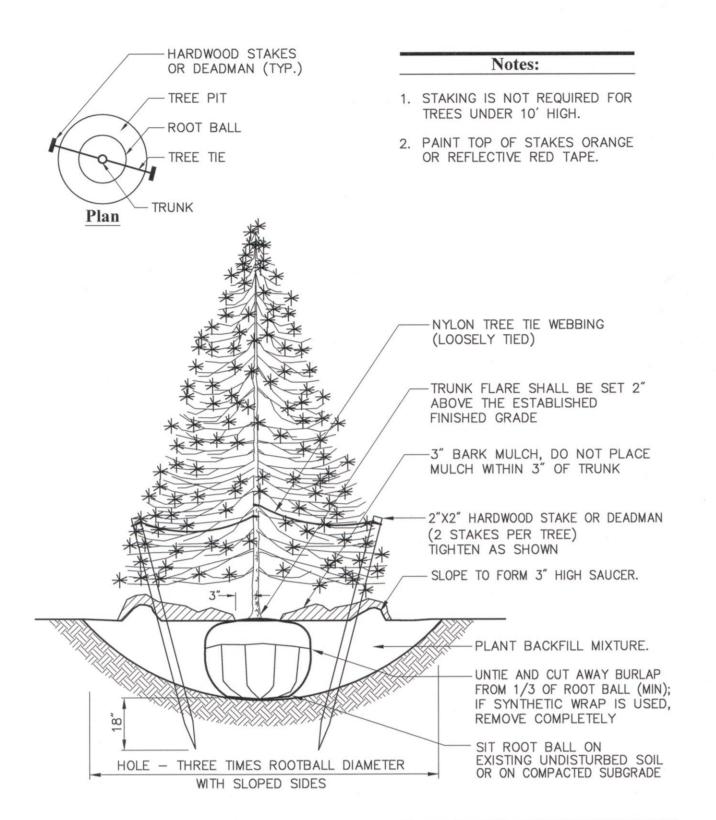
Project Number

13125.00

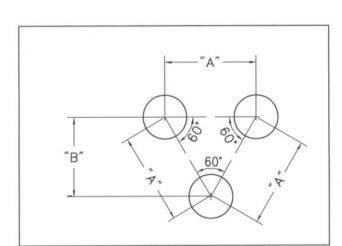
Siltsack Sediment Trap Source: VHB LD\_659 N.T.S. Source: VHB



Multistem Tree Planting		6/15
N.T.S.	Source: VHB	LD_606

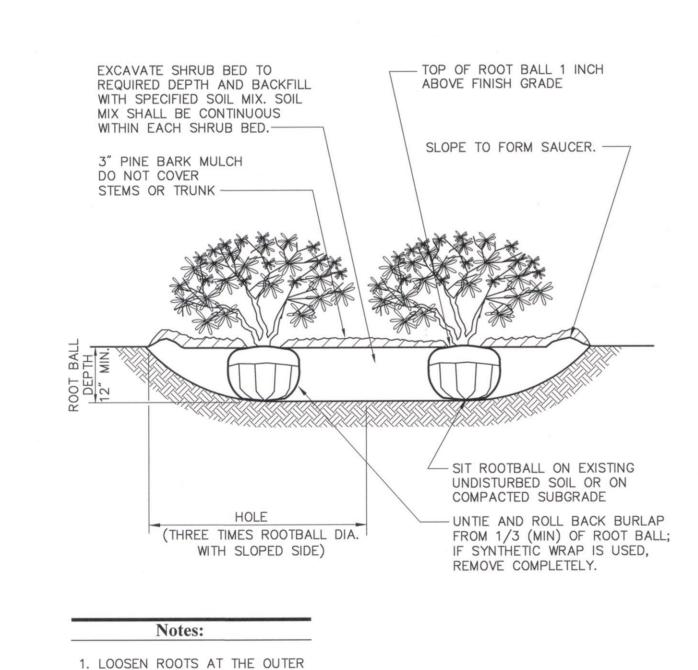


vergreen Tree Planting		6/15
.T.S.	Source: VHB	LD_604



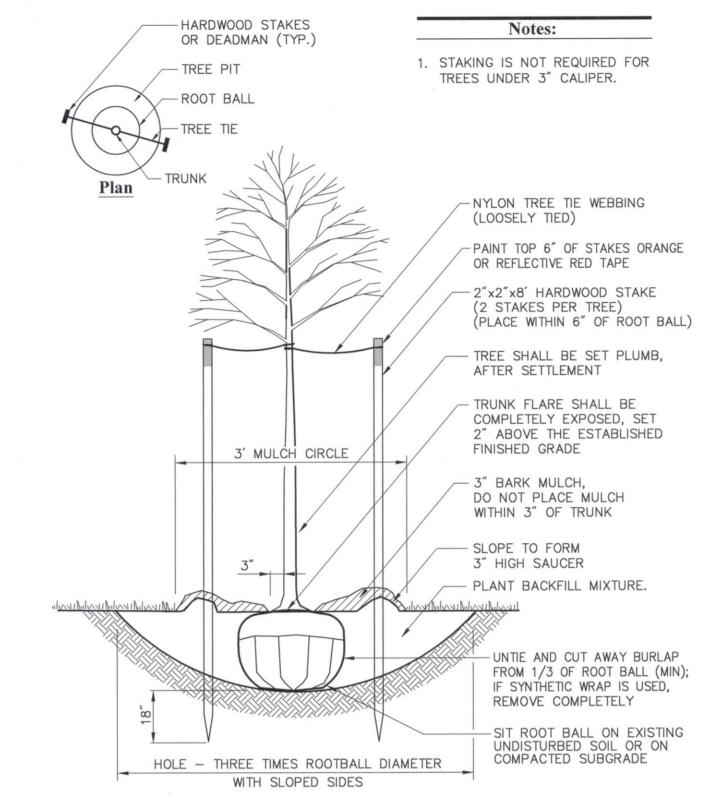
PLANT SPACING ("A")	ROW SPACING ("B")
6 IN. O.C.	5 IN. O.C.
8 IN. O.C.	7 IN. O.C.
10 IN. O.C.	8-1/2 IN. O.C.
12 IN. O.C.	10-1/2 IN. O.C.
15 IN. O.C.	13 IN. O.C.
18 IN. O.C.	16 IN. O.C.
24 IN. O.C.	21 IN. O.C.
30 IN. O.C.	26 IN. O.C.
36 IN. O.C.	30 IN. O.C.
48 IN. O.C.	42 IN. O.C.
54 IN. O.C.	48 IN. O.C.
60 IN. O.C.	54 IN. O.C.

Ground Cover an	nd Shrub Spacing Chart	6/08
N.T.S.	Source: VHB	LD_616



**Shrub Bed Planting** 6/08 N.T.S. LD\_601 Source: VHB

EDGE OF ROOTBALL OF CONTAINER GROWN SHRUBS.



Tree Planting	(For Trees Under 4" Caliper)	6/15
N.T.S.	Source: VHB	LD_602

## Planting Notes

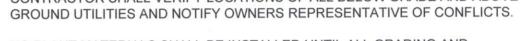
- 1. ALL PROPOSED PLANTING LOCATIONS SHALL BE STAKED AS SHOWN ON THE PLANS FOR FIELD REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
- 2. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL BELOW GRADE AND ABOVE
- 3. NO PLANT MATERIALS SHALL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA. CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE OF ANY CONFLICT.
- TREES AND SHRUBS, AND IN ALL PLANTING BEDS, UNLESS OTHERWISE INDICATED ON THE PLANS, OR AS DIRECTED BY OWNER'S REPRESENTATIVE.
- 5. ALL TREES SHALL BE BALLED AND BURLAPPED, UNLESS OTHERWISE NOTED IN THE DRAWINGS OR SPECIFICATION, OR APPROVED BY THE OWNER'S REPRESENTATIVE.
- 6. FINAL QUANTITY FOR EACH PLANT TYPE SHALL BE AS GRAPHICALLY SHOWN ON THE PLAN. THIS NUMBER SHALL TAKE PRECEDENCE IN CASE OF ANY DISCREPANCY BETWEEN QUANTITIES SHOWN ON THE PLANT LIST AND ON THE PLAN. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES BETWEEN THE NUMBER OF PLANTS SHOWN ON THE PLANT LIST AND PLANT LABELS PRIOR TO
- 9. ALL PLANT MATERIALS SHALL BE GUARANTEED FOR ONE YEAR FOLLOWING
- 10. AREAS DESIGNATED "LOAM & SEED" SHALL RECEIVE MINIMUM 6" OF LOAM AND SPECIFIED SEED MIX. LAWNS OVER 2:1 SLOPE SHALL BE PROTECTED WITH
- 11. ALL DISTURBED AREAS NOT OTHERWISE NOTED ON CONTRACT DOCUMENTS SHALL BE LOAM AND SEEDED OR MULCHED AS DIRECTED BY OWNER'S
- 12. THIS PLAN IS INTENDED FOR PLANTING PURPOSES. REFER TO SITE / CIVIL

## **Tree Protection**

- 1. EXISTING TREES TO REMAIN SHALL BE PROTECTED WITH TEMPORARY CONSTRUCTION FENCE. ERECT FENCE AT EDGE OF THE TREE DRIPLINE PRIOR TO START OF CONSTRUCTION.
- 2. CONTRACTOR SHALL NOT OPERATE VEHICLES WITHIN THE TREE PROTECTION AREA. CONTRACTOR SHALL NOT STORE VEHICLES OR MATERIALS, OR DISPOSE OF ANY WASTE MATERIALS, WITHIN THE TREE PROTECTION AREA.
- 3. DAMAGE TO EXISTING TREES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY A CERTIFIED ARBORIST AT THE CONTRACTOR'S EXPENSE.

