

TOWN OF HUDSON

PLANNING BOARD

PUBLIC MEETING TOWN OF HUDSON, NH AUGUST 13, 2014



Hudson, New Hampshire 03051

603/886-6005



The Town of Hudson Planning Board will hold a regularly scheduled meeting on Wednesday, August 13, 2014 at 7:00 p.m. in the "Buxton Community Development Conference Room" at Town Hall. The following items will be on the agenda:

- I. CALL TO ORDER BY CHAIRPERSON AT 7:00 P.M.
- II. PLEDGE OF ALLEGIANCE
- III. ROLL CALL
- IV. SEATING OF ALTERNATES
- V. MINUTES OF PREVIOUS MEETING(S)
- VI. CASES REQUESTED FOR DEFERRAL
- VII. CORRESPONDENCE
- VIII. PERFORMANCE SURETIES
 - IX. ZBA INPUT ONLY
 - A. Hawkview Subdivision ZI# 03-14

Map 186/Lots 20-4 & 24; Map 194/ Lot 10; Map 195/Lot 1; Map 201/Lot 7

Purpose of plan: The project proposes to consolidate the five existing parcels and further subdivide the merged parcels to create 63 residential open space lots and 1 conventional lot. The temporary wetland impact is 2,235 sf, the permanent wetland impact is 6,284 sf, and the buffer impact is 161,639 sf.

B. Land of Leonard Vigeant ZI# 02-14

Map 128/Lots 7 & 8 300 Webster Street

Purpose of plan: The project proposes to consolidate Lots 7 & 8 in the Town of Hudson with two adjacent lots in the Town of Litchfield and resubdivide to create 9 new building lots along a new town roadway. The temporary wetland impact is 913 sf, the permanent wetland impact is 2,545 sf, and the buffer impact is 25,915 sf.

- X. PUBLIC HEARINGS
- XI. OLD BUSINESS/PUBLIC HEARINGS

Planning Board Agenda August 13, 2014 Page 2

XII. DESIGN REVIEW PHASE

XIII. CONCEPTUAL REVIEW ONLY

XIV. NEW BUSINESS/PUBLIC HEARINGS

A. Derry Street Retail LLR (Hogan) SB# 06-14 Map 165/Lots 145 & 146 66 & 68 Derry Street

Purpose of plan: To relocate the lot-line between existing Map 165/Lots 145 & 146. Application Acceptance & Hearing.

B. Derry Street Retail Site Plan (Hogan) SP# 10-14 Map 165/Lot 145 66 Derry Street

Purpose of plan: To propose 7,225 sf of retail space and the associated access, circulation, parking, stormwater, landscaping and lighting improvements on Lot 145. This plan assumes previous approval of the proposed lot line adjustment between Lots 145 & 146. Application Acceptance & Hearing.

C. Derry Street Retail Site Plan (Hogan) SP# 09-14 Map 165/Lot 146 68 Derry Street

Purpose of plan: To propose 9,984 sf of retail space and the associated access, circulation, parking, stormwater, landscaping and lighting improvements on Lot 146. This plan assumes previous approval of the proposed lot line adjustment between Lots 145 & 146. Application Acceptance & Hearing.

XV. OTHER BUSINESS XVI. ADJOURNMENT

All plans and applications are available for review in the Planning Office. Comments may be submitted in writing until 10:00 a.m. on the Tuesday prior to the day of the meeting.

The public is invited to attend.

John M. Cashell

Town Planner

POSTED: Town Hall, Library, Post Office - 08-01-14

Hawkview Subdivision ZBA Input Only

Staff Report August 13, 2014

SITE: Map 186/Lots 20-4 & 24; Map 194/ Lot 10; Map 195/Lot 1; Map 201/Lot 7 ZI# 03-14

ZONING: G-1 - Minimum Lot Size With or Without Town Water & Sewer 87,120 sf and Minimum Frontage 200 ft.

PURPOSE OF PLAN: The project proposes to consolidate the five existing parcels and further subdivide the merged parcels to create 63 residential open space lots and 1 conventional lot. The temporary wetland impact is 2,235 sf, the permanent wetland impact is 6,284 sf, and the buffer impact is 161,639 sf.

PLAN UNDER REVIEW ENTITLED: Open Space Plan Hawkview Subdivision Map 186/Lots 20-4 & 24; Map 194/ Lot 10; Map 195/Lot 1; Map 201/Lot 7, White Service Road and Kara's Crossing Drive, Hudson, NH, prepared by Keach-Nordstrom Associates, Inc., dated: May 7, 2014 (no revision date), consisting of Sheet 1 of 1 and Sheets 1 - 5 and Notes 1 - 4 on Sheet 1 of 1 (said plans are attached hereto).

APPLICANT REPRESENTATIVE: Tony Basso, Keach - Nordstrom Associates, Inc.

ATTACHMENTS:

- ZBA Input Only application, dated July 11, 2014 "A-1".
- Letter by William Oleksak, Zoning Admin., re: Zoning Determination for Hawkview Subdivision, dated July 18, 2014, "A".
- Motion to Recommend Wetlands Special Exception: issued by the Conservation Commission for the Hawkview Subdivision, dated 14 July 2014 "B".
- November 9, 2005 Minutes/Decisions, re: most recent date Planning Board reviewed the Hawkview Subdivision, which also concerned ZBA Input Only "C".

OUTSTANDING ISSUES/ RECOMMENDATION: Staff found no outstanding issues with this ZBA Input Only application. In preparation for the meeting, please review the attached set of ZBA Input Only Plans, together with William Oleksak's letter "A" and the Conservation Commission's Recommendation "B".

Please note, the last time the board reviewed a ZBA Input application for the subject lots was on Nov. 9, 2005. Please see the Board's action on that application, per attachment "C".

Staff recommends for the board to review this application for what it is, i.e.,

1) It's a Wetland Special Exception application, filed with the ZBA, which pertains to proposed stormwater treatment and control facilities that, if constructed, will have a beneficial effect on the abutting wetlands, as determined by the Town of Hudson Conservation Commission (see attached recommendation "B").

2) Please note, in previous ZBA Input Only applications the board requested applicants to submit lot dimension and lot size data. The present submission does not include this data, however, if, in fact, this subdivision moves toward formal subdivision application submission, such data will have to be submitted. In effect, the only thing (in realistic terms) for the board to review for Wednesday night, is the detail provided in the submitted plans for the proposed roadway layout, and as this layout pertains to the proposed wetland crossings and associated wetland and wetland buffer impacts. To this effect, the attached plans provide this detail; that is, the proposed wetland crossing structures are cited on the plans, as well as the proposed slopes and areas of wetland and wetland buffer impacts, and in regard to this application, staff provides below, for the board's consideration, a DRAFT MOTION to forward to the ZBA.

NOTE: thinking outside the box, and a little ahead of the submittal process, this proposed subdivision could go in the direction of requiring emergency access only, via both Kara's Crossing and Hawkview Rd. In effect, the only public means of access would be via Bush Hill Rd. In doing so, emergency access would be provided for the proposed 63 lot subdivision, while at the same time, avoiding the introduction of additional traffic to Spear Rd. and Gibson Rd., which are two roads that one could argue are not constructed to handle additional traffic. This is not to say that Bush Hill Rd. is a major arterial road, but it does provide a better primary means of access than both Gibson Rd. and Spear Rd.

DRAFT MOTION:

I move to forward correspondence to the ZBA, notifying them that the Planning Board has no concerns regarding the proposed Wetland Special Exception application, which calls for the temporary wetland impact of 2,235 sf, the permanent wetland impact of 6,284 sf, and buffer impact of 161,639 sf, as shown on the following plan entitled: Open Space Plan Hawkview Subdivision Map 186/Lots 20-4 & 24; Map 194/ Lot 10; Map 195/Lot 1; Map 201/Lot 7, White Service Road and Kara's Crossing Drive, Hudson, NH, prepared by Keach-Nordstrom Associates, Inc., dated: May 7, 2014 (no revision date), consisting of Sheet 1 of 1 and Sheets 1 - 5 and Notes 1 - 4 on Sheet 1 of 1.

Motion by:	Second:	Carried/Failed:	
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A-1"

ZBA INPUT ONLY APPLICATION FOR REVIEW TOWN OF HUDSON, NEW HAMPSHIRE

Map 186; Lots 20-4 & 24 Map 194; Lot 10 Map 195; Lot 1 Map 201; Lot 7

		_ Tax Map # Lot #			
Name of Proje	ect: Hawkview Subdivision	ZI # 03-14			
	ct: General Zoning (For Office Use)				
	(For Office Use)	(For Office Use)			
ZBA Action:					
	PROPERTY OWNER: (Map 201; Lot 7)	DEVELOPER: /Owner			
Name:	Green Mountain Partners Realty Trust	Eagles Nest Estates, LLC			
Address:	9 Old Derry Road	21 Continental Boulevard			
Address:	Hudson, NH 03051	Merrimack, NH 03054			
Telephone #		(603) 320-5123			
Fax#					
Email:		johngargasz@gmail.com			
	PROJECT ENGINEER				
Name: Kea	ch-Nordstrom Associates, Inc.	Telephone # (603) 627-2881			
Address: 10 (Commerce Park No., Suite 3	Fax # (603) 627-2915			
Address: Bed	Address: Bedford, NH 03110 Email: pcolburn@keachnordstrom.com				
PURPOSE OI	PURPOSE OF PLAN:				
	roposes to consolidate the five existing parce	ls and further subdivide the merged parcels			
		lot. The temporary wetland impact is 2,235 sf,			
	t wetland impact is 6,284 sf, and the buffer in				
		HUDSON			
	(For Office Use)	Pate:			
Plan Routing	,	Date: 211211			
	e no comments I have comm	ents (attach to form)			
-	Title:	The Day			
(Initials)					
Department:		1			
Zoning	Engineering Assessor Police	EFirePlanning			
High	Highway Consultant Review Fees Paid				

APPLICATION FOR ZBA INPUT ONLY REVIEW TOWN OF HUDSON, NEW HAMPSHIRE

I hereby apply for ZBA Input Only Review and acknowledge I will comply with all of the Ordinances of the Town of Hudson, New Hampshire State Laws, as well as any stipulations of the Planning Board, in development and construction of this project. I understand that if any of the items listed under the ZBA Input Only specifications or application form are incomplete, the application will be considered rejected.

Pursuant to RSA 674:1-IV, the owner(s), by the filing of this application as indicated above, hereby give permission for any member of the Hudson Planning Board, the Town Engineer, the Conservation Commission and such agents or employees of the Town or other persons as the Planning Board may authorize, to enter upon the property which is the subject of this application at all reasonable times for the purpose of such examinations, surveys, tests and inspections as may be appropriate. The owner(s) release(s) any claim or right he/she (they) may now or hereafter possess against any of the above individuals as a result of any examinations, surveys, tests and inspections conducted on his/her (their) property in connection with this applications.

oal owner,
work and be ne construction the Code f any change.
10

Twenty-one days prior to the scheduled Planning Board Meeting, a complete subdivision, or site plan application including all supporting materials/documents must be submitted in final form to the Town Planner's Office.

- Please schedule an appointment with the Town Planner for initial plan submittal.
- Revisions are due on Tuesday the week prior to the Planning Board deferral date by 10:00AM. Any application/materials received after that time will be deferred until the next available meeting date.

TOWN OF HUDSON



COMMUNITY DEVELOPMENT DEPARTMENT







12 School Street · Hudson, New Hampshire 03051 · 603-886-6008 · Fax 603-594-1142

July 18, 2014

Keach-Nordstrom Associates, Inc. 10 Commerce Park, North, Ste. 3B Bedford, NH 03110 Attn: Katherine Basso

Re:

Hawkview Subdivision - Wetland Special Exceptions

Dear Ms. Basso:

I have reviewed your request for a Wetland Special Exception for a temporary wetland impact of 2,235 SF, 6,284 SF of permanent wetland impact, and 16,639 SF of wetland buffer impact. This is a change of the original ZBA approvals of October 26, 2006 for 12 wetland crossings. The Board had only approved five (5) crossings. The new plan has only four (4) wetland crossings and a new subdivision layout.

You will need to come before the Zoning Board for the above mentioned wetland special exceptions.

Please feel free to contact the Community Development Department if you have any further questions.

This decision may be appealed within 30 days.

Sincerely,

COMMUNITY DEVELOPMENT DEPARTMENT

William A. Oleksak Zoning Administrator

pc:

Board of Selectmen

Zoning Board of Adjustment

Town Planner
Inspectional Services

File

WO/pl



Motion to Recommend Wetlands Special Exception

Date: 14 July 2014

Case: Eagles Nest Estates, LLC and Green Mountain Partners Realty Trust

White Service Road & Kara's Crossing Drive

Map 186 Lots 024-4 & 024; Map 194 Lot 010; Map 195 Lot 001, & Map 201 Lot 007

Referenced Plan: Overview Plan, Open Space Plan, and Wetland and Wetland Buffer Impact Plan,

Hawkview Subdivision (5 Sheets)

Dated: May 12, 2014 (Overview Plan) and May 7, 2014 (all others)

Description of Work to be performed: Open space subdivision of five existing lots to create 63 new single family building lots, including one conventional lot, and 140.5 acres of proposed open space. The required temporary impact is 2,235 SF, the permanent wetland impact is 6,284 SF and the wetland buffer impact is 161,639 SF. These impacts include five wetland crossings for a proposed new roadway and additional impacts for storm water management and utility improvements.

Members Present: J Battis, R Brownrigg, K Dickinson, R Jurewicz

Members Stepping Down: None

Alternates Seated: None

Motion to Recommend: Favorable X_ Unfavorable _____

With Stipulations:

- 1. Construction and restoration shall comply with: BEST MANAGEMENT PRACTICES TO CONTROL NON-POINT SOURCE POLLUTION: A GUIDE FOR CITIZENS AND TOWN OFFICIALS (NH Dept of Environmental Services Current Issue.)
- 2. During construction and restoration erosion control barriers shall be installed and maintained to the satisfaction of the Town Engineer.

Motion By: R Jurewicz Second By: R. Brownrigg

Vote: Favorable 4 Unfavorable 0 Abstain 0

Summary of Arguments For Recommending: The proposed wetland and wetland buffer impacts are all within the uses permitted by special exception under §334-35 *Uses within the Wetland Conservation District* of the Hudson Town Code and meet the conditions required to grant a special exception. The proposed impacts are necessary to the development of the site. Overall, the plan, as presented, including conservation easements and open spaces, represents a vast improvement over previous versions of this development presented to the Commission and the proposed impacts are considered reasonable for the development of the site.

Dissenting Argument(s): None

This motion is based on the plan(s) submitted by the applicant. Additional impacts that result from the relocation of impervious surfaces or structures have not been addressed. It is recommended that if such changes are made the plan be returned to the Conservation Commission for further review. **Approved.**

Planning Board Minutes/Decisions November 9, 2005 Page 5



XI. ZBA INPUT ONLY

A. Hawkview – White Service Road ZI# 04-05

Map 194/Lot 5 Bush Hill Road

Purpose of plan: Planning Board input to the ZBA for a Special Exception for roadway crossings and drainage structures within wetlands and the wetland buffer. Deferred Date Specific from the 09-28-05 Planning Board Meeting.

M. McGrath seated.

Motion by G. Hall that Planning Board has no concerns with the plan as presented. Seconded by W. Tate. Vote: 3-4-0 Motion failed.

Motion by M. McGrath that Planning Board has concerns with the wetland crossings in light of correspondence submitted from EPA. Seconded by V. Russo. Vote: 4-3-0 Motion carried.

B. Hawkview Ridge – Hawkview Road ZI# 05-05

Map 195/Lot 1 Map 201/Lot 7

Purpose of plan: Planning Board input to the ZBA for a Special Exception for roadway crossings and drainage structures within wetlands and the wetland buffer. Deferred Date Specific from the 09-28-05 Planning Board Meeting.

M. McGrath moved to forward to the ZBA the following concerns regarding the Hawkview Ridge ZBA Wetland Special Exception application:

1. To date, the Applicant has not submitted plans, sufficient in detail, to determine the extent of wetland impacts, nor the extent of development, i.e., the plans do not show even a basic layout schematic of lots. Also, the Applicant has not submitted sufficient details as to alternative routes of roadway construction, which, if provided, may create fewer and less severe wetland crossings.

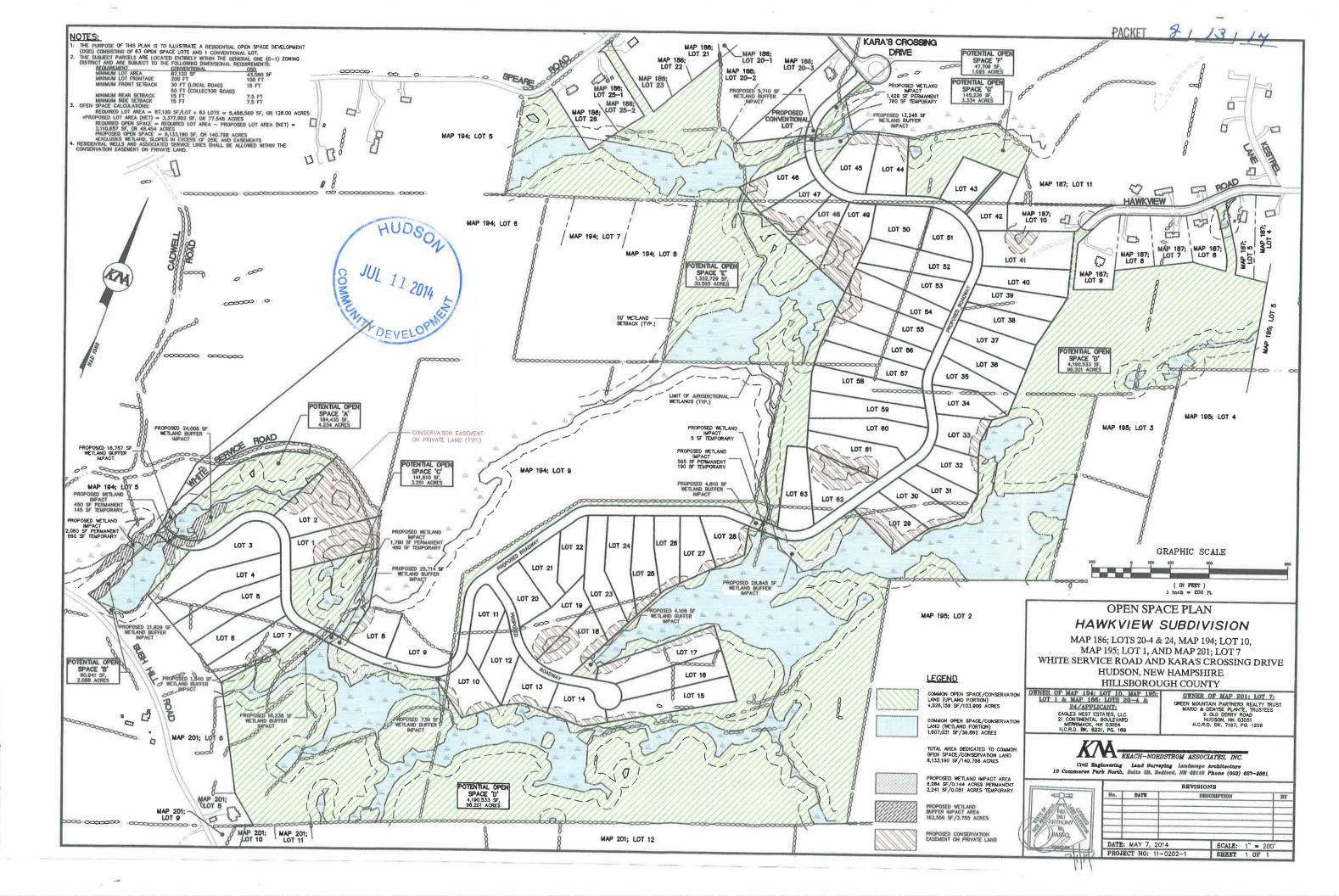
2. The Planning Board has determined that it is in the Town's best interest to investigate and work with the developer, relative to planning a residential development that creates substantially less environmental impact than what is presently proposed for this undeveloped 200+ acre tract. This concern also takes into account that the subject tract abuts several other large undeveloped tracts.

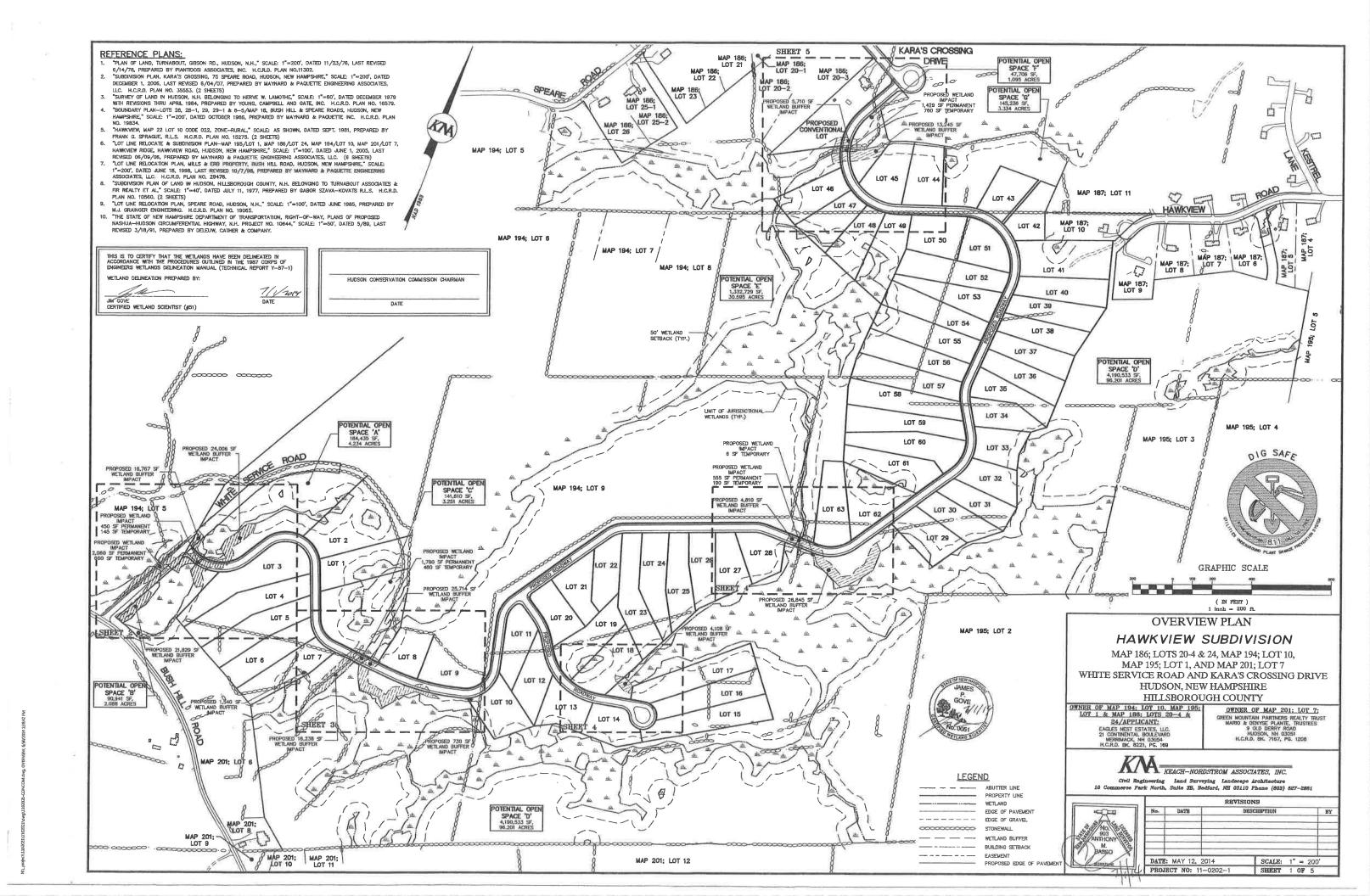
NOTE: The Planning Board reviewed the following plans regarding the two ZBA Input applications for Hawkview Ridge:

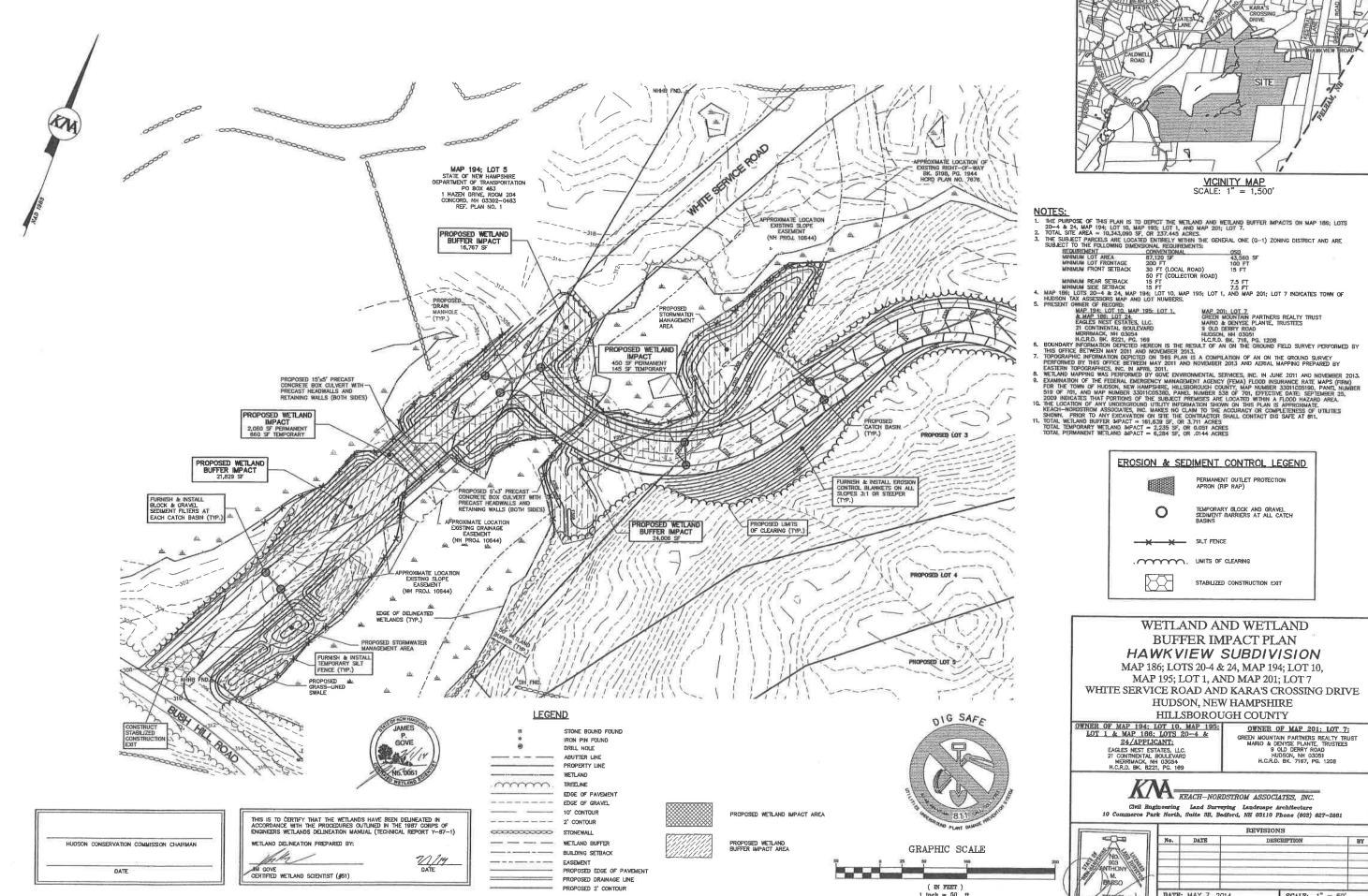
a) Hawkview Ridge, Hawkview Road, Hudson, NH, prepared by Maynard & Paquette, Engineering Associates, LLC and dated: June 1, 2005 and revised thru July 21, 2005, consisting of Sheets 40 – 48 (numbered as submitted) and Notes 1 – 12, shown on Sheet 41.

3. Copies of EPA letters to be sent to ZBA for information.

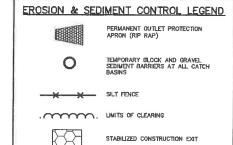
Seconded by G. Hall. Vote: 7-0, motion carried.







VICINITY MAP SCALE: 1" = 1,500'



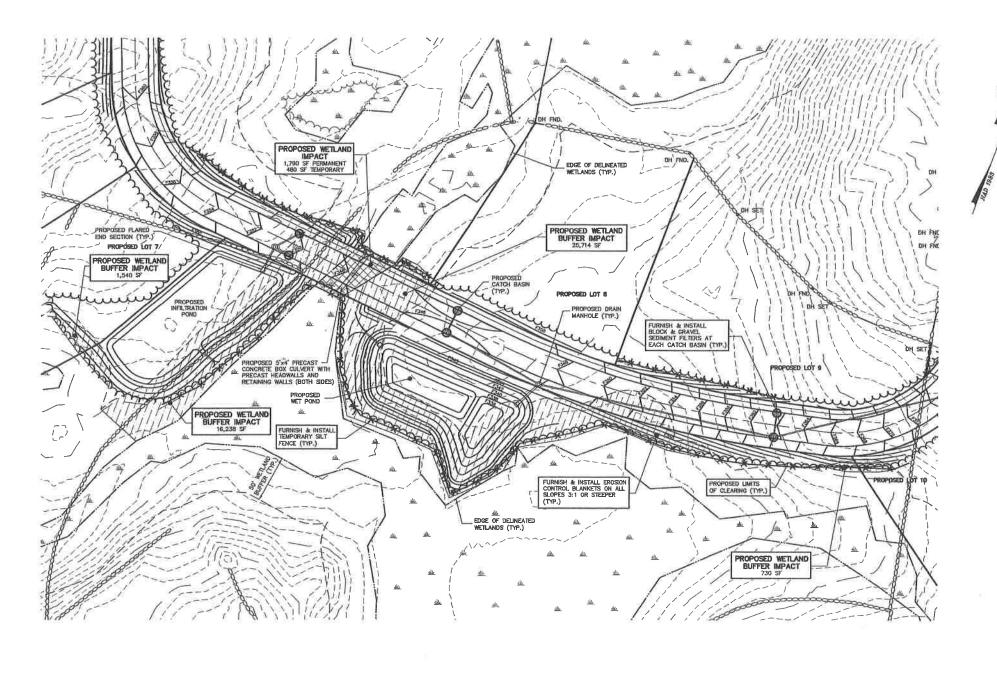
WETLAND AND WETLAND **BUFFER IMPACT PLAN** HAWKVIEW SUBDIVISION

MAP 195; LOT 1, AND MAP 201; LOT 7 WHITE SERVICE ROAD AND KARA'S CROSSING DRIVE

HILLSBOROUGH COUNTY

OWNER OF MAP 201; LOT 7; GREEN MOUNTAIN PARTNERS REALTY TRUST
MARIO & DENYSE PLANTE, TRUSTEES
9 OLD DERRY ROAD
HUDSON, NH 03051
H.C.R.D. BK. 7167, PG. 1208

REVISIONS DESCRIPTIO DATE: MAY 7, 2014 SCALE: 1" = 50' PROJECT NO: 11-0202-1 SHEET 2 OF 5





AM GOVE CERTIFIED WETLAND SCIENTIST (#51)

This is to certify that the Wetlands have been delineated in accordance with the procedures dutuned in the 1887 corps of engineers wetlands delineation manual (Technical Report Y—87—1) WETLAND DELINEATION PREPARED BY:

EROSION & SEDIMENT CONTROL LEGEND



PERMANENT OUTLET PROTECTION APRON (RIP RAP)



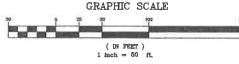




STABILIZED CONSTRUCTION EXIT



GRAPHIC SCALE



SEE SHEET 2 FOR NOTES

LEGEND

	STONE BOUND FOUND
	IRON PIN FOUND
•	DRILL HOLE
	ABUTTER LINE
	PROPERTY LINE
	WETLAND
mm.	TREELINE
	EDGE OF PAVEMENT
	EDGE OF GRAVEL
	10' CONTOUR
	2' CONTOUR
00000000000	STONEWALL.
	WETLAND BUFFER
	BUILDING SETBACK
	EASEMENT
	PROPOSED EDGE OF PAVEMENT
	PROPOSED DRAINAGE LINE
	PROPOSED 2' CONTOUR
	PROPOSED WETLAND IMPACT ARE
	PROPOSED WETLAND BUFFER IMPACT AREA

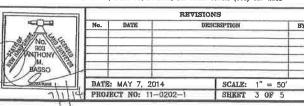
WETLAND AND WETLAND **BUFFER IMPACT PLAN** HAWKVIEW SUBDIVISION

MAP 186; LOTS 20-4 & 24, MAP 194; LOT 10, MAP 195; LOT 1, AND MAP 201; LOT 7 WHITE SERVICE ROAD AND KARA'S CROSSING DRIVE HUDSON, NEW HAMPSHIRE HILLSBOROUGH COUNTY

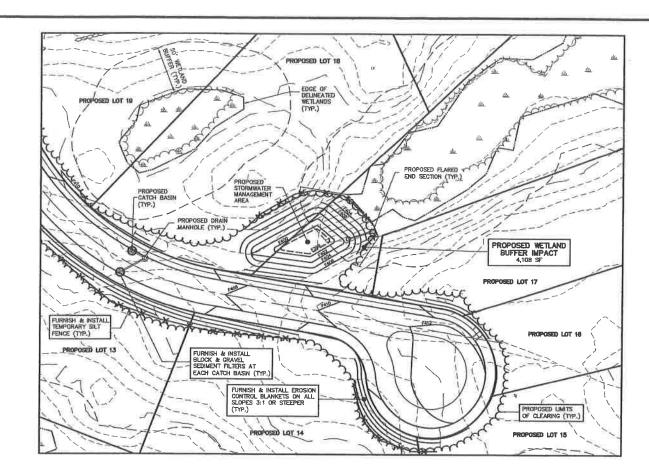
OWNER OF MAP 194: LOT 10, MAP 195: LOT 1 & MAP 186: LOTS 20-4 & 24/APPLICANT: EAGLES NEST ESTATES, LLC. 21 CONTINENTAL BOLLEVARD MERRIMACK, NH 03054 H.C.R.D. BK. B2ZI, PG. 169

OWNER OF MAP 201: LOT 7: GREEN MOUNTAIN PARTINERS REALTY TRUST
MARIO & DENYSE PLANTE, TRUSTEES
9 OLD DERRY ROAD
HUDSON, NH 03051
H.C.R.D. BK. 7187, PG. 1208

KEACH-NORDSTROM ASSOCIATES, INC. Civil Engineering Land Surveying Landscape Architecture 10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881







EROSION & SEDIMENT CONTROL LEGEND

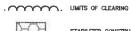


PERMANENT OUTLET PROTECTION APRON (RIP RAP)



TEMPORARY BLOCK AND GRAVEL SEDIMENT BARRIERS AT ALL CATCH





STABILIZED CONSTRUCTION EXIT

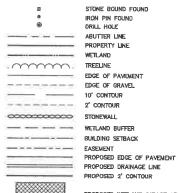










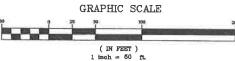




PROPOSED WETLAND IMPACT AREA

PROPOSED WETLAND BUFFER IMPACT AREA





WETLAND AND WETLAND **BUFFER IMPACT PLAN** HAWKVIEW SUBDIVISION

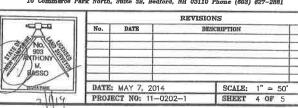
MAP 186; LOTS 20-4 & 24, MAP 194; LOT 10, MAP 195; LOT 1, AND MAP 201; LOT 7 WHITE SERVICE ROAD AND KARA'S CROSSING DRIVE HUDSON, NEW HAMPSHIRE HILLSBOROUGH COUNTY

OWNER OF MAP 194; LOT 10, MAP 195; LOT 1 & MAP 186; LOTS 20-4 & 24/APPLICANT: EAGLES NEST ESTATES, LLC. 21 CONTINENTAL BOULEVARD MERRIMACK, NH 03054 H.C.R.D. BK, 8221, PG. 169

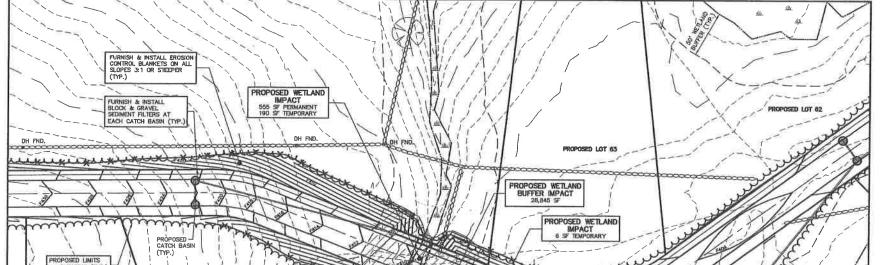
OWNER OF MAP 201; LOT 7; GREEN MOUNTAIN PARTNERS REALTY TRUST
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HUDSON, NH 03051
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KEACH-NORDSTROM ASSOCIATES, INC. Civil Engineering Land Surveying Landscape Architecture 10 Commerce Park North, Suite SB, Bedford, NH 03110 Phone (603) 627-2881