## **Plant Maintenance Notes**

- CONTRACTOR SHALL PROVIDE COMPLETE MAINTENANCE OF THE LAWNS AND PLANTINGS. NO IRRIGATION IS PROPOSED FOR THIS SITE. THE CONTRACTOR SHALL SUPPLY SUPPLEMENTAL WATERING FOR NEW LAWNS AND PLANTINGS DURING THE ONE YEAR PLANT GUARANTEE PERIOD.
- 2. CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR, AND EQUIPMENT FOR THE COMPLETE LANDSCAPE MAINTENANCE WORK. WATER SHALL BE PROVIDED BY THE CONTRACTOR.
- WATERING SHALL BE REQUIRED DURING THE GROWING SEASON, WHEN NATURAL RAINFALL IS BELOW ONE INCH PER WEEK.
- 4. WATER SHALL BE APPLIED IN SUFFICIENT QUANTITY TO THOROUGHLY SATURATE THE SOIL IN THE ROOT ZONE OF EACH PLANT.
- 5. CONTRACTOR SHALL REPLACE DEAD OR DYING PLANTS AT THE END OF THE ONE YEAR GUARANTEE PERIOD. CONTRACTOR SHALL TURN OVER MAINTENANCE TO THE FACILITY MAINTENANCE STAFF AT THAT



- 4. A 3-INCH DEEP MULCH PER SPECIFICATION SHALL BE INSTALLED UNDER ALL

- 7. ANY PROPOSED PLANT SUBSTITUTIONS MUST BE REVIEWED BY LANDSCAPE ARCHITECT AND APPROVED IN WRITING BY THE OWNER'S REPRESENTATIVE.
- 8. ALL PLANT MATERIALS INSTALLED SHALL MEET THE SPECIFICATIONS OF THE "AMERICAN STANDARDS FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSERYMEN AND CONTRACT DOCUMENTS.
- DATE OF FINAL ACCEPTANCE.
- EROSION CONTROL FABRIC.
- REPRESENTATIVE.
- DRAWINGS FOR ALL OTHER SITE CONSTRUCTION INFORMATION.

## **Grocery Store at Meadow Walk** Sudbury

526-528 Boston Post Road Sudbury, MA

,	
Designed by	Checked by

101 Walnut Street

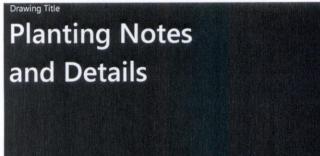
Watertown, MA 02471

PO Box 9151

617.924.1770

November 10, 2015 **Local Approvals** 

Not Approved for Construction





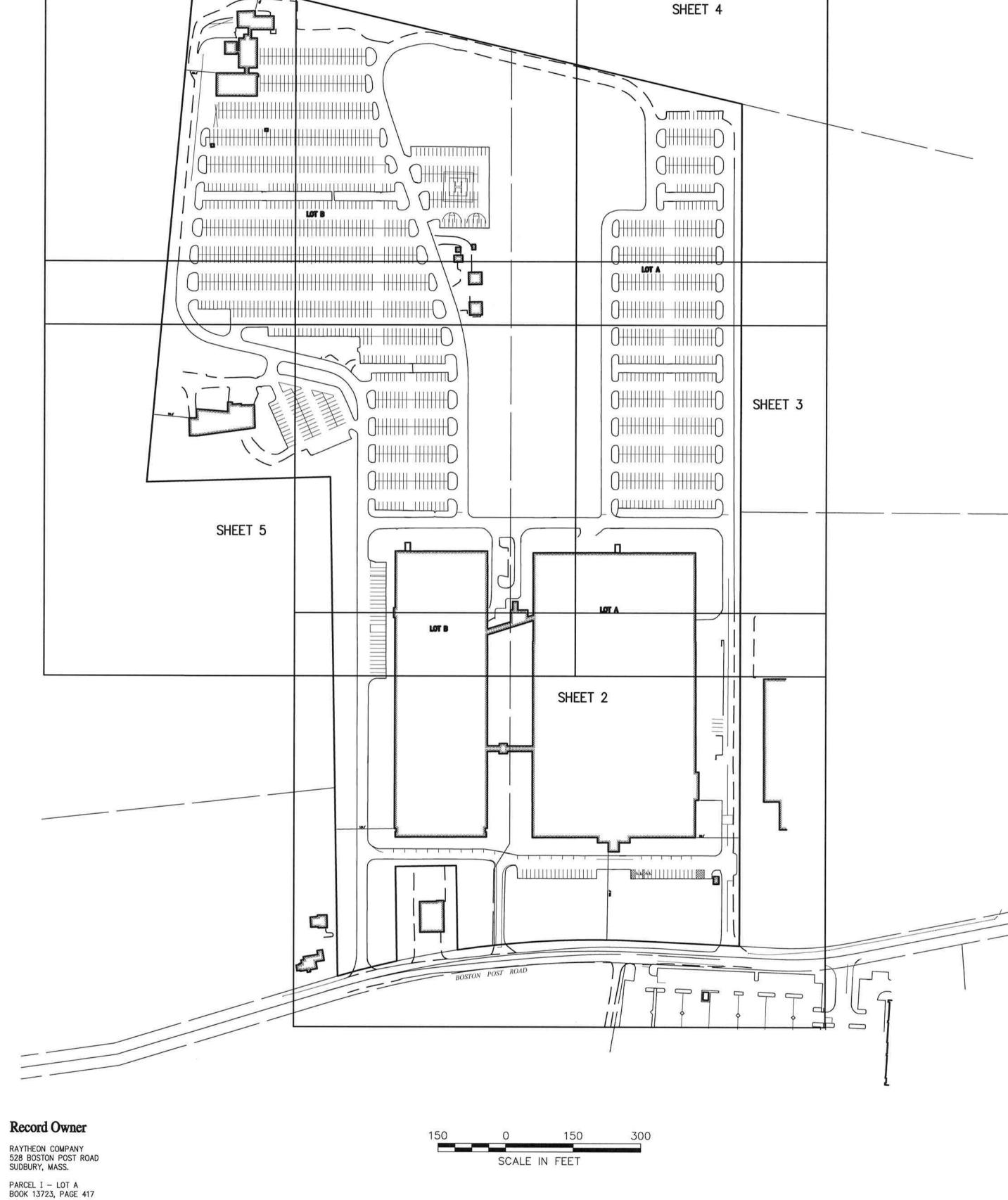


## General Notes

- 1) THE PROPERTY LINES SHOWN ON THIS PLAN ARE BASED UPON AN ACTUAL FIELD SURVEY CONDUCTED BY VHB, INC. IN JUNE, 2015 AND FROM DEEDS AND PLANS OF RECORD.
- 2) THE EXISTING CONDITIONS SHOWN ON THIS PLAN WERE DEVELOPED FROM A COMBINED EFFORT OF AERIAL PHOTOGRAMMETRIC MAPPING BY EASTERN TOPOGRAPHICS, INC., BASED ON AERIAL PHOTOGRAPHS TAKEN ON APRIL 25, 2015 AND AUGMENTED BY AN ON-THE-GROUND SURVEY PERFORMED BY VHB, INC. IN MAY/JUNE, 2015.
- 3) THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED ON FIELD OBSERVATIONS AND INFORMATION OF RECORD. THEY ARE NOT WARRANTED TO BE EXACTLY LOCATED NOR IS IT WARRANTED THAT ALL UNDERGROUND UTILITIES OR OTHER STRUCTURES ARE SHOWN ON THIS PLAN.
- HORIZONTAL DATUM IS BASED ON MASS. GRID SYSTEM, NAD 1983. ELEVATIONS SHOWN ON THIS PLAN REFER TO NAVD OF 1988.
- 5) THE LOT LIES ENTIRELY WITHIN ZONE X (UNSHADED) (AREAS TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS SHOWN ON THE FLOOD INSURANCE RATE MAP FOR MIDDLESEX COUNTY, MASSACHUSETTS, MAP NUMBER 25017C0506F, EFFECTIVE DATE JULY
- 6) THE LOT LIES ENTIRELY WITHIN THE LIMITED INDUSTRIAL DISTRICT (LID) AS SHOWN ON THE "ZONING DISTRICT MAP OF SUDBURY, MASSACHUSETTS", DATED OCTOBER 16, 2000. DIMENSIONAL REQUIREMENTS FOR A (LID) AT THE TIME OF THIS SURVEY ARE:

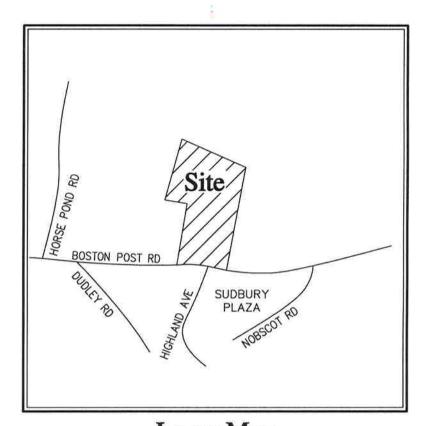
7)			REQUIRE	ED	EXISTING	
	MINIMUM	LOT AREA	100,000	S.F	2,156,154 S.F.	
	MINIMUM	FRONTAGE	50	FEET	763.07 FEET (TOTAL)	
	MINIMUM	FRONT YARD SETBACK	125	FEET	195.9 FEET	
	MINIMUM	SIDE YARD SETBACK	50	FEET	69.3 FEET	
	MINIMUM	REAR YARD SETBACK	50	FEET	48.6 FEET	
	MAXIMUM	BUILDING HEIGHT	35	FEET	33.4 FT. (MAIN BLDG) 44 FT. (BELTRAN BLDG.)	

- 8) THE TREE SYMBOL OUTLINE SHOWN ON THIS PLAN DOES NOT REPRESENT THE ACTUAL TREE CANOPY.
- 9) THIS PLAN WAS MADE WITH THE BENEFIT OF A CURRENT TITLE COMMITMENT DATED SEPTEMBER 8, 2015.



SHEET 6

PARCEL II – LOT B BOOK 51383, PAGE 258



Locus Map (NOT TO SCALE)



101 Walnut Street PO Box 9151 Watertown, MA 02471 617.924.1770

## Legend

DRAIN MANHOLE **EXECUTE** CATCH BASIN S SEWER MANHOLE © ELECTRIC MANHOLE TELEPHONE MANHOLE MANHOLE HH HAND HOLE WATER GATE FIRE HYDRANT O GAS GATE → STREET SIGN C LIGHT POLE UTILITY POLE O- GUY POLE GUY WIRE MONITORING WELL FLOOD LIGHT WELL WE MARSH

> FINISHED FLOOR ELEVATION CNO COULD NOT OPEN NPV NO PIPES VISIBLE DYL DOUBLE YELLOW LINE DWL DASHED WHITE LINE SYL SINGLE WHITE LINE LSA LANDSCAPED AREA

F.F.E.=45.27

EDGE OF PAVEMENT CONCRETE CURB VERTICAL GRANITE CURB SGE SLOPED GRANITE EDGE BB BITUMINOUS BERM BITUMINOUS CURB GUARD RAIL 

---- DRAINAGE LINE --- - SEWER LINE ----- UNDERGROUND ELECTRIC T TELEPHONE LINE - G - GAS LINE OOOOOOO STONE WALL TREE LINE

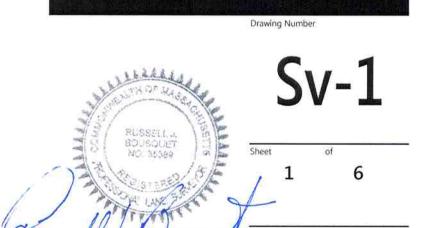
100'BZ 100-FT BUFFER ZONE LIMIT OF BANK
VEGETATED WETLAND BOUNDARY

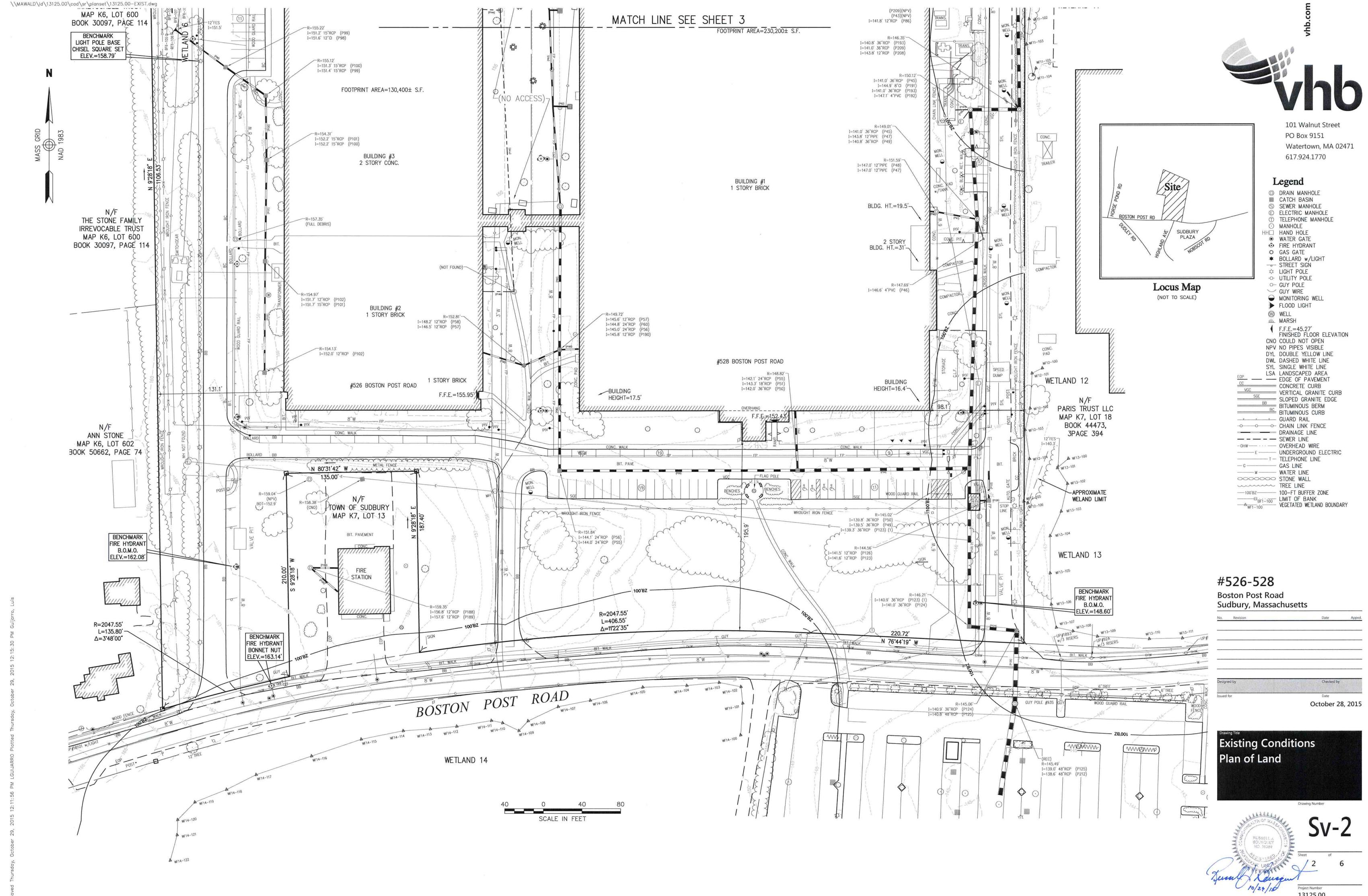
## #526-528

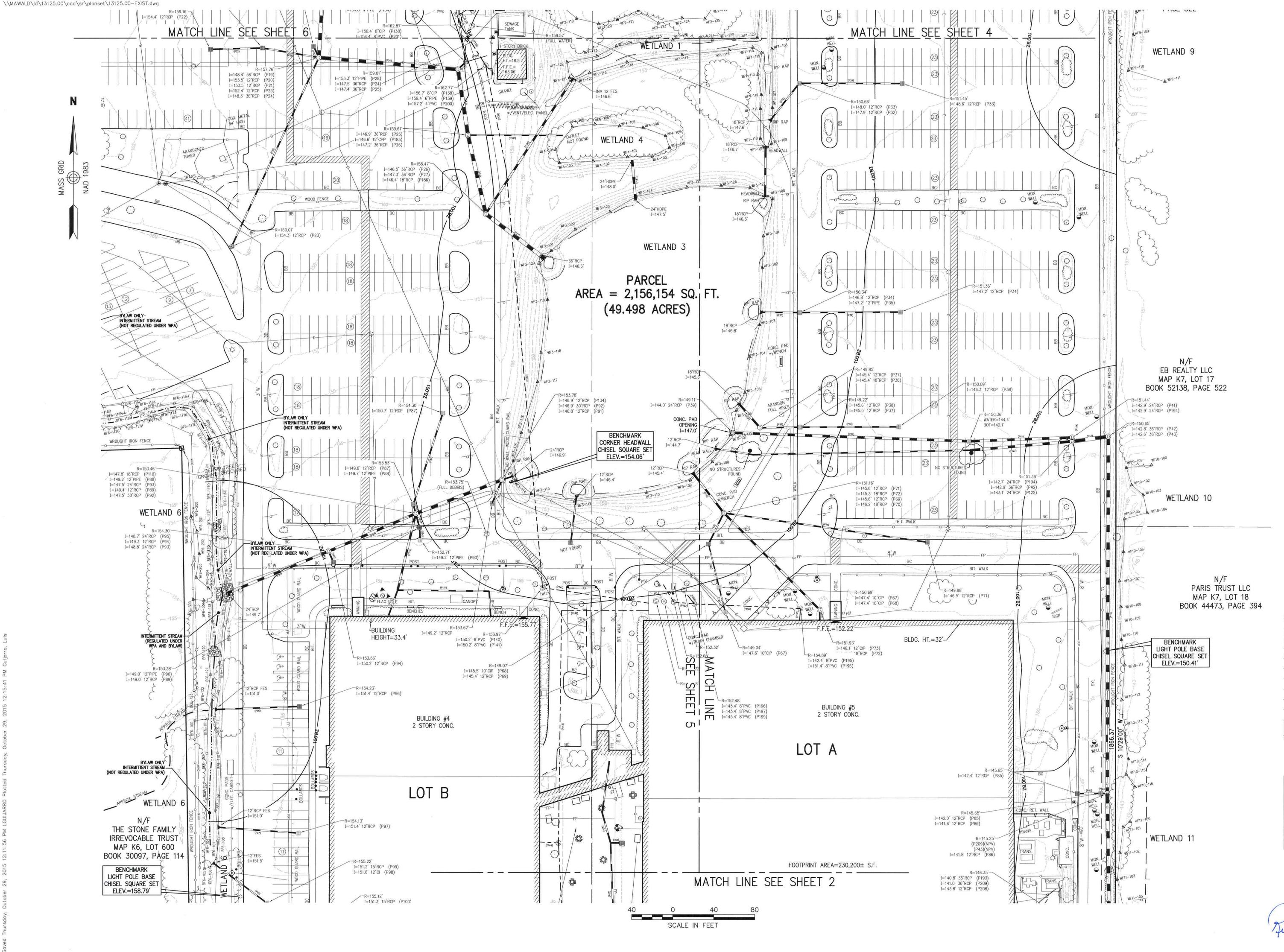
**Boston Post Road** Sudbury, Massachusetts

No. Revision	Date Ap	pvd
		_
		_
Designed by	Checked by	[8]
Issued for	Date	
	October 28, 20	15

**Existing Conditions** Plan of Land









101 Walnut Street PO Box 9151 Watertown, MA 02471 617.924.1770

## Legend

□ DRAIN MANHOLE■ CATCH BASIN S SEWER MANHOLE © ELECTRIC MANHOLE TELEPHONE MANHOLE MANHOLE HH HAND HOLE ● WATER GATE◆ FIRE HYDRANT O GAS GATE ◆ BOLLARD w/LIGHT → STREET SIGN □ LIGHT POLE -O- UTILITY POLE O- GUY POLE ✓ GUY WIRE MONITORING WELL ▶ FLOOD LIGHT W WELL MARSH F.F.E.=45.27'
FINISHED FLOOR ELEVATION CNO COULD NOT OPEN NPV NO PIPES VISIBLE DYL DOUBLE YELLOW LINE DWL DASHED WHITE LINE SYL SINGLE WHITE LINE LSA LANDSCAPED AREA - EDGE OF PAVEMENT = CONCRETE CURB — VERTICAL GRANITE CURB = SLOPED GRANITE EDGE BITUMINOUS BERM BITUMINOUS CURB - GUARD RAIL ── CHAIN LINK FENCE DRAINAGE LINE — - — SEWER LINE - OVERHEAD WIRE UNDERGROUND ELECTRIC — T TELEPHONE LINE - GAS LINE WATER LINE
STONE WALL
TREE LINE

#526-528

Boston Post Road Sudbury, Massachusetts

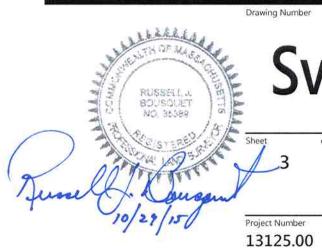
— 100'BZ——— 100-FT BUFFER ZONE

LIMIT OF BANK
WEI-100 VEGETATED WETLAND BOUNDARY

cy Checked by

October 28, 2015

Existing Conditions
Plan of Land



SCALE IN FEET



101 Walnut Street PO Box 9151 Watertown, MA 02471 617.924.1770

## Legend

DRAIN MANHOLE ■ CATCH BASIN S SEWER MANHOLE © ELECTRIC MANHOLE TELEPHONE MANHOLE MANHOLE HH HAND HOLE WATER GATE FIRE HYDRANT O GAS GATE BOLLARD w/LIGHT → STREET SIGN □ LIGHT POLE