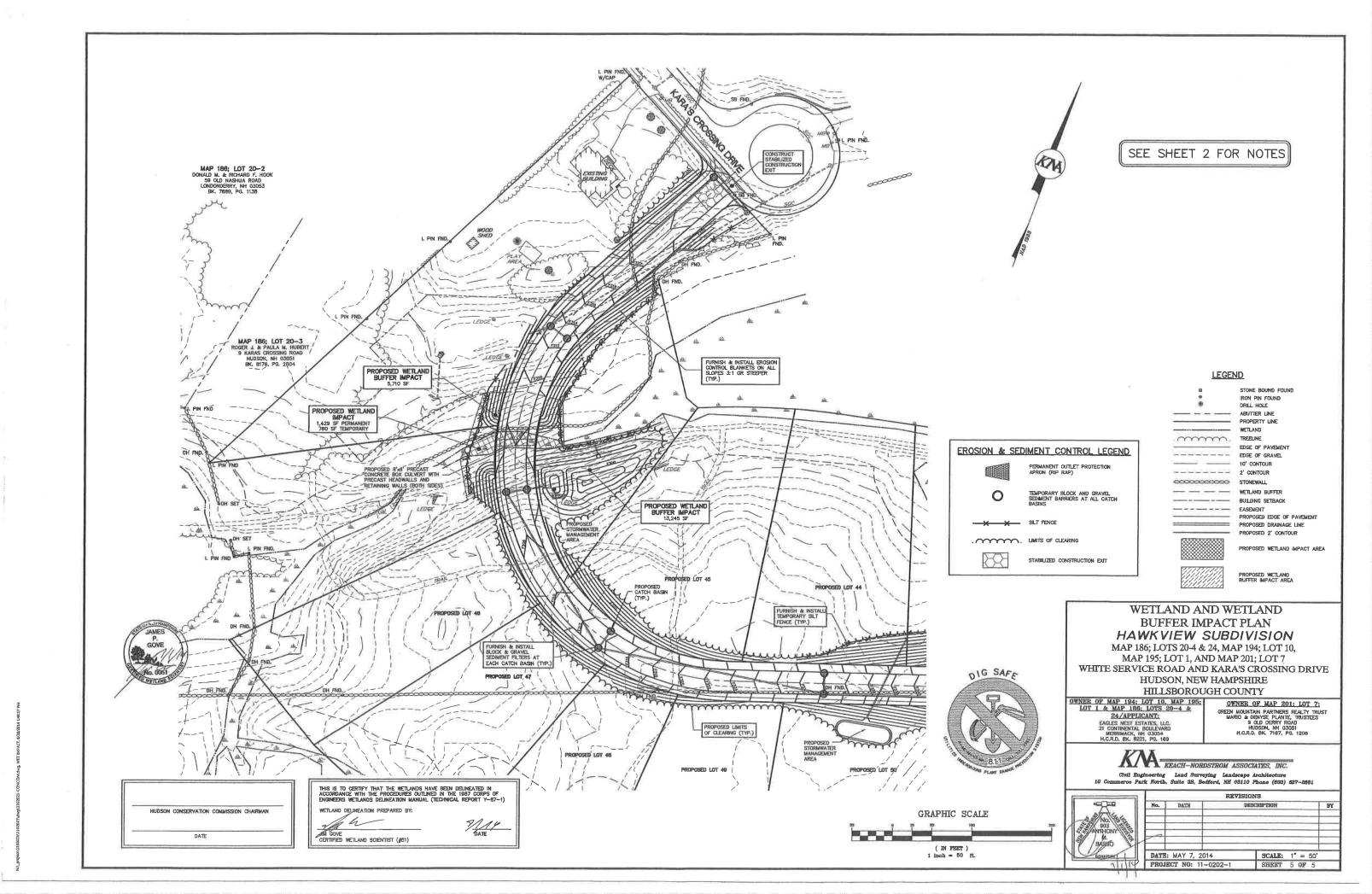




FURNISH & INSTALL TEMPORARY SILT FENCE (TYP.)

PROPOSED WETLAND BUFFER IMPACT 4,810 SF

PROPOSED LOT 27



Land of Leonard Vigeant ZBA Input Only

Staff Report August 13, 2014

SITE: 300 Webster Street - Map 128/Lots 7 & 8 - ZI# 02-14

ZONING: G-1 - Minimum Lot Size With or Without Town Water & Sewer 87,120 sf and Minimum Frontage 200 ft.

PURPOSE OF PLAN: The project proposes to consolidate Lots 7 & 8 in the Town of Hudson with two adjacent lots in the Town of Litchfield and re-subdivide to create 9 new building lots along a new town roadway. The temporary wetland impact is 913 sf, the permanent wetland impact is 2,545 sf, and the buffer impact is 25,915 sf.

PLAN UNDER REVIEW ENTITLED: Wetland/Wetland Buffer Impact Plan Land of Leonard Vigeant – Hudson: Map 128; Lot 7 & 8, Litchfield: Map 1; Lot 2 & 1 300 Webster Street, Hudson, NH, Hillsborough County, prepared by Keach-Nordstrom Associates, Inc., dated: July 1, 2014 (no revision date), consisting of Sheets 1 and 2 and Notes 1 – 12 on Sheet 1 (said plans are attached hereto).

APPLICANT REPRESENTATIVE: Tony Basso, Keach - Nordstrom Associates, Inc.

ATTACHMENTS:

- ZBA Input Only application, dated July 11, 2014 "A".
- Motion to Recommend Wetlands Special Exception: issued by the Conservation Commission for the Land of Leonard Vigent, 300 Webster St., Map 128; Lots 007 & 008, dated 11 July 2014 "B".

OUTSTANDING ISSUES/ RECOMMENDATION:

As with the Hawkview ZBA Input Plan, staff found no outstanding issues with this ZBA Input Only application. In preparation for the meeting, please review the attached set of ZBA Input Only Plans and application "A", as well as the Conservation Commission's Recommendation "B". This recommendation, takes into consideration that this proposed subdivision directly abuts the Merrimack River to the rear, and that upon subdivision plan submission, the Planning Board and Town should seek to secure access easements within this development pertaining to the Heritage Trail, as described in Stipulations 3 & 4 of the Conservation Commission's attached Motion to Recommend "B".

Also inscribed on the Conservation Commission's Recommendation is a **Summary of Argument For Recommending**, which recognizes that "The proposed wetland and wetland buffer impacts are all within the uses permitted by special exception under §334-35 *Uses within the Wetland Conservation District* of the Hudson Town Code and meet the conditions required to grant a special exception. The proposed impacts are necessary to the development of the site."

In addition to the above, as cited in the Hawkview staff report included in this Packet, in previous ZBA Input Only applications the board requested applicants to submit lot dimension and lot size data. The present submission does not include this data, however, if, in fact, this subdivision moves

toward formal subdivision application submission, such data will have to be submitted. In effect, the only thing (in realistic terms) for the board to review for Wednesday night, is the detail provided in the submitted plans for the proposed roadway layout, and as this layout pertains to the proposed wetland crossings and associated wetland and wetland buffer impacts. To this effect, the attached plans provide this detail; that is, the proposed wetland crossing structures are cited on the plans, together with erosion control materials. The plans also depict the proposed slopes and areas of wetland and wetland buffer impacts, and in regard to this application, staff provides below, for the board's consideration, a DRAFT MOTION to forward to the ZBA.

DRAFT MOTION:

I move to forward correspondence to the ZBA, notifying them that the Planning Board has no concerns regarding the proposed Wetland Special Exception application, which calls for the temporary wetland impact of 913 sf, the permanent wetland impact of 2,545 sf, and the buffer impact of 25,915 sf, as shown on the plan under review entitled: Wetland/Wetland Buffer Impact Plan Land of Leonard Vigeant – Hudson: Map 128; Lot 7 & 8, Litchfield: Map 1; Lot 2 & 1 300 Webster Street, Hudson, NH, Hillsborough County, prepared by Keach-Nordstrom Associates, Inc., dated: July 1, 2014 (no revision date), consisting of Sheets 1 and 2 and Notes 1 – 12 on Sheet 1.

Motion by:	Second:	Carried/Failed:	





Landscape Architecture

LETTER OF TRANSMITTAL

DATE: JUNY 11, 2014:
PROJECT NO: 07-0511-4A
REFERENCE: Land of Legonard Vigeant
TO: Town of Hudson-Planning Dept. 12 School street Hudson, NH 03051
-10
ATTENTION: John Cashell, Town Planner
WE ARE SENDING YOU THE FOLLOWING ITEMS: THESE ARE TRANSMITTED AS FOLLOWS:
FOR APPROVAL SPECIFICATIONS
SIGNATURE (to verify receipt)
COPY TO: SIGNED:
Katherine Basso

Land Surveying

Civil Engineering

ZBA INPUT ONLY APPLICATION FOR REVIEW TOWN OF HUDSON, NEW HAMPSHIRE

	cation: JUIVII, 2014	Tax Map # 128 Lot # / & 8		
Name of Proje	ct: Land of Leonard Vigeant	ZBA 02-14		
Zoning Distric	ct: General Zo (For Office Use)	ning ID#(For Office Use)		
ZBA Action:				
	PROPERTY OWNER:	DEVELOPER:		
Name:	Leonard Vigeant	(Same)		
Address:	5 Mockingbird Lane			
Address:	Hudson, NH 03051			
Telephone #	(603) 321-1946			
Fax #				
Email:	vfamilyproperties@comcast.net			
	PROJECT ENGINEER			
Name: Kea	ch-Nordstrom Associates, Inc.	Telephone # (603) 627-2881		
Address: 10 C	Commerce Park No., Suite 3	Fax # (603) 627-2915		
Address: Bed	ford, NH 03110	Email: pcolburn@keachnordstrom.com		
PURPOSE OF	FPLAN:			
The project pr	roposes to consolidate Lots 7 & 8 in the	Town of Hudson with two adjacent lots in the		
Town of Litch	hfield and re-subdivide to create 9 new b	ouilding lots along a new town roadway. The		
temporary we	etland impact is 913 sf, the permanent we	etland impact is 2,545 sf, and the buffer impact		
is 25,915 sf.				
	(For Office U	se)		
Plan Routing 1	Date:P	an Date:		
		omments (attach to form)		
Title:				
(Initials)	-			
Department:				
Zoning	Engineering Assessor P	olice Fire Planning		
High	nwayConsultant Review	Fees Paid		

APPLICATION FOR ZBA INPUT ONLY REVIEW TOWN OF HUDSON, NEW HAMPSHIRE

I hereby apply for ZBA Input Only Review and acknowledge I will comply with all of the Ordinances of the Town of Hudson, New Hampshire State Laws, as well as any stipulations of the Planning Board, in development and construction of this project. I understand that if any of the items listed under the ZBA Input Only specifications or application form are incomplete, the application will be considered rejected.

Pursuant to RSA 674:1-IV, the owner(s), by the filing of this application as indicated above, hereby give permission for any member of the Hudson Planning Board, the Town Engineer, the Conservation Commission and such agents or employees of the Town or other persons as the Planning Board may authorize, to enter upon the property which is the subject of this application at all reasonable times for the purpose of such examinations, surveys, tests and inspections as may be appropriate. The owner(s) release(s) any claim or right he/she (they) may now or hereafter possess against any of the above individuals as a result of any examinations, surveys, tests and inspections conducted on his/her (their) property in connection with this applications.

Signature of Owner:

		200		7	,	
*	If other than an individual, indicat	e name of o	rganization	and its	principal o	wner,
	partners, or corporate officers.	-	1	1	٠	

Signature of Developer: Florand

The developer/individual in charge must have control over all project work and be available to the Code Enforcement Officer/Building Inspector during the construction phase of the project. The individual in charge of the project must notify the Code Enforcement Officer/Building Inspector within two (2) working days of any change.

Technical Review Signature:

Planner Approval Signature:

Twenty-one days prior to the scheduled Planning Board Meeting, a complete subdivision, or site plan application including all supporting materials/documents must be submitted in final form to the Town Planner's Office.

- Please schedule an appointment with the Town Planner for initial plan submittal.
- Revisions are due on Tuesday the week prior to the Planning Board deferral date by 10:00AM. Any application/materials received after that time will be deferred until the next available meeting date.

Motion to Recommend Wetlands Special Exception



Date: 14 July 2014

Case: Leonard A. Vigeant & Jane M. Vigeant

300 Webster Street Map 128 Lots 007 & 008

Referenced Plan: Land of Lenny Vigeant

Dated: July 1, 2014

Description of Work to be performed: To consolidate Map 128 Lots 007 and 008 in the Town of Hudson with two adjacent lots in the Town of Litchfield and to re-subdivide to create 9 new building lots along a new town road. Construction of this new roadway will require a temporary wetland impact of 913 SF, a permanent wetland impact of 2,545 SF and a wetland buffer impact of 25,913 SF.

Members Present: J Battis, R Brownrigg, K Dickinson, R Jurewicz

Members Stepping Down: None

Alternates Seated: None

Motion to Recommend: Favorable

Unfavorable <u>X</u>

With Stipulations:

- Construction and restoration shall comply with: BEST MANAGEMENT PRACTICES TO CONTROL NON-POINT SOURCE POLLUTION: A GUIDE FOR CITIZENS AND TOWN OFFICIALS (NH Dept of Environmental Services – Current Issue.)
- 2. During construction and restoration erosion control barriers shall be installed and maintained to the satisfaction of the Town Engineer.
- 3. Recommend that the Town of Hudson acquire a pedestrian easement from the cul-de-sac at the western end of the proposed new roadway, along the lot line between Lots 6&7 to the boat ramp, located coincident with Photo 6 on the associated plans, and at the top of the Merrimack River bank both north and south of the wetlands connecting to the river, for the purpose of providing access to and a path for the proposed Heritage Trail.
- 4. Recommend that the Town of Hudson acquire a river access and pedestrian easement extending from the recommended pedestrian easement located coincident with Photo 6 on the associated plans, and continuing down the existing boat ramp to the Merrimack River.

Motion By: K. D	ickins	son				
Second By: R. B	rowni	rigg				
Vote: Favorable	4	Unfavorable	0	Abstain	0	

Summary of Arguments For Recommending: The proposed wetland and wetland buffer impacts are all within the uses permitted by special exception under §334-35 *Uses within the Wetland Conservation District* of the Hudson Town Code and meet the conditions required to grant a special exception. The proposed impacts are necessary to the development of the site.

Dissenting Argument(s): None

This motion is based on the plan(s) submitted by the applicant. Additional impacts that result from the relocation of impervious surfaces or structures have not been addressed. It is recommended that if such changes are made the plan be returned to the Conservation Commission for further review.