-O- UTILITY POLE O- GUY POLE GUY WIRE MONITORING WELL

▶ FLOOD LIGHT W WELL WE MARSH

F.F.E.=45.27'
FINISHED FLOOR ELEVATION CNO COULD NOT OPEN NPV NO PIPES VISIBLE DYL DOUBLE YELLOW LINE DWL DASHED WHITE LINE

SYL SINGLE WHITE LINE LSA LANDSCAPED AREA EOP — EDGE OF PAVEMENT CONCRETE CURB VERTICAL GRANITE CURB SLOPED GRANITE EDGE BITUMINOUS BERM BITUMINOUS CURB GUARD RAIL

OHW OVERHEAD WIRE ----- UNDERGROUND ELECTRIC T TELEPHONE LINE − G −−−− GAS LINE

WATER LINE

STONE WALL

TREE LINE

100'BZ 100-FT BUFFER ZONE

WF1-100 VEGETATED WETLAND BOUNDARY

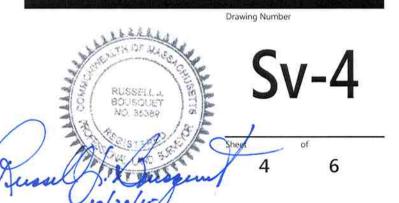
#526-528

**Boston Post Road** Sudbury, Massachusetts

. Revision	Date	Appvd.
		-
signed by	Checked by	1 0 1 76
ued for	Date	

October 28, 2015

**Existing Conditions** Plan of Land



Project Number 13125.00



101 Walnut Street PO Box 9151 Watertown, MA 02471 617.924.1770

## Legend

DRAIN MANHOLE **EXECUTE** CATCH BASIN S SEWER MANHOLE © ELECTRIC MANHOLE ① TELEPHONE MANHOLE MANHOLE HH HAND HOLE

WATER GATE FIRE HYDRANT O GAS GATE → STREET SIGN □ LIGHT POLE -O- UTILITY POLE O- GUY POLE GUY WIRE MONITORING WELL ▶ FLOOD LIGHT WELL MARSH F.F.E.=45.27'
FINISHED FLOOR ELEVATION CNO COULD NOT OPEN NPV NO PIPES VISIBLE DYL DOUBLE YELLOW LINE DWL DASHED WHITE LINE SYL SINGLE WHITE LINE LSA LANDSCAPED AREA - EDGE OF PAVEMENT CONCRETE CURB VERTICAL GRANITE CURB SLOPED GRANITE EDGE BB BITUMINOUS BERM BITUMINOUS CURB GUARD RAIL

OHW OVERHEAD WIRE

UNDERGROUND ELECTRIC
TO TELEPHONE LINE

WATER LINE
STONE WALL
TREE LINE
100'BZ—100'BZ—100-FT BUFFER ZONE
LIMIT OF BANK
VEGETATED WETLAND BOUNDARY

— - — - — SEWER LINE

— G — GAS LINE

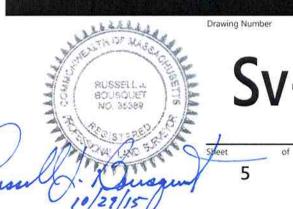
## #526-528

Boston Post Road Sudbury, Massachusetts

No. Revision	Date Appvd
The state of the s	to do the second
Designed by	Checked by
Issued for	Date
	October 28, 2015

October 28, 201.

Existing Conditions
Plan of Land



Project Number 13125.00

Saved Thursday, October 29, 2015 12:11:56 PM LGUIJARRO Plotted Thursday, October 29, 2015 12:16:00 PM Guijarro, Lı

SCALE IN FEET



101 Walnut Street
PO Box 9151
Watertown, MA 02471
617.924.1770

## Legend

DRAIN MANHOLECATCH BASINSEWER MANHOLE © ELECTRIC MANHOLE TELEPHONE MANHOLE MANHOLE HH HAND HOLE WATER GATE FIRE HYDRANT O GAS GATE ◆ BOLLARD w/LIGHT → STREET SIGN □ LIGHT POLE → UTILITY POLE O- GUY POLE GUY WIRE MONITORING WELL FLOOD LIGHT W WELL MARSH F.F.E.=45.27 FINISHED FLOOR ELEVATION CNO COULD NOT OPEN NPV NO PIPES VISIBLE DYL DOUBLE YELLOW LINE DWL DASHED WHITE LINE SYL SINGLE WHITE LINE LSA LANDSCAPED AREA — EDGE OF PAVEMENT — CONCRETE CURB VERTICAL GRANITE CURB SLOPED GRANITE EDGE BITUMINOUS BERM BITUMINOUS CURB — GUARD RAIL --- DRAINAGE LINE — - — - — SEWER LINE - OHW --- OVERHEAD WIRE ----- UNDERGROUND ELECTRIC T TELEPHONE LINE - G - GAS LINE

#526-528
Boston Post Road
Sudbury Massachusetts

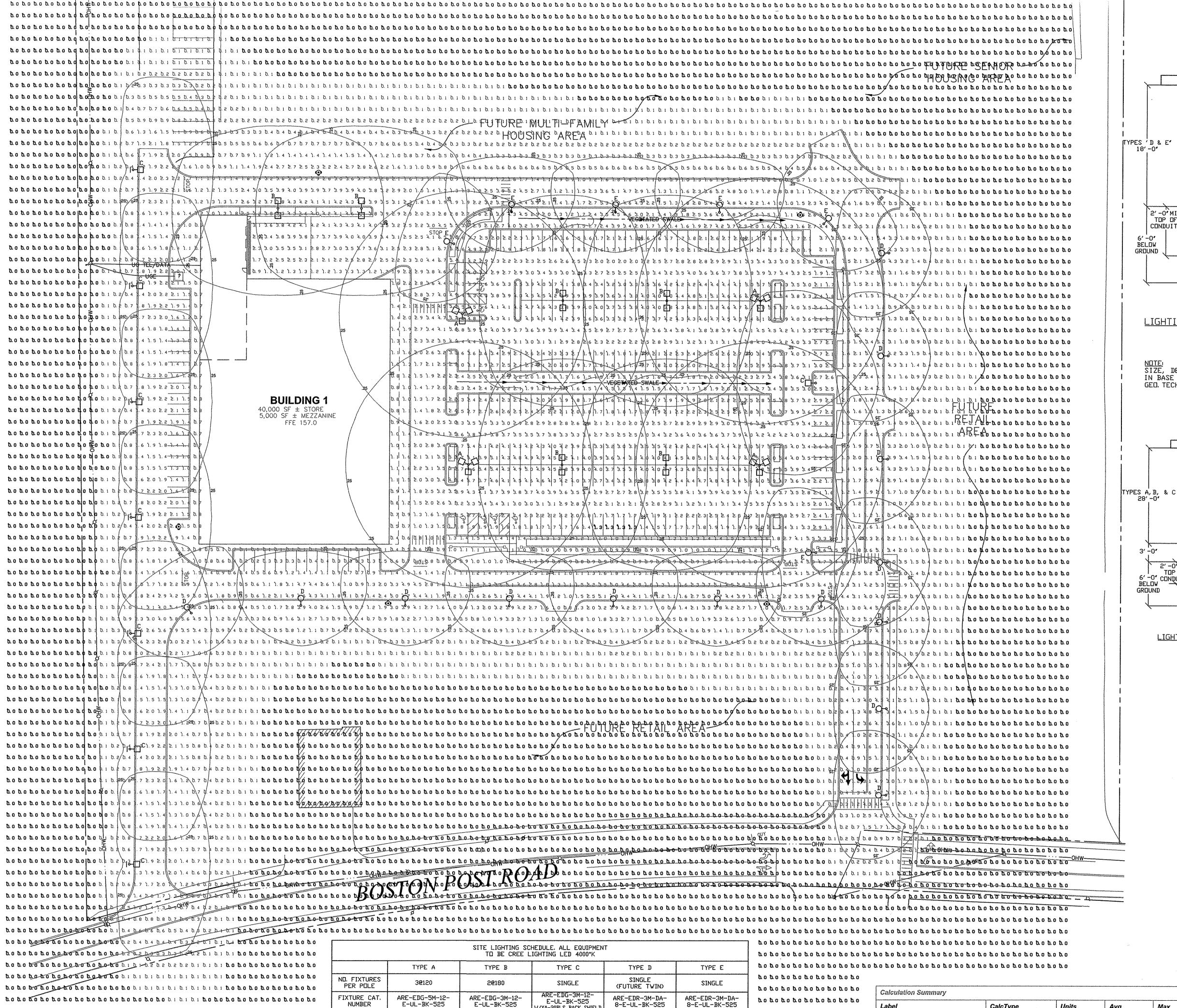
u	udbury, Massachusetts					
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ued f	for	Date				
	141	Date				

October 28, 2015

Existing Conditions
Plan of Land



Saved Thursday, October 29, 2015 12:11:56 PM LGUIJARRO Plotted Thursday, October 29, 2015



TIXTURE DIST

TYPE

MTG HEIGHT

TYPE 5

TYPE 3

TYPE 3

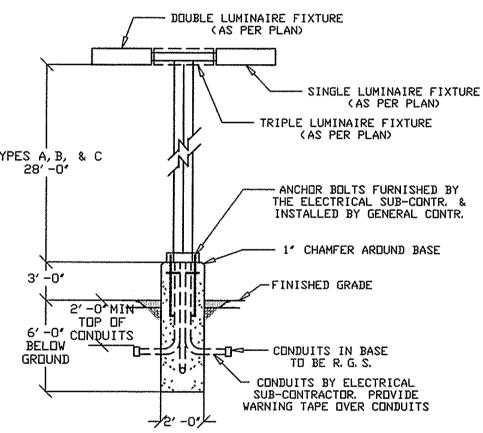
18'

18'

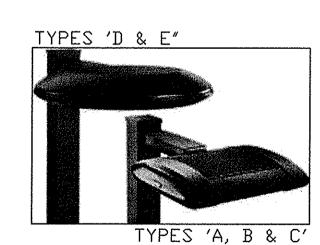
SINGLE LUMINAIRE FIXTURE (AS PER PLAN) - ANCHOR BOLTS FURNISHED BY THE ELECTRICAL SUB-CONTR. & INSTALLED BY GENERAL CONTR. - 1' CHAMFER AROUND BASE -FINISHED GRADE 2' -0" MIN CONDUITS - CONDUITS IN BASE TO BE R. G. S. ·CONDUITS BY ELECTRICAL SUB-CONTRACTOR, PROVIDE WARNING TAPE OVER CONDUITS <u> ど2′ -0″ 丿</u>

LIGHTING POLE BASE DETAIL NOT TO SCALE

DEPTH & REINFORCING STEEL IN BASE TO BE DETERMINED BY GEO. TECH. & STRUCTURAL ENGINEER



LIGHTING POLE BASE DETAIL



CANDPY LIGHTING & WALL MOUNTED SECURITY LIGHTS TO BE PROVIDED AS PART OF THE BLDG PACKAGE. SEE BLDG PLANS FOR LOCATIONS &

PROJECT: Sudbury, MA Sil	te
CLIENT:	
SCALE:	FILE: omni sudbury ma site 03.adm
DATE: 11/10/2015	sales person: Paul Abdella
THESE DRAWINGS ARE FOR AND ARE NOT INTENDED FOR REPRESENTED ARE AN APPRO DATA SUPPLIED BY LAMP MFG.	CONSTRUCTION. VALUES XIMATON GENERATED FORM

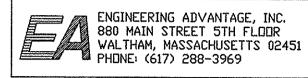
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Parking Area Only Z 3ft	Illuminance	Fc	3.16	6.1	1.3	2.43	4.69
Site Balance Z = 0	Illuminance	Fc	0.51	6.7	0.0	N.A.	N.A.

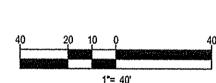
**bobobobobobobobo** 

**bobobobobobobobo** 



101 Walnut Street PO Box 9151 Watertown, MA 02471 617.924.1770





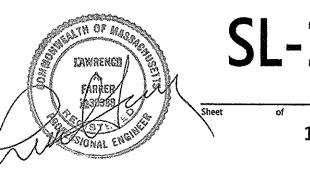
## **Grocery Store at Meadow Walk** Sudbury