Approved		
Jim Battis, Chairman		

Packet: 08/13/14

Derry Street Retail Lot Line Relocation LLR (Hogan)

Staff Report August 13, 2014

SITE: 66 & 68 Derry Street -- Map 165/Lots 145 & 146 -- SB# 06-14

ZONING: Business (B) – Minimum lot size 30,000 with Town water & sewer and 150 ft. street frontage.

PURPOSE OF PLAN: To relocate the lot-line between existing Map 165/Lots 145 & 146. Application Acceptance & Hearing.

PLAN UNDER REVIEW ENTITLED: "Lot Line Adjustment Plan Land of Shawn B. Hogan, Map 165 Lots 145 & 146, 66 & 68 Derry St., Hudson, NH, prepared by Keach-Nordstrom Associates, Inc., dated: July 7, 2014 (no revision date), consisting of Sheets 1 and 2 and Notes 1 – 13 on Sheet 1 (said plans are attached hereto).

ATTACHMENTS:

1) Lot Line Relocation Plan application, which includes a signed affidavit by the property owner, Shawn B. Hogan, granting permission to Keach-Nordstrom Associates, Inc. to prepare and submit plan applications, etc. on his behalf, date stamped 07/14/13 – Attachment "A".

REQUESTED WAIVER: N/A.

APPLICATION TRACKING:

- 1. This application was submitted on July 14, 2014.
- 2. Initial Public Hearing scheduled for August 13, 2014.

OUTSTANDING ISSUES & RECOMMENDED ACTION:

- 1. As depicted on the attached plan set, this LLR application calls for the creation of New Lot: Map 165/Lot 145, having a street address 66 Derry St., and consisting of 72,410 sf and New Lot: Map 165/Lot 146, having a street address of 68 Derry St., and consisting of 81,127 sf. Please note, the above-cited minimum lot size & frontage requirements are met by this plan. That is, Lot 145 has 150.01 ft of street frontage and Lot 146 has 258.17 ft. of frontage, and each lot exceeds the minimum lot size of 30,000 with Town water & sewer. NOTE: the former lot lines for Lot 146 are shown with a "Z" bisecting a solid line (please see the corner area of said lot fronting on Derry St.
- 2. Presently, the plan does not include a Hall Chart, but Note # 2 on Sheet 1 includes the lot information included in a Hall Chart. This information is also provided within the each lot area on the plan.
- 3. Taking the above plan description into account, and the fact the application is in order, staff, herein, recommends application acceptance. Further, the two proposed lots are the subject of the initial Site Plan Review public hearings, following action on this plan. NOTE: the applicant will provide an owner-signed plan at the meeting.

I move to accept the LLR Plan application for 66 & 68 Derry St., Map 165, Lots 145 & 146. Motion by: ______Second: _____Carried/Failed: _____. MOTION TO APPROVE: I move to approve the Lot Line Relocation Plan entitled: "Lot Line Adjustment Plan Land of Shawn B. Hogan, Map 165 Lots 145 & 146, 66 & 68 Derry St., Hudson, NH, prepared by Keach-Nordstrom Associates, Inc., dated: July 7, 2014 (no revision date), consisting of Sheets 1 and 2 and Notes 1 — 13 on Sheet 1, in accordance with the following terms and conditions: 1. All stipulations of approval shall be incorporated into the Decision of Approval, which shall be recorded at the HCRD, together with the Plan. 2. All monumentation shall be set or bonded prior to the Planning Board endorsing the Plan-of-Record.

Motion by: _____Second: ____Carried/Failed: _____

DRAFT MOTIONS:

LOT LINE RELOCATION APPLICATION FOR REVIEW TOWN OF HUDSON, NEW HAMPSHIRE

Date of Application: July 10, 2014 Tax	Map # 165 Lot # 145 PAN 100 Map
Name of Project: Derry Street Retail	
Zoning District: B-Business General SE (For Town Use)	(For Town Use)
Z.B.A. Action:	
PROPERTY OWNER:	DEVELOPER:
Name: Shawn B. Hogan	Clark, Geer, Latham & Assoc., Inc
Address: 11354 Golf Round Drive	3901 Springhill Ave.
Address: Newport Richey, FL	Mobile, AL 36608
Telephone #34654	(251)344-7073
Fax #	(251)343-9179
Email:	<u>tlatham@cglengineers</u> .com
PROJECT ENGINEER Name: Steven B. Keach, P.E. (KNA) Address: 10 Commerce Park No., 3	Telephone # (603) 627-2881 Fax # (603) 627-2915
Address: Bedford, NH 03110 PURPOSE OF PLAN: To relocate the lot line between exis	Email: <u>skeach@keachnordstrom.com</u> ting Map 165; Lots 145 and 146.
Plan Routing Date: 7-/6-/4 Sub/Site Date I have no comments I have comm	e: 7-29-14
Title:	Date:
Department:	
Zoning Engineering Assessor Police Consultant Highway Departm	
Fees Paid	the loss was been done and also the loss than the loss and the part has day from the loss and measure the country and and and the part.

LOT LINE RELOCATION DATA SHEET

Plan Name: Land of Sh	awn B. Hogan
Plan Type: <u>Lot Line Relocati</u>	on Plan
Legal Description:	Map 165 Lot 145
	Map 165 Lot 146
Date: <u>July 10, 2014</u>	
Location:	66 & 68 Derry Street
Total Area:	S.F. <u>153,537</u> Acres: <u>3.524</u>
Area in Wetlands:	7405 sf (Lot 145)
Zoning:	B-Business
Lots Not Meeting Required Dimensions:	0
Required Area:	30,000 sf (With Town Water and Sewer)
Required Frontage:	150 lf
Water and Waste System Proposed:	Public
Number of Lots With Existing Buildings:	2
Existing Buildings To Be Removed:	1
Flood Zone Reference:	Not in flood zone-Map No. 33011CO514E
Proposed Linear Feet Of New Roadway:	0

LOT LINE RELOCATION DATA SHEET

Dates/Case #/Description:	N/A
Stipulations of ZBA, (Attach Copies of Stipulations on Separate Sheet)	
NH Wetlands Board Action:	N/A
Conservation Commission Recommendation:	N/A
List Permits Required:	_N/A

APPLICATION FOR LOT LINE RELOCATION TOWN OF HUDSON, NEW HAMPSHIRE

I hereby apply for Lot Line Relocation Plan Review and acknowledge I will comply with all of the Ordinances of the Town of Hudson, New Hampshire State Laws, as well as any stipulations of the Planning Board, in development and construction of this project. I understand that if any of the items listed under the Lot Line Relocation Plan specifications or application form are incomplete, the application will be considered rejected.

Pursuant to RSA 674:1-IV, the owner(s), by the filing of this application as indicated above, hereby give permission for any member of the Hudson Planning Board, the Town Engineer, the Conservation Commission and such agents or employees of the Town or other persons as the Planning Board may authorize, to enter upon the property which is the subject of this application at all reasonable times for the purpose of such examinations, surveys, tests and inspections as may be appropriate. The owner(s) release(s) any claim or right he/she (they) may now or hereafter possess against any of the above individuals as a result of any examinations, surveys, tests and inspections conducted on his/her (their) property in connection with this applications.

Signature of Owner:	TODD LITTLER	
DEVELOPER	VP. LEASING	

If other than an individual, indicate name of organization and its principal owner, partners, or corporate officers.

OWNEL		1111	1001	
Signature of Developer:	Da	Attached	Affidavit	

The developer/individual in charge must have control over all project work and be available to the Code Enforcement Officer/Building Inspector during the construction phase of the project. The individual in charge of the project must notify the Code Enforcement Officer/Building Inspector within two (2) working days of any change.

Technical Review Signature:

Planner Approval Signature:

APPLICATION IS DUE AT 10:00 A.M. Toesday the week prior to the Planning Board Meeting. Any applications/materials received after that time will be deferred until the next available meeting.



Owner Affidavit

I. Shawn B. Hogan, owner of the properties referenced on Tax Map 165; Lots 145 & 146, located at 66 & 68 Derry Street in Hudson, New Hampshire, hereby verify that I authorize Keach-Nordstrom Associates, Inc. (KNA) to prepare, submit and represent, on my behalf, throughout the federal, state and municipal application process.

Signature of Landowner:

Shawn B Hogan

Printed Name of Landowner:

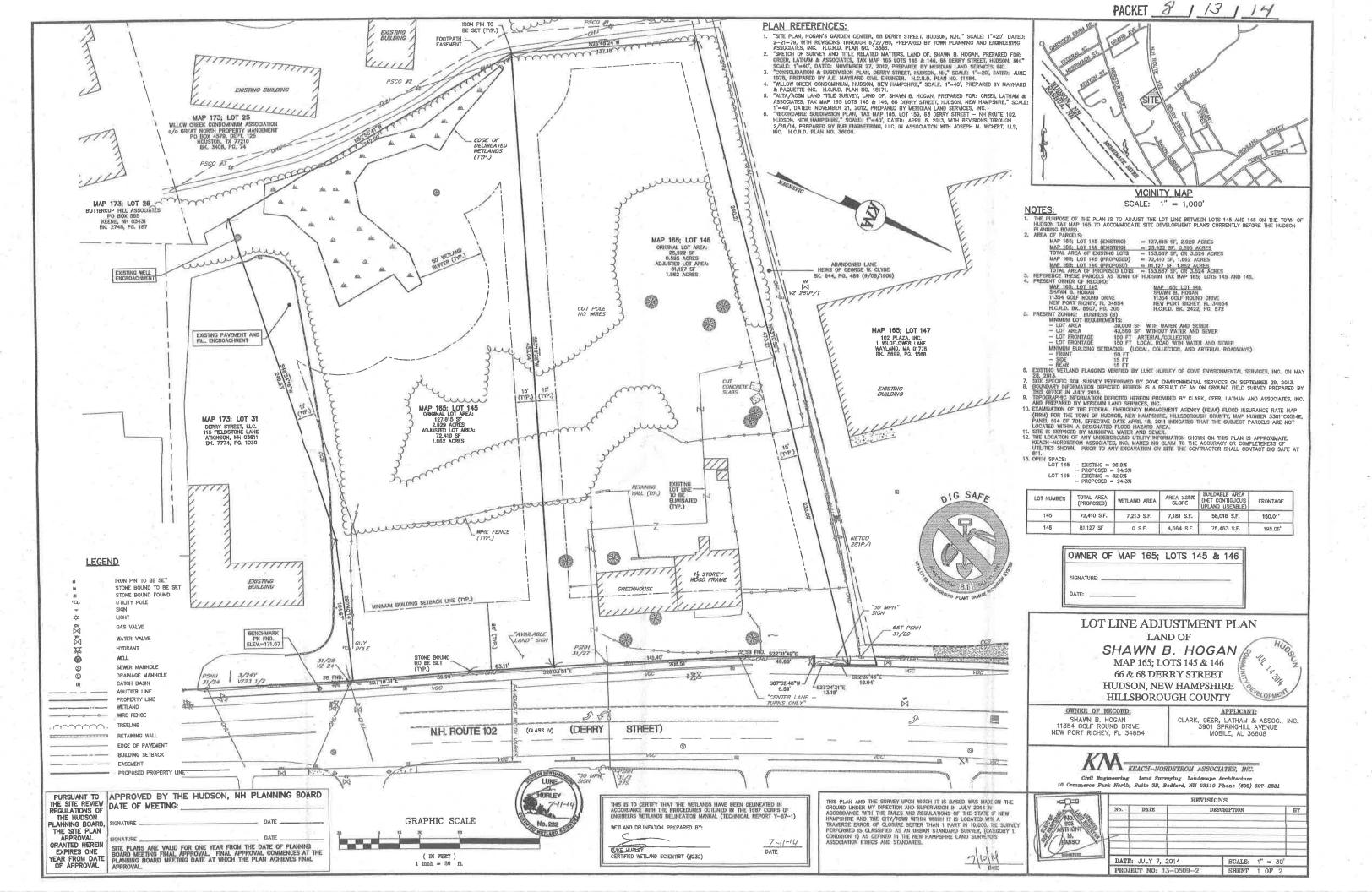
Address of Owner:

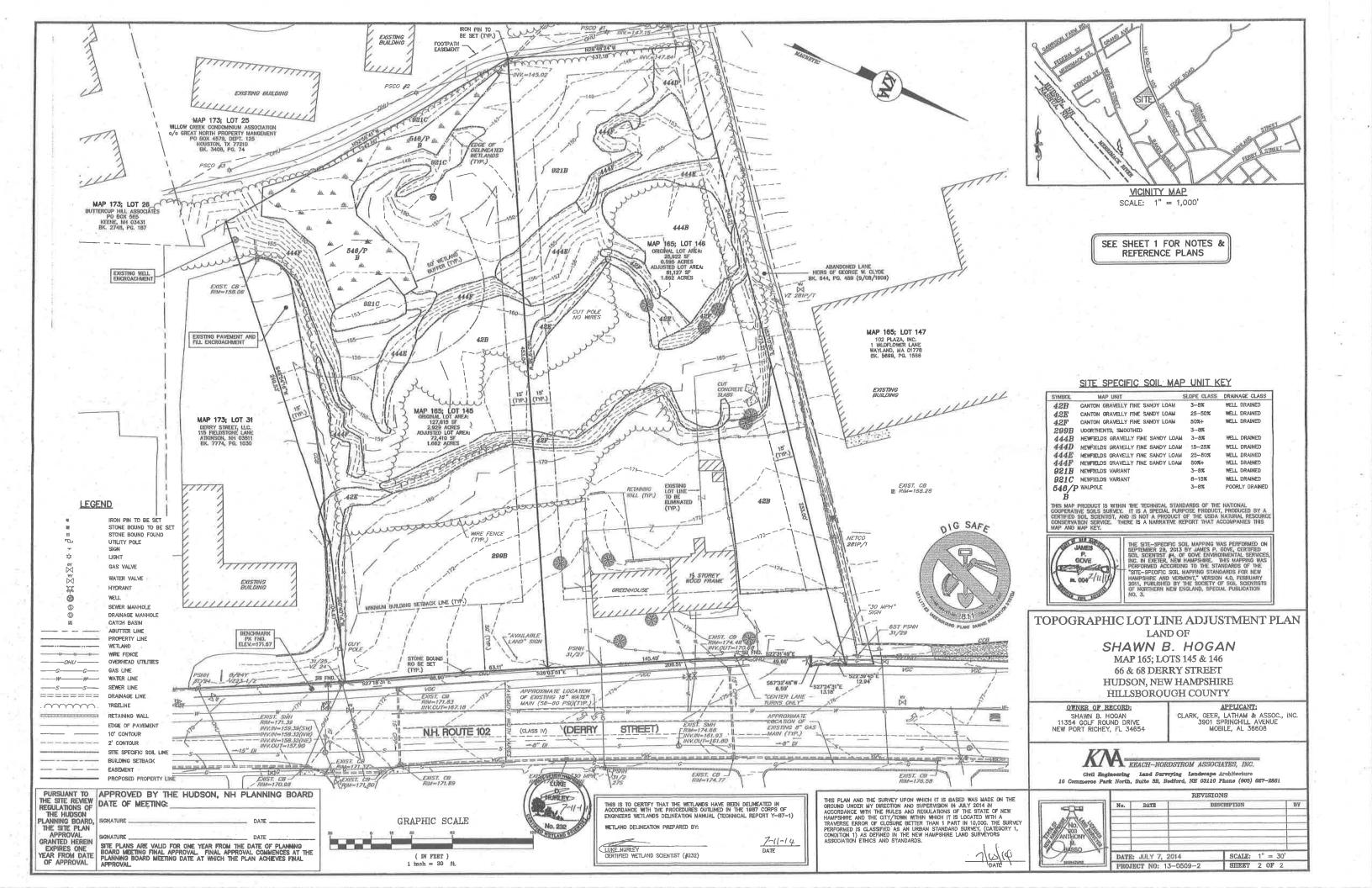
4729 Musselshell Ot

NewPortRichey, FL 3463

Date:

10-3-2013





Packet: 08/13/14

66 & 68 Derry Street Retail Development Site Plans

Staff Report August 13, 2014

SITE: 66 & 68 Derry Street -- Map 165/Lots 145 & 146 -- SP# 10-14 & SP# 10-15

ZONING: Business (B) – Minimum lot size 30,000 with Town water & sewer and 150 ft. street frontage.

PURPOSE OF PLAN: To propose 7,225 sf of retail space and the associated access, circulation, parking, stormwater, landscaping and lighting improvements on Lot 145 and to propose 9,984 sf of retail space and the associated access, circulation, parking, stormwater, landscaping and lighting improvements on Lot 146. Both plans assume previous approval of the proposed lot line adjustment between Lots 145 & 146. Application Acceptance & Hearing.

PLAN UNDER REVIEW ENTITLED: "Non-Residential Site Plan Derry Street Retail, Map 165 Lots 145 & 146, 66 & 68 Derry St., Hudson, NH, prepared by Keach-Nordstrom Associates, Inc., dated: July 7, 2014 (no revision date), consisting of Sheets 1 - 20 and Notes 1 - 30 on Sheet 1 (said plans are attached hereto).

ATTACHMENTS:

- 1) Project Narrative, Site Plan Application, Checklist and Waiver Forms date stamped July 14, 2014 Attachment "A".
- 2) GPI Traffic Impact and Access Study Proposed Retail Development, dated April 2014 "A1".
- 3) CLD's Initial Comments Report, including Traffic Study Critique and Application Checklist dated July 30, 2014 "B".
- 4) Keach-Nordstrom's Response letter, together with GPI's Traffic Response letter, both dated Aug. 1, 2014 "C".
- 5) Comments/Memos from: HFD Deputy Fire Chief, John O'Brien, Road Agent, Kevin Burns, Zoning Admin., Bill Oleksak, and Asst. Assessor, Jim Michaud "**D**".
- 6) NHDES Notice of Acceptance of Permit application, dated July 15, 2014 "E".
- 7) CAP Fee Form "F".

REQUESTED WAIVERS (see Note 30 on Sheet 1 of 20):

- 1. HTC 193-10(I) Shared Driveway
- 2. HTC 275-8(B) Internal Green Space
- 3. HTC 275-9(C) -- Noise Study
- 4. HTC 275-9(D) -- Fiscal Impact Study

APPLICATION TRACKING:

- 1. This application was submitted on July 14, 2014.
- 2. Initial Public Hearing scheduled for August 13, 2014.

OUTSTANDING ISSUES:

1) Please note, in preparing this staff report for the board's consideration, the applicant's representative, Tony Basso, requested that at Wednesday night's hearing he be allowed to present the two submitted Site Plan applications as one project, i.e., even though each of the two proposed buildings will be on separate lots. Please note, CLD's attached Comments Report "B", as well as municipal Dept. Head Comments "D", have been submitted in the singular Site Plan Review context. That is, as opposed to providing comments for each of the two applications.

With the above in mind, staff provides the following outstanding issues regarding the proposed "Shopping Center" style project:

- A) In accordance with CLD's attached Comments Report "B", the applicant has addressed the onsite outstanding issues, and to a certain extent, the offsite (traffic) related issues. Please see CLD's traffic related comments/concerns, which are included in attachment "B", and the applicant's Response Letter to same included in attachment "C". Of significant reference, to say the least, in regard to traffic associated with this project, please read GPI's Traffic Impact and Access Study Proposed Retail Development, dated April 2014 attachment "A1".
- B) In regard to onsite issues: the two development lots shown on the Plan: 66 & 68 Derry St, Map 165, Lots 145 & 146, Keach-Nordstrom's attached Response Letter and attached revised plans address CLD's outstanding concerns cited in their initial report. CLD's follow-up Comments Report is pending at the time of this writing (Fri., Aug. 8th). In any event, exterior lighting and landscaping have been properly addressed in accordance with Planning Board Site Plan Review Regulations, as well as the number and dimensions of the parking spaces and onsite travel lanes for both buildings, loading spaces, pedestrian access and dumpster locations/installation detail.
- C) In regard to the areas cited on the plans for "Snow Storage". In this author's opinion, the board may want to require adding additional "Snow Storage" areas to the plan. NOTE: in regard to this issue, Note #24 on the Site Plan indicates that upon reaching onsite snow storage capacity, snow will be appropriately removed from the site. If the board is satisfied with this stipulation, additional onsite snow storage capacity is a moot point.
- D) In regard to the northernmost ingress only driveway for Derry St. southbound traffic, the board may want to have this design altered, i.e., increase its angle (e.g., Nottingham Square and the recently approved ingress only driveway for Goodwill). In this manner, there would be less likelihood for vehicles to exit the site using this driveway, and for northbound Derry St. traffic to use this drive as a means on ingress to the site. Please note, the foregoing design alteration would result in the loss of several parking spaces, which in turn, would lead to a reduction in building square footage. That is, unless the board is willing to grant a waiver for the number of required parking spaces. Another alternative regarding the subject driveway, and as suggested by CLD, but opposed by Keach-Nordstrom (see attachments "B" & "C"), would be to eliminate it, which would result in the 2 development lots only having one means of access.
- E) Relative to the main driveway being shared, cross easements will have to be drafted and favorably recommended by Town Counsel. The same holds true for the drain and utility easements concerning both development lots, as shown on Sheet 5 of 20 Easement Plan.

F) In regard to the offsite issues, i.e., exclusive to traffic entering and exiting the site from Derry Street, CLD and the project eng's. Traffic Consultant, GPI, differ in their findings/determinations concerning adequate queuing capacity between the site's main driveway and Ledge Rd. That is, as depicted on the plans, and cited in CLD's traffic critique, the distance between said driveway and Ledge Rd. is approximately 90 ft. With such a short distance between these two intersections, CLD disputes the findings of GPI, in that the latter determined the number of vehicles northbound on Derry St., turning left into the shopping center, will not interfere with the number of vehicles turning into Ledge Rd., southbound on Derry St. At the meeting, the project representative agreed to have the author of GPI's traffic study in attendance to present their traffic findings, which may help the board decide on this outstanding traffic issue.

Herein, staff would like to comment on project related traffic, that is, the board may want to consider requiring the applicant to design both north and southbound Derry Street transition lanes, relative to better controlling traffic flow into and out of the shopping center, as well as southbound traffic turning left into Ledge Rd.

In addition to the above traffic issues, the board may want to consider requiring the applicant to grant a future roadway widening easement along the entire frontage of this site. Please note, this is also suggested as a condition in CLD's Comments Report "B".

CAP Fee Worksheet Form for both buildings is provided as attachment "F".

RECOMMENDATION: For this hearing, staff recommends, first, application acceptance, followed by the board having the applicant present the project, then allow for public into and then have the project representatives answer questions from the board and the public. The question and answer period, may lead to both on and offsite modifications that may cause a second or even third meeting prior to the Planning Board taking final action on the two Site Plan applications. If the foregoing scenario does not occur, and the board moves to take final action at this hearing, staff has provided below appropriate DRAFT MOTIONS for the board's consideration.

DRAFT MOTIONS to be voted on in the plural, i.e., relative to each of the two retail buildings being established under separate deeds:

I move to accept the Sit	te Plan applications for 66 &	£ 68 Derry St., Map 165, Lots 145	& 146.
Motion by:	Second:	Carried/Failed:	

REQUESTED WAIVERS:

- 1. HTC 193-10(I) Shared Driveway
- 2. HTC 275-8(B) Internal Green Space
- 3. HTC 275-9(C) -- Noise Study
- 4. HTC 275-9(D) -- Fiscal Impact Study

1	HTC	193-100	T) – S	hared	Driveway
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I move to grant the requested waiver: HTC 193-10(I) - Shared Driveway - because requiring two full access driveways (one for each of the two lots) would reduce the functionality and efficiency of the applicant's development plans, and because Rte. 102 (Derry Street) is a major arterial corridor, reducing the amount of driveway curb cuts is highly desirable, relative to creating safer routes of travel, therefore, the granting of this waiver is not contrary to the spirit and intent of the Site Plan Review regulations.

	Motion by:	Second:	Carried/Failed:	
2)	landscaping is proposed plan proposed and travel lanes, ra	e requested waiver: HTC - vided around the proposed vides the required number	275-8(B) – Internal Green Space - becau parking lots and travel lanes, and giver of trees and shrubs surrounding the par ng lots, the granting of this waiver is in	that the king lots
	•			
3)	HTC 275-9(C) No	ise Study		
I move to grant the requested waiver: HTC 275-9C - Noise Study - because such a study unnecessary, taking into consideration that the proposed retail use is located in a Business zoning district, for which said use is allowed, and existing retail uses, similar in scale a character to that proposed, exist in the immediate vicinity of the subject property, further, residential properties located to the rear of the site are provided with a heavily wooded natu wetland buffer, nearly 200 ft. in width, therefore, the granting of this waiver is in keeping we the spirit and intent of the ordinances.				
	Motion by:	Second:	Carried/Failed:	
4)	in addition to the s unnecessary in ord granting of this wa regulations.	e requested waiver: HTC 2 ubmitted plans and submit er to evaluate the fiscal im iver is not contrary to the s	75-9D - Fiscal Impact Study - because ted application documents, said study is pact of this development, and as such, the spirit and intent of the Site Plan Review Carried/Failed:	ē

MOTION TO APPROVE (again, the below motion shall be interpreted in the plural, relative to establishing and recording a separate Site Plan-of-Record, Development Agreement and associated easement deeds for each project site/lot):

I move to grant approval for the Site Plan entitled: Non-Residential Site Plan Derry Street Retail, Map 165 Lots 145 & 146, 66 & 68 Derry St., Hudson, NH, prepared by Keach-Nordstrom Associates, Inc., dated: July 7, 2014 (no revision date), consisting of Sheets 1-20 and Notes 1-30 on Sheet 1 in accordance with the following terms and conditions:

- 1) All stipulations of approval shall be incorporated into the Development Agreement, which shall be recorded at the HCRD, together with the Site Plan-of-Record (hereinafter referred to as the Plan).
- 2) Prior to the Planning Board endorsement of the Plan, the Development Agreement and the future road widening easement along Derry Street (NH Rte. 102) shall be favorably reviewed and recommended on by Town Counsel, together with the utility, access and drainage easement deeds.
- 3) All improvements shown on the Plan, including Notes 1-30, shall be completed in their entirety and at the expense of the Applicant or his assigns.
- 4) After the issuance of the foundation permits for each of the proposed buildings, and prior to the issuance of the framing permit thereof, the applicant shall submit to the Hudson Community Development Department a foundation "As-Built" plan on a transparency and to the same scale as the approved site plan. The foundation "As-Built" plan shall include all structural dimensions and lot line setback measurements to the foundation and be stamped by a licensed land surveyor. Any discrepancy between the approved site plan and foundation "As-Built" plans shall be documented by the applicant and be part of the foundation "As-Built" submission.
- 5) A CAP Fee in the following amounts and manner of collection shall be required: (i) prior to the issuance of a Certificate of Occupancy for the 7,225 sf retail building for 66 Derry St., Map 165/Lot 145, \$33,885.25 shall be submitted to the Town and (ii) prior to the issuance of a Certificate of Occupancy for the 9,984 sf retail building for 68 Derry St., Map 165/Lot 146, \$46,824.96 shall be submitted to the Town.
- 6) Prior to the issuance of a final certificate of occupancy, a L.L.S. certified "As Built" site plan shall be provided to the Town of Hudson Community Development Department, confirming that the site conforms with the Planning Board approved Plan.
- 7) Onsite landscaping shall be provided for in accordance with the plant and tree species specified on Sheet 9 of 20 of the Plan.
- 8) Exterior construction activities on the site shall be limited to between 7:00 A.M. and 7:00 P.M. Monday through Saturday. No construction activities shall occur on Sunday.
- 9) This approval shall be subject to final engineering review, including approval of the stormwater pollution prevention plan (SWPPP).

10) The applicant's enginal a preconstruction material construction.							
Motion by:	Second:	Car	rried/F	ailed:	-		

NOTE: all other pertinent Site Plan approval terms and conditions are included in the above-cited Site Plan-of-Record, Notes 1-30, including, but not limited blasting and refuse removal, etc.



Civil Engineering Land Surveying Landscape Architecture 10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2861

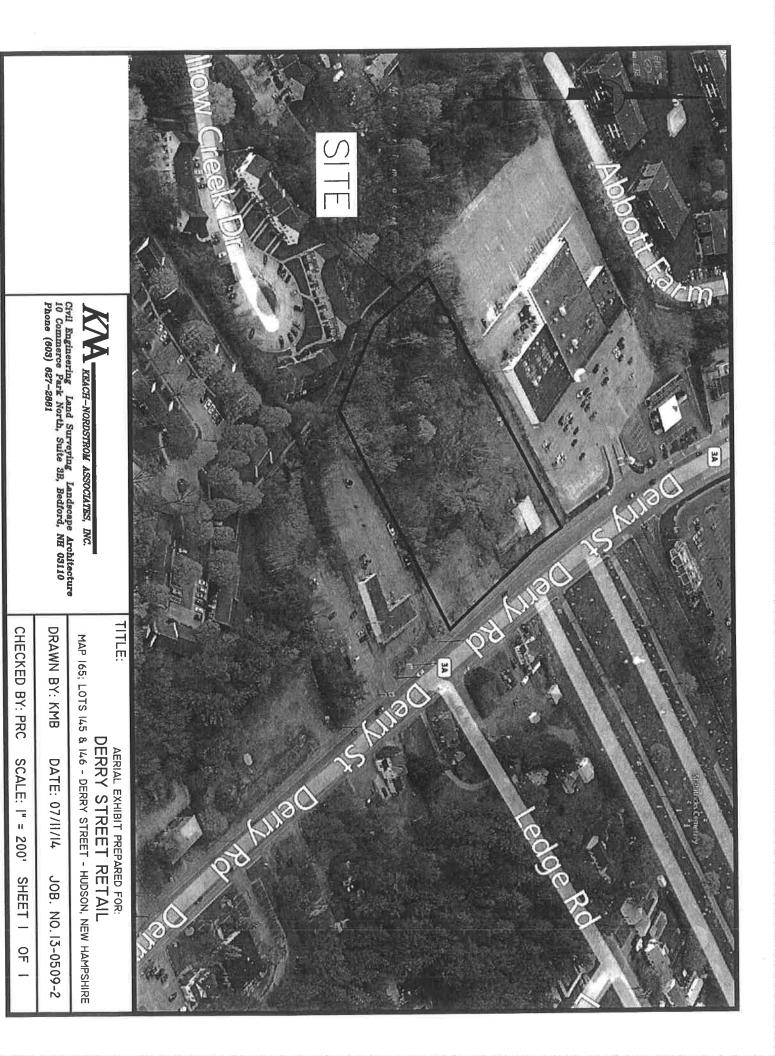
MAP 165; LOTS 145 & 146 - DERRY STREET - HUDSON, NEW HAMPSHIRE

DATE: 07/11/14 JOB. NO.13-0509-2

DRAWN BY: KMB

SHEET 유

CHECKED BY: PRC SCALE: I" = 200'



PRELIMINARY & FINAL SITE PLAN APPLICATION FOR PLAN REVIEW (Also for Wireless) TOWN OF HUDSON, NEW HAMPSHIRE

	H
PRELIMINARY & FINAL SIT	E DI AN ADDITICATION
FOR PLAN REVIEW (A TOWN OF HUDSON, NI	Also for Wireless)
Date of Application: July 10, 2014 Ta	x Map # 165 Lot # 145
Name of Project: Derry Street Reta	il
Zoning District: B-Business General (For Town Use)	1 SP# / / / (For Town Use)
ZBA Action: <u>Wetland Special Except</u>	ion 12/12/13
PROPERTY OWNER: DE	VELOPER:
Name: Shawn B. Hogan C.	ark, Geer, Latham & Assoc., Inc.
Address: 11354 Golf Round Dr. 39	001 Springhill Ave.
Address: Newport Richey, FL Mc	
Telephone # 34654 (2	51)344-7073
Fax #(2	51)343-9179
Email: t	latham@cglengineers.com
PROJECT ENGINEER	SURVEYOR
Name:Steven B. Keach, P.E. (KNA)	Anthony M. Basso, L.L.S. (KNA)
Address: 10 Commerce Park No., 3	10 Commerce Park No., 3
Address: Bedford, NH 03110	Bedford, NH 03110
Telephone #(603)627-2881	(603)627-2881
	(603)627-2915
Email:	abasso@keachnordstrom.com
PURPOSE OF	
	associated access, circulation, parking, stormwater, t 145. This plan assumes previous approval of the proposed
For Town	3.0
Plan Routing Date: 7-5-14 Sub	/Site Date:
I have no comments I have com	ments (attach to form)
Title:	Date:
DEPT: Zoning Engineering AssessorConsultant Highway Department Fees Paid:	Police Fire Planning



H



July 11, 2014

Projective Narrative

Derry Street Retail Map 165; Lots 145 & 146 66 & 68 Derry Street Hudson, NH 03051

The subject parcels are located at 66 & 68 Derry Street, and are referenced on Hudson's Tax Map 165 as Lots 145 & 146. The 3.524 acre parcel is in Hudson's Business (B) Zoning District. The site is currently developed with an abandoned building and greenhouse in the front portion of the lots. There is evidence of earth disturbance to the rear of the properties by observation of the treeline, steep slopes and terracing. The area along Derry Street was previously used for temporary stockpiling of construction materials, and the remaining portions of the site are undeveloped consisting of meadows and woodlands. The proposal is to raze the existing structures, and redevelop the site.

Prior to site redevelopment, the applicant is proposing to adjust the lot lines between Lots 145 and 146. We submitted Lot Line Relocation Plans under separate application. For the purpose of advancing the Site Plan, we have assumed previous approval of the Lot Line Relocation.

The proposed project entails the construction of two retail buildings, one 9,984 square feet and the other 7,225 square feet. Each building will have concrete walkways, sufficient parking, and truck loading areas. Along with the construction of the buildings and other site improvements, the proposal will include connections for municipal water and sewer. The site will be re-graded to provide proper access to the site, and to direct stormwater toward above ground treatment and mitigation areas at the westerly end of the site. Because the site plan incorporates two lots of record, we have submitted two separate Non-Residential Site Plan Applications for review.

SITE DATA SHEET

PLAN NAME: Derry Street	Retail					
PLAN TYPE: <u>SITE PLAN</u>						
LEGAL DESCRIPTION: MAP_	165 LOT 145	ž.				
DATE: July 10, 2014						
Location by Street	_66 Derry Street					
Zoning:	_B-Business					
Proposed Land Use:	Retail					
Existing Use:	Vacant					
Surrounding Land Use(s):	Commercial/Residential					
Number of Lots Occupied:	1					
Existing Area Covered by Building:	410 sf					
Existing Buildings to be removed:	1					
Proposed Area Covered by Building:	7,225 sf					
Open Space Proposed:	58%					
Open Space Required:	35%					
Total Area:	S.F.: 72,410 Acres: 1.662					
Area in Wetland:	7405 sf Area Steep Slopes: 7181 sf					
Required Lot Size:	30,000 sf					
Existing Frontage:	_150 lf					
Required Frontage:	150 lf					
Building Setbacks:	Required* Proposed					
Front: Side: Rear:						

SITE PLAN DATA SHEET (Continued)

Flood Zone Reference:	Not in flood	zone Map No. 33011C0514E				
Width of Driveways:	30 ft & 45 ft					
Number of Curb Cuts:	2					
Proposed Parking Spaces:	28 (2HC)					
Required Parking Spaces:	19.3					
Basis of Required Parking (Use): Dates/Case #/Description/Stipulations	Warehouse Sto	Retail-1 Space/200 sf Warehouse Storage 1 Space/1000 sf				
of ZBA, Conservation Commission, NH Wetlands Board Actions: (Attach stipulations on separate sheet)		ial Exception				
Waivers Requested: Refere	n Town Code	Regulation Description				
(Left column for Town Use) Impact Fees:	5-8 (B) 5-9 (C)	Shared Driveway Internal Green Space Noise Study Fiscal/Environmental Impact				
C.A.P Fee: TBD						
Development Agreement Proposed: YES						
	For Town Use					
Data Sheet Checked By:		Date:				

APPLICATION FOR SITE PLAN REVIEW TOWN OF HUDSON, NEW HAMPSHIRE

Thirty (30) days prior to Planning Board Meeting, a complete <u>site plan</u> to include all supporting materials/documents must be submitted in final form. The site plan shall comply with the following specifications/requirements:

Applicant Initials		Staff Initials
PRC_a)	Submission of nine (9) full sets of Site Plans (sheet size: 22" x 34") shall be submitted at the time of application filing, followed by the submission of seventeen (17) 11" X 17" plan sets (revised if applicable) to the Community Development Department no later than 10:00 A.M., Tuesday the week prior to the scheduled public hearing/conceptual review date.	nt
PRC_b)	A Site Plan narrative, describing the purpose, locations, long-range plans, impacts on traffic, schools, and utilities	
PRC c)	Plan scale at not less the one inch equals fifty feet $(1" = 50")$	
PRC d)	Locus plan with 1,000' minimum radius of site to surrounding area	
PRC e)	Plan date by day/month/year	
PRC f)	Revision block inscribed on the plan	
PRC_g)	Planning Board approval block inscribed on the plan	
PRC h)	Title of project inscribed on the plan	
PRC_i)	Names and addresses of property owners and their signatures inscribed on the plan	
PRC_j)	North point inscribed on the plan	
PRC_k)	Property lines: exact locations and dimensions	
PRC_I)	Square feet and acreage of site	
PRC m)	Square feet of each building (existing and proposed)	-
_ <u>PRC</u> n)	Names and addresses of bordering abutters, as shown on Tax Assessor's records not more than five (5) days prior to application date to be listed on the plan.	