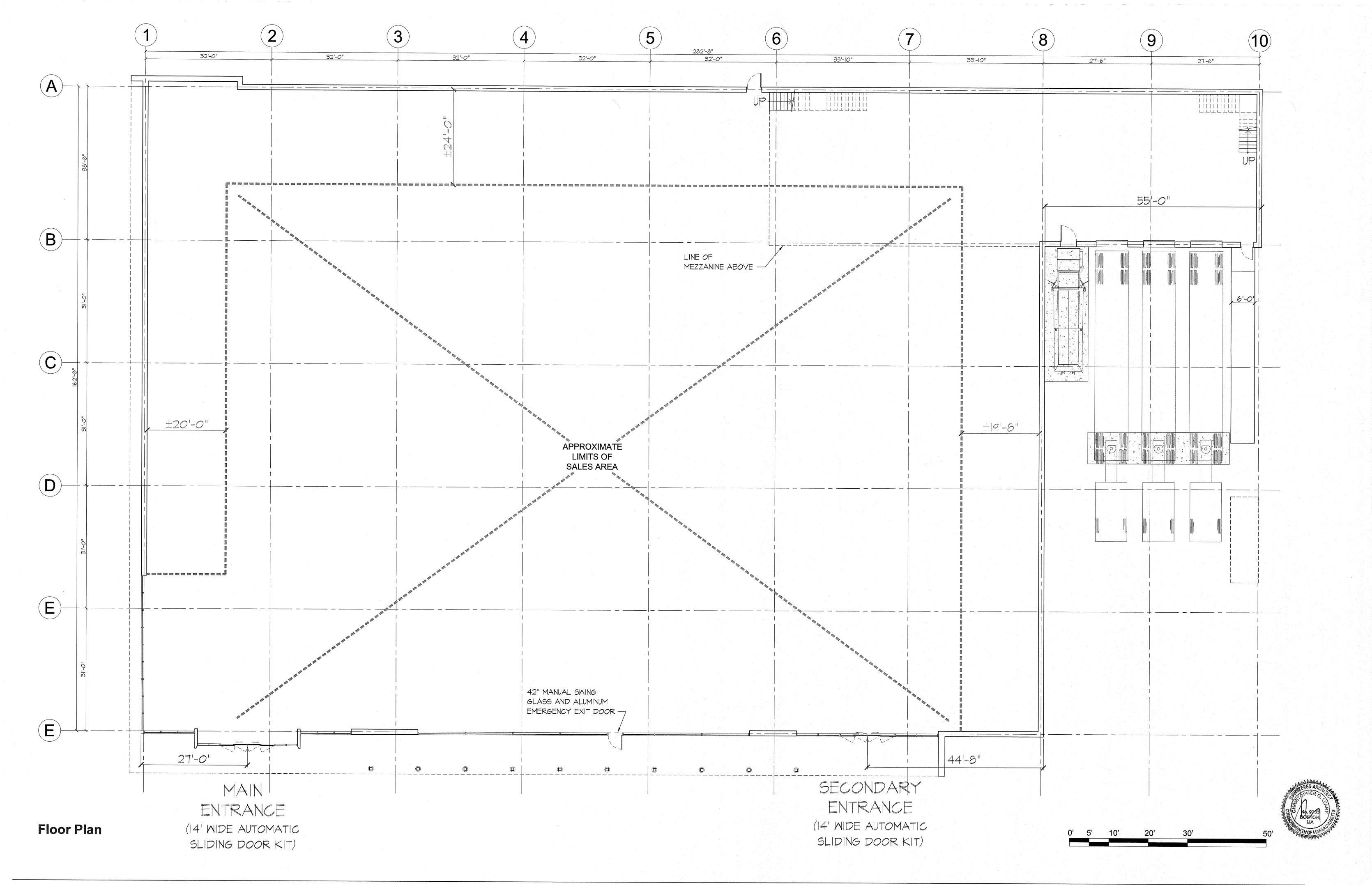
526-528 Boston Post Road Sudbury, MA

November 10, 2015 **Local Approvals** 

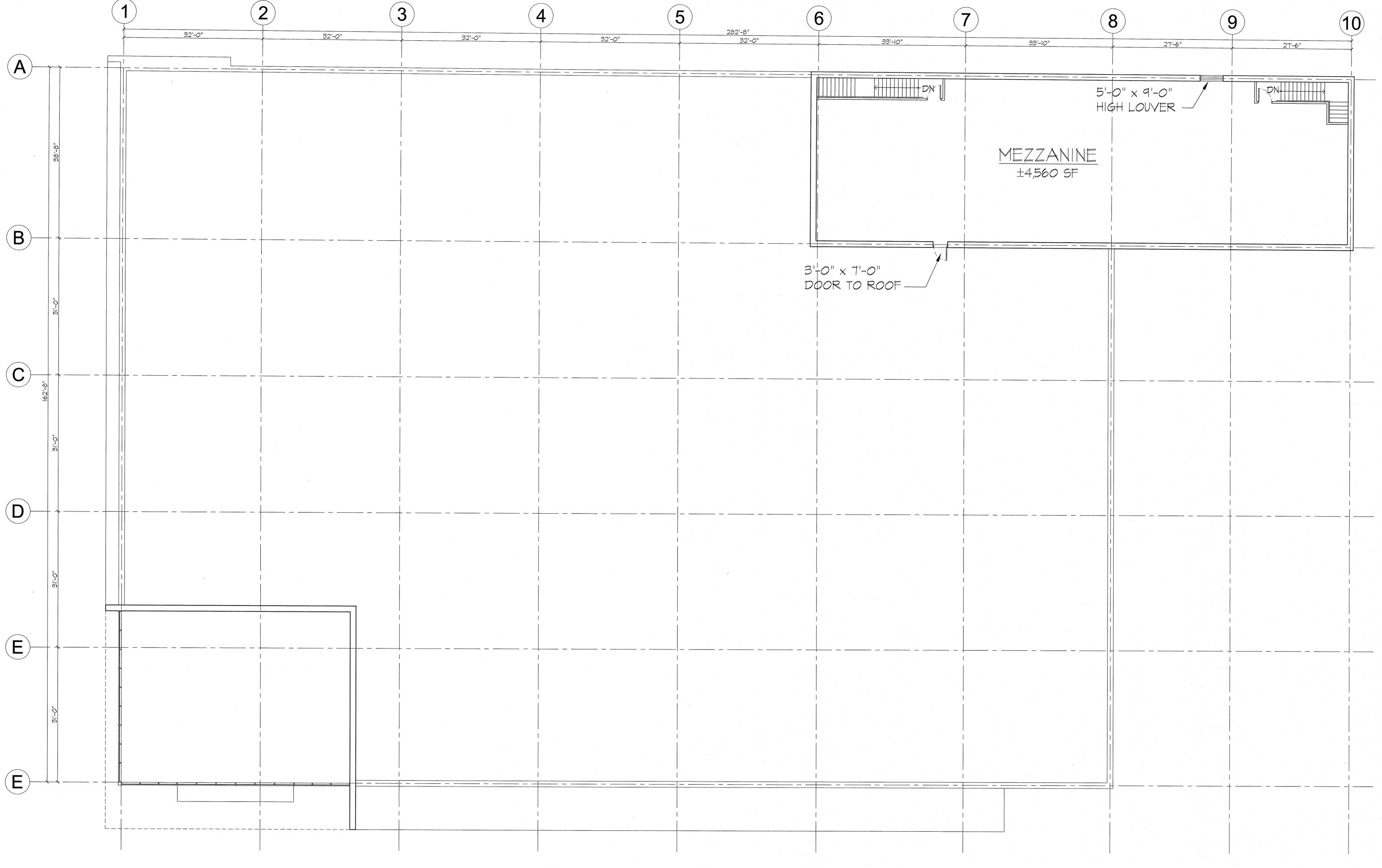
**Not Approved for Construction** 



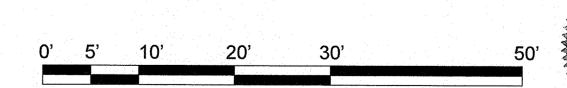




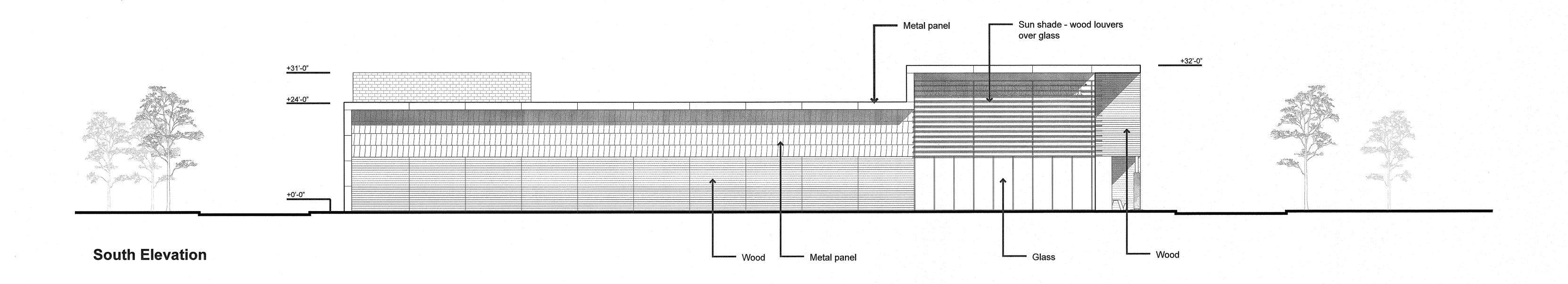


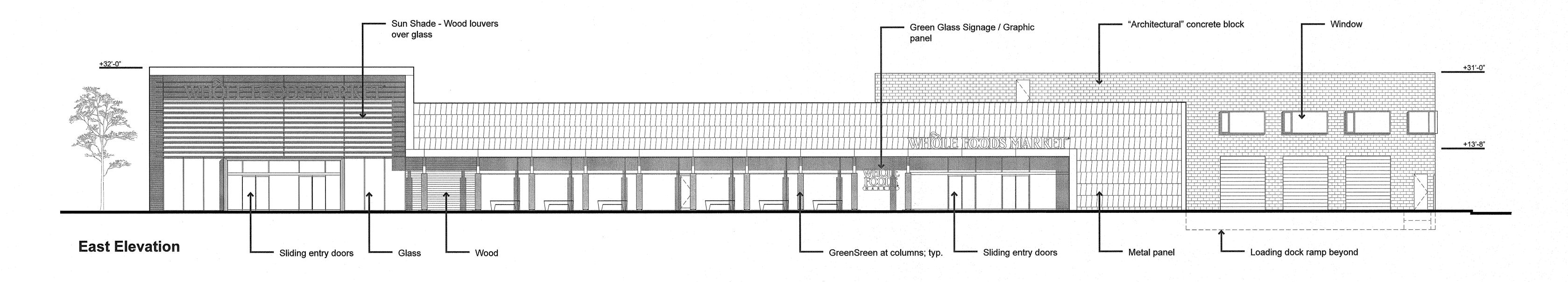


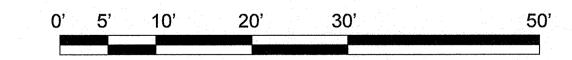
Mezzanine Plan





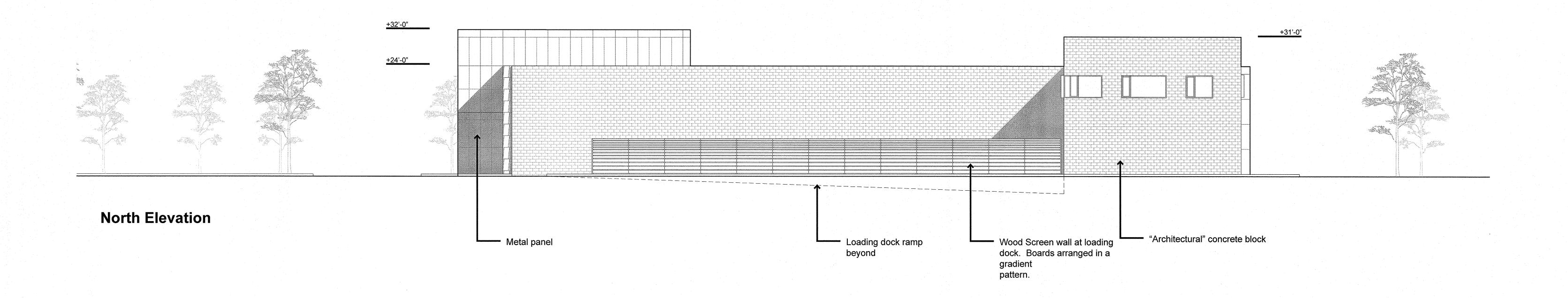


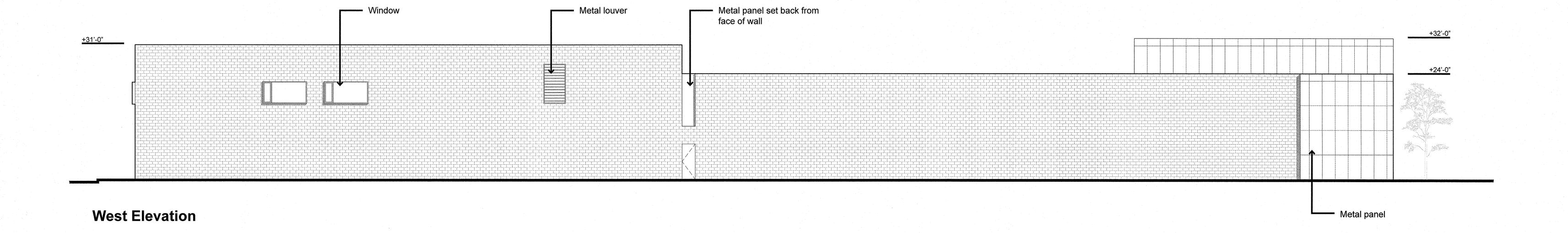














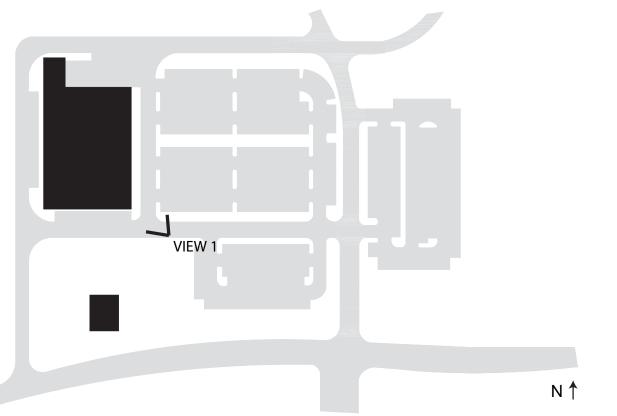








Rendering View 1

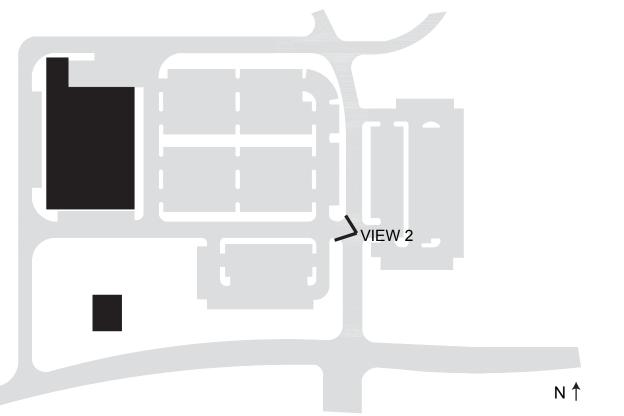






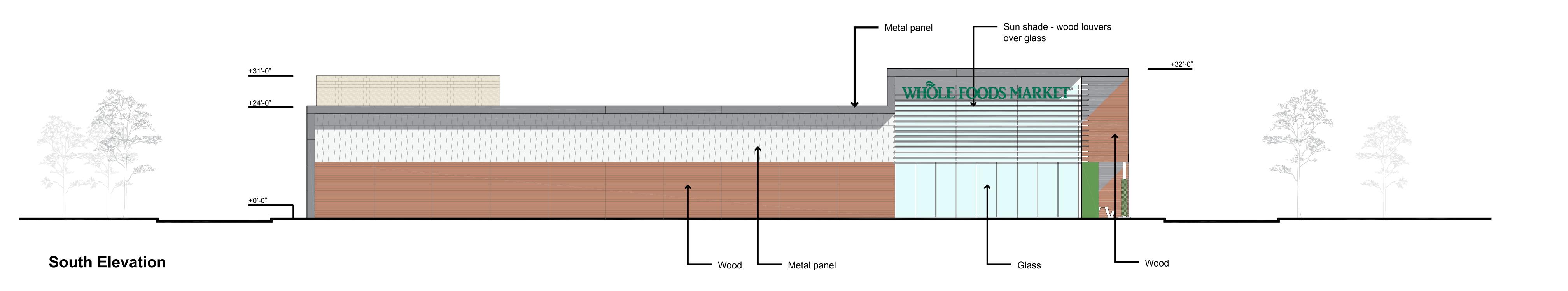


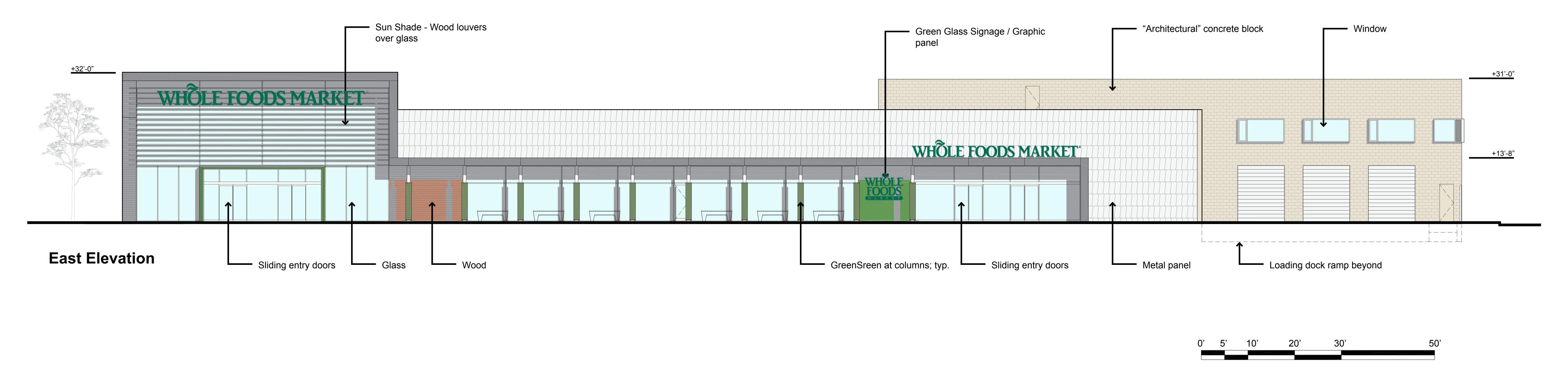
Rendering View 2



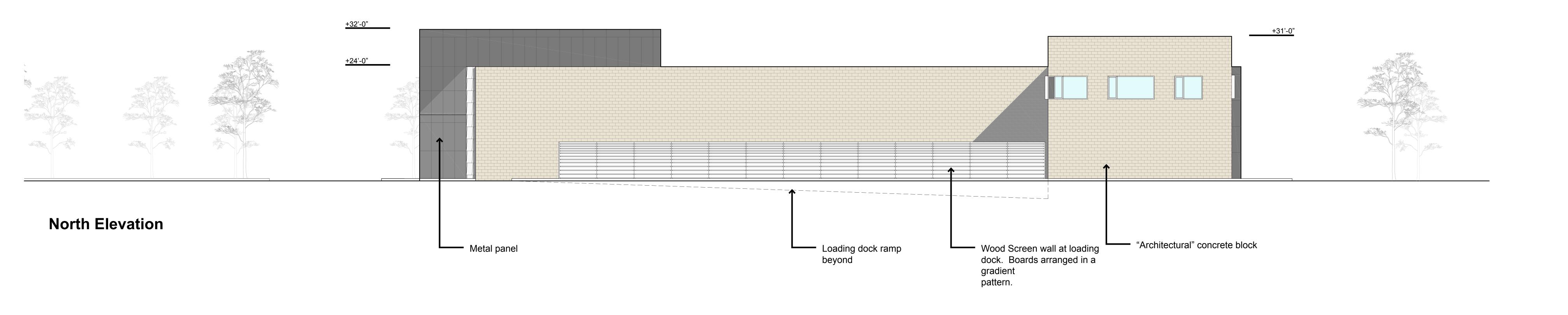


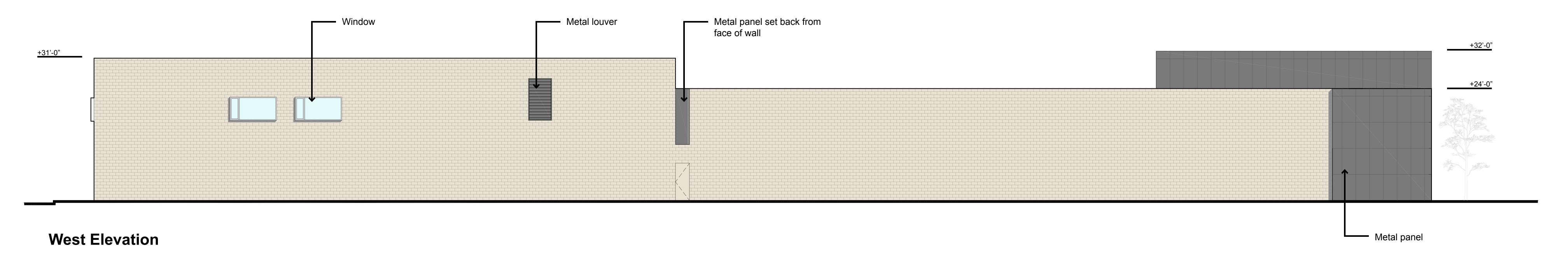


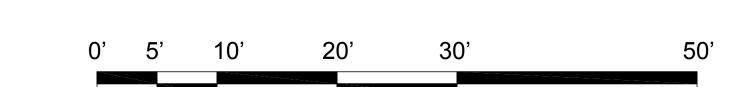






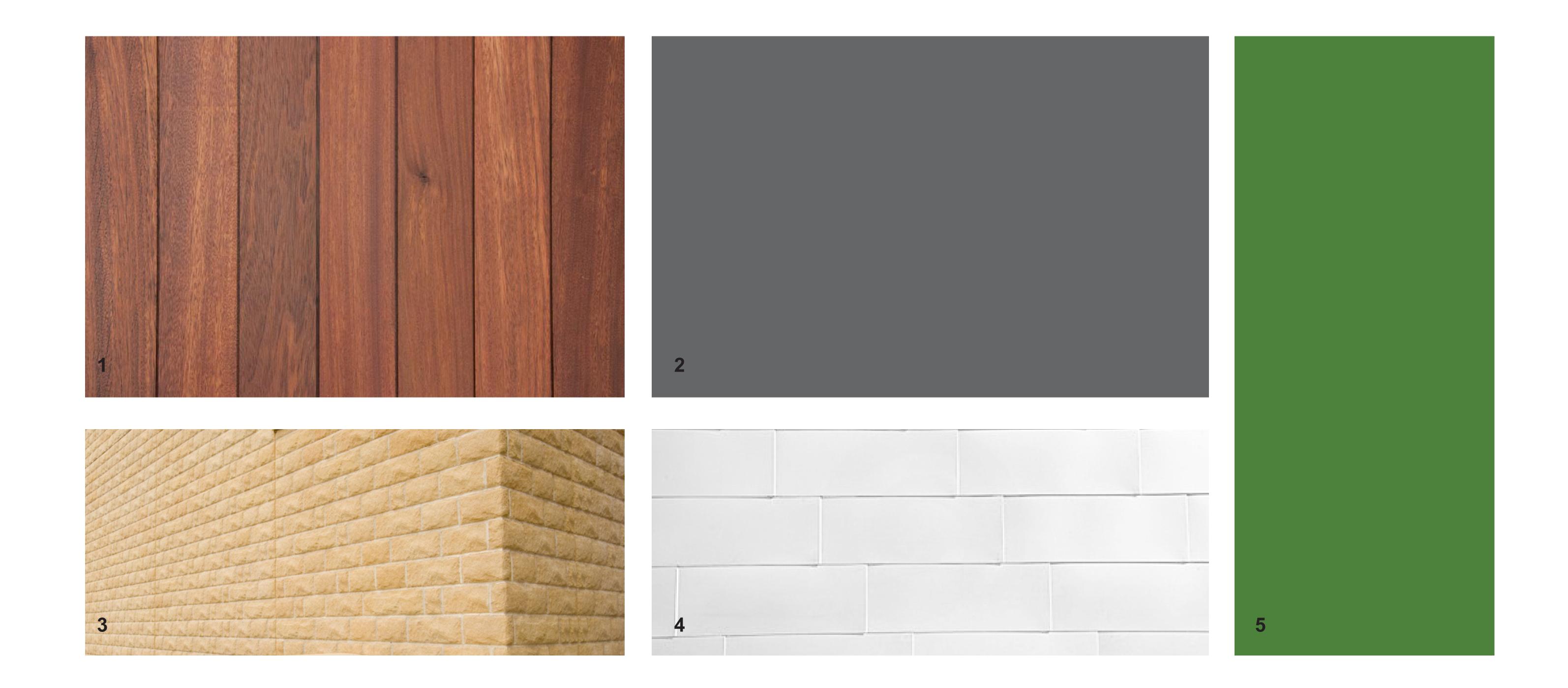












## **Exterior Materials**

- 1. Wood
- 2. Grey Metal Panel
- 3. Architectural Concrete Block
- 4. White Metal Panel
- 5. Green Metal panel





Miscellaneous Perspective Images















**Precedent Images** 













**Precedent Images** 





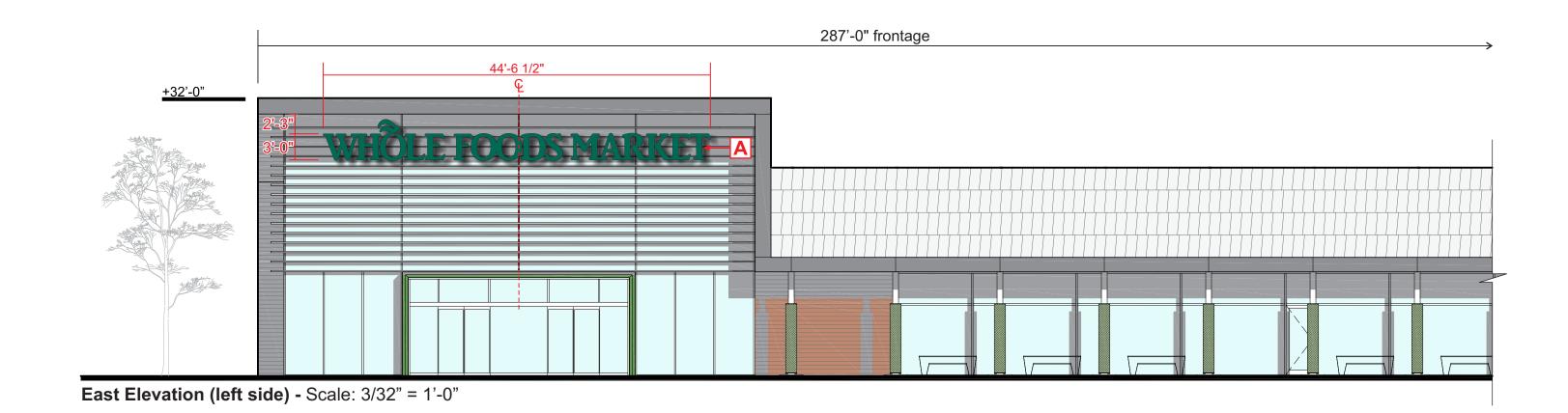


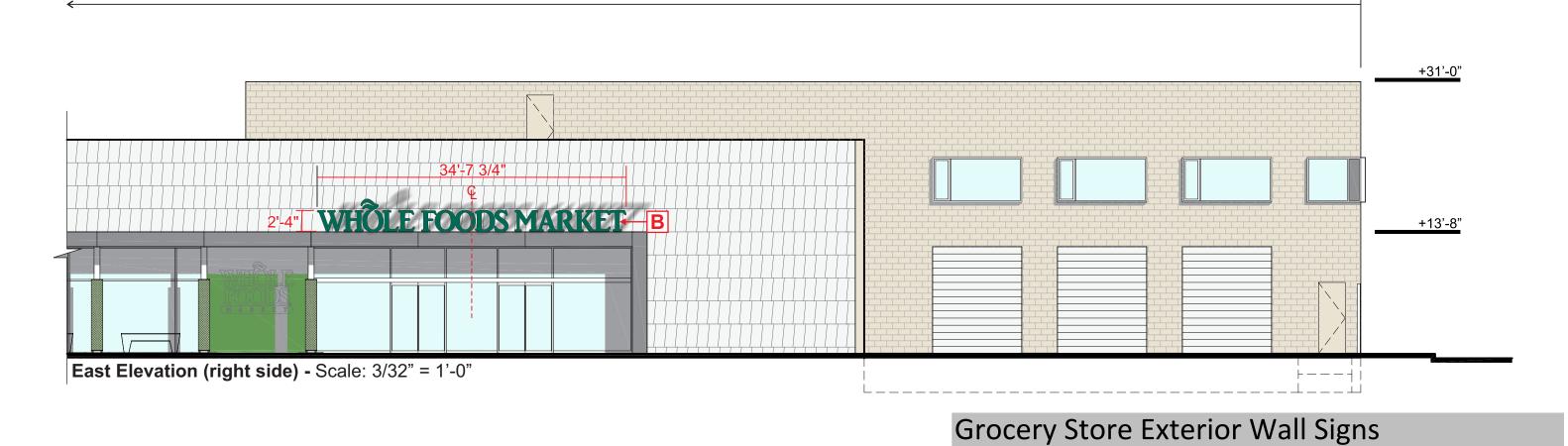


GreenScreen - column covers at covered patio











FRESNO, CA 93711

PROJECT:	RE
CUSTOMER: Whole Foods Market	_1_
LOCATION: 528 Boston Post Road - Sudbury, MA 01776	_2
DATE: 10/27/2015	_
SALES: David Esajian	_
DESIGNER: James Franks	

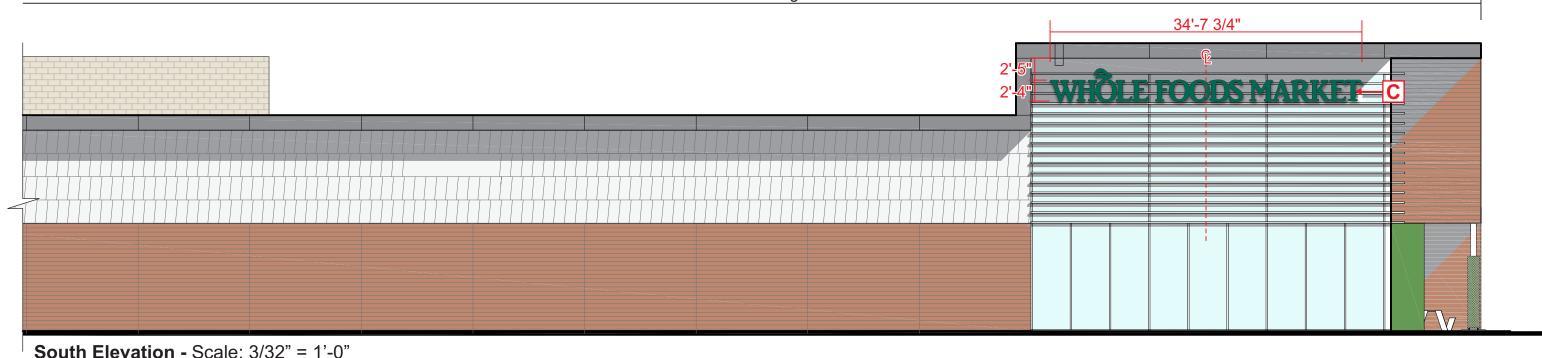
PROJECT:	REVISION	DATE	DESCRIPTION	APPROVALS	1
CUSTOMER: Whole Foods Market	_1	10-28-15	Add site plan	SALES:	1
LOCATION: 528 Boston Post Road - Sudbury, MA 01776	_2	11-10-15	New elevations and site plan		Ш
DATE: 10/27/2015				CUSTOMER:	ĺĺí
SALES: David Esajian				LANDLORD:	E
DESIGNER: James Franks				ENIDEONIS.	

CONCEPTUAL DRAWINGS ONLY: Dimensions are approximate & may change due to construction factors or exact field conditions. Colors shown are as close as printing will allow. Always follow written specifications.

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1 of 3 JOB #18869

SHEET





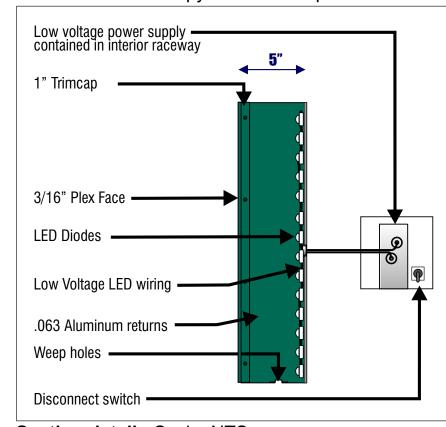


PAN CHANNEL LETTER SPECIFICATIONS

Description: Manufacture and install three (3) sets of internally-illuminated channel letters. Scale: 3/16" = 1'-0"

Component	Туре	Specifications	Color / Finish
Faces	3/16" Milky White Plex #2447	Vinyl applied 1at surface	3M Holly Green #3630-76
Trimcaps	1" Trimcap	Jewelite	Match PMS #342 (Green)
Returns	.063 Aluminum	Paint (satin)	Match PMS #342 (Green)
Illumination	LED		White

**NOTE:** Final attachment detail to be based on actual wall and canopy details once provided.



Section detail - Scale: NTS



JITE	102	

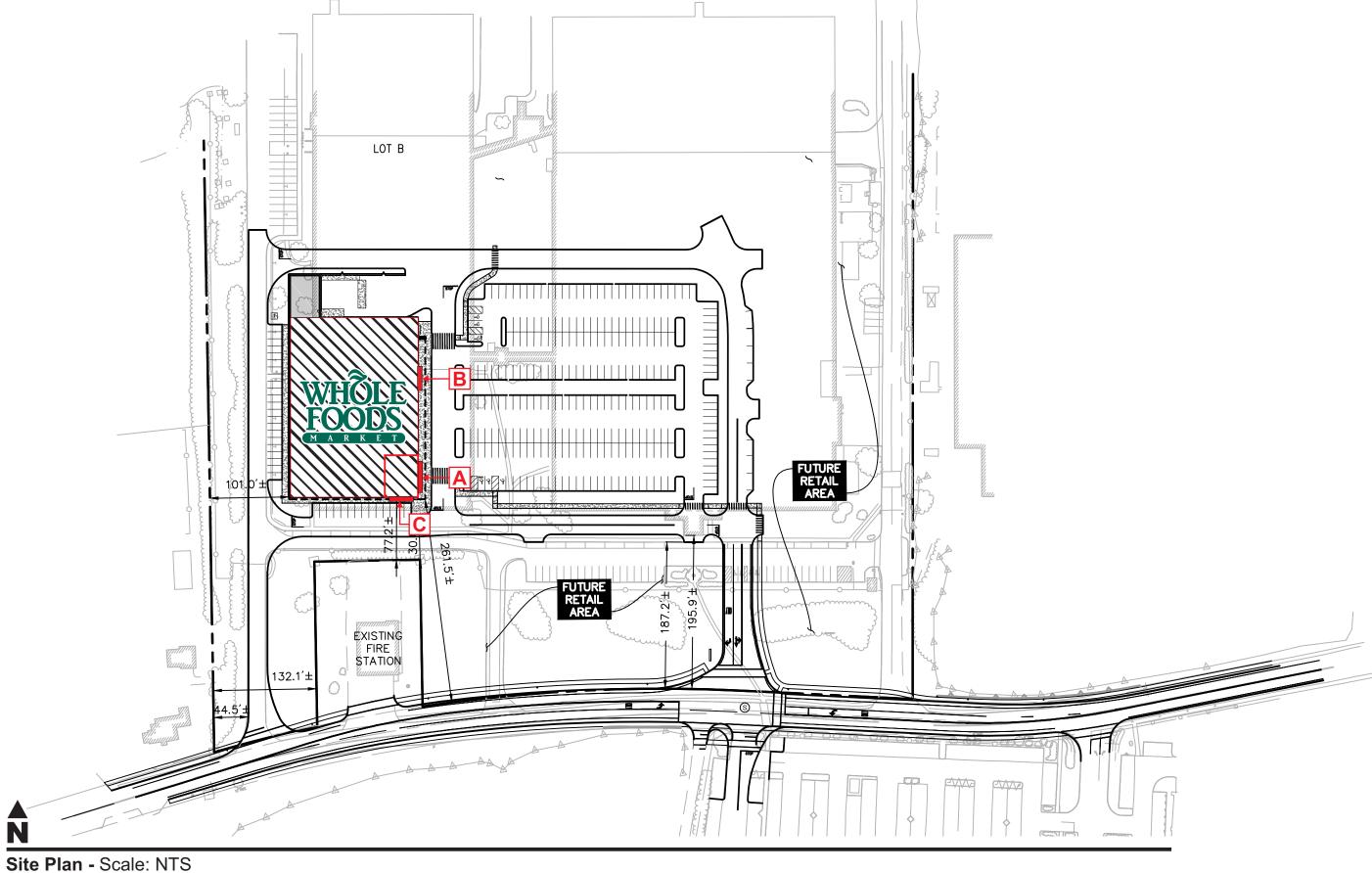
PROJECT:	REVISION	DATE	DESCRIPTION	,
CUSTOMER: Whole Foods Market	_1	10-28-15	Add site plan	- SALES:
LOCATION: 528 Boston Post Road - Sudbury, MA 01776	2	11-11-15	New elevations and site plan	- JALLO.
DATE: 10/27/2015				CUSTOMER:
SALES: David Esajian				- LANDLORD:
DESIGNER: James Franks				

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SHEET 2 of 3 JOB #18869





2670 W. SHAW LANE/SUITE 102 FRESNO, CA 93711

PROJECT:	REVISION	DATE	DESCRIPTION	APPROVALS	<b>C</b> (
CUSTOMER: Whole Foods Market	1 2	10-28-15 11-11-15	Add site plan  New elevations and site plan	SALES:	or Al
LOCATION: 528 Boston Post Road - Sudbury, MA 01776  DATE: 10/27/2015		11-11-13	New elevations and Site plan	CUSTOMER:	Al Th
SALES: David Esajian				LANDLORD:	pla or
DESIGNER: James Franks					co

CONCEPTUAL DRAWINGS ONLY: Dimensions are approximate & may change due to construction factors or exact field conditions. Colors shown are as close as printing will allow. Always follow written specifications.

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3 of 3

SHEET

JOB #18869