Applicant Initials		Staff Initials
PRC o)	Location of all structures, roads, wetlands, hydrants, wells, septic systems, 4k reserve areas, floodways/floodplains, driveways, travel areas, parking areas and natural features within 200 feet of the tract	
PRC p)	Locations of existing and proposed permanent monuments and bench marks within 200 feet of the development tract	
PRC_q)	Pertinent highway projects	
PRC r)	Assessor's Map and Lot number(s)	
PRC_s)	Waiver application form shall be submitted with the site plan application, note on plan listing waivers requested/granted; and all waivers granted to the site plan regulations shall be listed on the final plan; waivers to checklist shall be reduced to writing and be signed by the Planning Board Chairman and Planning Board Secretary and recorded with the plan	:
PRC_t)	Delineate zoning district on the plan	
PRC_u)	Storm water drainage plan	
PRC_v)	Topographical elevations at 2-foot intervals contours: existing and proposed	-
PRC_w)	Utilities: existing and proposed	
PRC_x)	Parking: existing and proposed	
PRC_y)	Parking space: length and width	
PRC z)	Aisle width/maneuvering space	
PRC aa)	Landscaping: existing and proposed	
PRC ab)	Building and wetland setback lines	
PRC_ac)	Curb cuts	
PRC ad)	Rights of way: existing and proposed	
PRC ae)	Sidewalks: existing and proposed	
PRC af)	Exterior lighting plan	
PRC ag)	Sign locations: size and design	
PRC ah)	Water mains and sewerage lines	
PRC_ai)	Location of dumpsters on concrete pads	-
PRC_aj)	All notes from plats	:

Applicant Initials		Staff Initials
PRC ak)	Buffer as required by site plan regulations	
W al)	Green and open space requirements met with both types of spaces inscribed on the plan	
PRC_am)	Soil types and boundaries, Note: If site contains marginal or questionable soils, a High Intensity Soil, Survey (HISS) may be deemed necessary to submit as part of the application. Said HISS, if required, shall be perform by a State of New Hampshire Certified Soil Scientist, who shall affix his her stamp and signature shall be inscribed on the plan.	ed
PRC an)	Wetlands (and poorly-drained and very poorly-drained soils, also identifies Class 5 and Class 6 High Intensity Soil Survey (HISS soils), and permanent and seasonal wetlands shall be identified on the plan by a New Hampshire certified wetland or soil scientist, who shall affix his/her stam and signature to the respective plan.	v
PRC_ao)	"Valid for one year after approval" statement inscribed on the plan.	
PRC_ap)	Loading bays/docks	
PRC_aq)	State of New Hampshire engineer's stamp, signature, surveyor's stamp, and signature	-
PRC ar)	Error of closure (1 in 10,000 or better)	
PRC_as)	Drafting errors/omissions	-
PRC_at)	Developer names, addresses, telephone numbers and signatures	
PRC au)	Photographs, electronic/digital display or video of site and area	-
PRC_av)	Attach one (1) copy of the building elevations	
aw)	Fiscal impact study	
PRC_ax)	Traffic study	
W_ay)	Noise study	

Applicant Initials		Staff Initials
N/A az)	Copies of any proposed or existing easements, covenants, deed restriction right of way agreements or other similar documents	ns,
PRC ba)	Copy of applicable Town, State, Federal approval/permits to include but not limited to the following:	
	 industrial discharge application sewer application flood plain permit wetlands special exception variance erosion control permit (149:8a) septic construction approval dredge and fill permit curb cut permit shore-land protection certification in in accordance with RSA483-B if applicable, review application with Lower Merrimack River Local Advisory Committee (LMRLAC) and attach LMRLAC project comments hereto. 	
PRC bb)	Presentation plan (colored, with color-coded bar chart)	-
PRC_bc)	Fees paid to clerk	
PRC bd)	Five (5) 22" x 34" copies of the plan shall be brought to the Planning Board meeting and distributed to the Planning Board members at the meeting. Note: for all subsequent meetings involving revised plans, five 22" x 34" copies of said plan shall be brought to the meeting for distribution to the board members.	
*Under the pur	view of the Planning Board, any and all items may be waived.	
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		=:

APPLICATION FOR LOT LINE RELOCATION TOWN OF HUDSON, NEW HAMPSHIRE

was town and with the terms.

I hereby apply for Lot Line Relocation Plan Review and acknowledge I will comply with all of the Ordinances of the Town of Hudson, New Hampshire State Laws, as well as any stipulations of the Planning Board, in development and construction of this project. I understand that if any of the items listed under the Lot Line Relocation Plan specifications or application form are incomplete, the application will be considered rejected.

Pursuant to RSA 674:1-IV, the owner(s), by the filing of this application as indicated above, hereby give permission for any member of the Hudson Planning Board, the Town Engineer, the Conservation Commission and such agents or employees of the Town or other persons as the Planning Board may authorize, to enter upon the property which is the subject of this application at all reasonable times for the purpose of such examinations, surveys, tests and inspections as may be appropriate. The owner(s) release(s) any claim or right he/she (they) may now or hereafter possess against any of the above individuals as a result of any examinations, surveys, tests and inspections conducted on his/her (their) property in connection with this applications.

Signature of Owner.	TODD LITTLER	
DEVELOPER	VP. LEASING	

If other than an individual, indicate name of organization and its principal owner, partners, or corporate officers.

Signature of Developer: So Attached Affidoxit

The developer/individual in charge must have control over all project work and be available to the Code Enforcement Officer/Building Inspector during the construction phase of the project. The individual in charge of the project must notify the Code Enforcement Officer/Building Inspector within two (2) working days of any change.

Technical Review Signature:

Planner Approval Signature:

APPLICATION IS DUE AT 10:00 A.M. Tuesday the week prior to the Planning Board Meeting. Any applications/materials received after that time will be deferred until the next available meeting.



Owner Affidavit

I. Shawn B. Hogan, owner of the properties referenced on Tax Map 165; Lots 145 & 146. located at 66 & 68 Derry Street in Hudson. New Hampshire, hereby verify that I authorize Keach-Nordstrom Associates, Inc. (KNA) to prepare, submit and represent, on my behalf, throughout the federal, state and municipal application process.

Signature of Landowner:

Printed Name of Landowner:

Shawn B H 1599n

4729 Musselshell Dt.

NewfortRickey, FL 34655

Date:

10-3-2013

Name of Subdivision/Site Plan: Derry Street Retail

Street Address: 66 and 68 Derry Street, Hudson, New Hampshire 03051

I <u>Anthony Basso</u> hereby request that the Planning Board waive the requirements of item <a href="https://html.ncbe.nlm.n

property Tax Map(s) 165 and Lot(s) 145 and 146 in the Town of Hudson, NH.

As the aforementioned applicant, I, herein, acknowledge that this waiver is requested in accordance with the provisions set forth in RSA 674:36, II (n), i.e., without the Planning Board granting said waiver, it would pose an unnecessary hardship upon me (the applicant), and the granting of this waiver would not be contrary to the spirit and intent of the Subdivision/Site Plan regulations.

Hardship reason(s) for granting this waiver (if additional space is needed please attach the appropriate documentation hereto):

A Nosie Impact Study would cause unnecessary financial burden on the applicant.

Reason(s) for granting this waiver, relative to not being contrary to the Spirit and Intent of the Subdivision/Site Plan regulations: (if additional space is needed please attach the appropriate documentation hereto):

The ordinance is in place to prevent noise pollution from occurring within areas of mixed use where it may cause disputes amongst neighbors. It is not expected that the proposed retail facility will bring any increased noise pollution to the site or to the residential and commercial uses surrounding it, therefore granting of the waiver is in keeping with the spirit and intent of the ordinance.

	Signed: Kuthun Basso
	Applicant or Authorized Agent FOR AMB
Planning Board Action:	
Waiver Granted:	
Waiver Not Granted:	

Name of Subdivision/Site Plan: **Derry Street Retail**

Street Address: 66 and 68 Derry Street, Hudson, New Hampshire 03051

I <u>Anthony Basso</u> hereby request that the Planning Board waive the requirements of item <u>HTC 275-9D</u> of the Subdivision/Site Plan Checklist in reference to a plan presented by <u>Keach-Nordstrom Associates, Inc.</u> (name of surveyor and engineer) dated <u>July 7, 2014</u> for property Tax Map(s) <u>165</u> and Lot(s) <u>145 and 146</u> in the Town of Hudson, NH.

As the aforementioned applicant, I, herein, acknowledge that this waiver is requested in accordance with the provisions set forth in RSA 674:36, II (n), i.e., without the Planning Board granting said waiver, it would pose an unnecessary hardship upon me (the applicant), and the granting of this waiver would not be contrary to the spirit and intent of the Subdivision/Site Plan regulations.

Hardship reason(s) for granting this waiver (if additional space is needed please attach the appropriate documentation hereto):

A Fiscal/Environmental Impact study beyond what we have provided through our Best Management Practices and the CAP fee required by the Town of Hudson would cause unnecessary financial burden on the applicant.

Reason(s) for granting this waiver, relative to not being contrary to the Spirit and Intent of the Subdivision/Site Plan regulations: (if additional space is needed please attach the appropriate documentation hereto):

This waiver request is not violating the spirit and intent of the ordinance due to the fact that the design plans incorporate the latest in stormwater treatment and mitigation measures including pollutant removal and ground water recharge. During construction, the contractor will be required to use Best Management Practices and to comply with the 2012 Construction General Permit administered by the USEPA. Fiscally, the site is subject to a CAP fee.

comply w	ith the	2012	Construction	General	Permit	adminis	stered	by the	USEP.
Fiscally, th	<u>ie site is</u>	subje	ect to a CAP fee	2.					
				Signe Appli	HADL	the B	al Agen	U t For	AMB
Planning B	oard Ac	ction:							
Waiver Gra	anted: _								
Waiver No	t Grante	ed:							

Name of Subdivision/Site Plan: **Derry Street Retail**

Street Address: 66 and 68 Derry Street, Hudson, New Hampshire 03051

I <u>Anthony Basso</u> hereby request that the Planning Board waive the requirements of item <a href="https://html.ncbe.nlm.n

property Tax Map(s) 165 and Lot(s) 145 and 146 in the Town of Hudson, NH.

As the aforementioned applicant, I, herein, acknowledge that this waiver is requested in accordance with the provisions set forth in RSA 674:36, II (n), i.e., without the Planning Board granting said waiver, it would pose an unnecessary hardship upon me (the applicant), and the granting of this waiver would not be contrary to the spirit and intent of the Subdivision/Site Plan regulations.

Hardship reason(s) for granting this waiver (if additional space is needed please attach the appropriate documentation hereto):

Each lot within the proposed development consist of small parking lots with stalls situated on either side of a travel lane. Since the lots consist of only single row parking stalls there is no good opportunity for internal green space, without incorporating peninsula islands that greatly interfere with snow removal operations.

Reason(s) for granting this waiver, relative to not being contrary to the Spirit and Intent of the Subdivision/Site Plan regulations: (if additional space is needed please attach the appropriate documentation hereto):

Ample landscaping is provided around the proposed parking lots and travel lanes. The landscape plan that was designed by a Licensed Landscape Architect consists of 21 shade trees and 159 shrubs. Given that the proposed plan provides the required number of trees and shrubs, just surrounding the parking lot and travel lanes rather than within the parking areas, granting the waiver is in keeping with the spirit and intent of the ordinance.

	anting the waiver is in keeping with the spirit a
intent of the ordinance.	
	Signed:
	Katherine Basso
	Applicant or Authorized Agent FOR AMB
Planning Board Action:	
Waiver Granted:	
Waiver Not Granted:	

Name of Subdivision/Site Plan: Derry Street Retail

Street Address: 66 and 68 Derry Street, Hudson, New Hampshire 03051

I <u>Anthony Basso</u> hereby request that the Planning Board waive the requirements of item <u>HTC 193-10(I)</u> of the Subdivision/Site Plan Checklist in reference to a plan presented by <u>Keach-Nordstrom Associates, Inc.</u> (name of surveyor and engineer) dated <u>July 7, 2014</u> for property Tax Map(s) <u>165</u> and Lot(s) <u>145 and 146</u> in the Town of Hudson, NH.

As the aforementioned applicant, I, herein, acknowledge that this waiver is requested in accordance with the provisions set forth in RSA 674:36, II (n), i.e., without the Planning Board granting said waiver, it would pose an unnecessary hardship upon me (the applicant), and the granting of this waiver would not be contrary to the spirit and intent of the Subdivision/Site Plan regulations.

Hardship reason(s) for granting this waiver (if additional space is needed please attach the appropriate documentation hereto):

The applicants are proposing single development plans that span two lots of record. The plans are designed such that each lot relies on the other for large vehicle access and circulation and utility connections to Derry Street. Requiring two full access driveways (one for each lot) would reduce the functionality and efficiency of the applicant's development plans.

Reason(s) for granting this waiver, relative to not being contrary to the Spirit and Intent of the Subdivision/Site Plan regulations: (if additional space is needed please attach the appropriate documentation hereto):

Granting the waiver will reduce full access curb cuts along Derry Street. The proposed development plans will revitalize this area of Hudson and bring new life to a dilapidated piece of property. Each lot, by themselves, meets the requirements of the Zoning Ordinance and Site Plan regulations for building setbacks, area, frontage, number of parking spaces, loading spaces, etc. Therefore, granting the waiver is not contrary to the spirit and intent of the ordinance.

The state of the s	est etc. Therefore, granting the warren is
contrary to the spirit and intent of the or	dinance.
	Signed: Vathure Basso Applicant or Authorized Agent FOR AMB
Planning Board Action:	
Waiver Granted:	
Waiver Not Granted:	

APPLICATION FOR SITE PLAN REVIEW TOWN OF HUDSON, NEW HAMPSHIRE

FOOTNOTES:

- 1. In the event of the denial of a plan, the recording fees collected will not be reimbursed, but will instead be used as an additional fee to help defray administrative costs associated with a denial.
- 2. The "Review Fees" are fees estimated necessary to offset costs incurred to review and/or compile plans, data, or other information relative to the proposal.
- 3. The "Amount Due" does not include fees for studies or reviews as authorized in Section G-2 of this regulation.
- 4. Fees must be paid in full prior to the commencement of any formal review by the Town of Hudson.

STATUS:		DATE:
y.	Application incomplete	
2.	Application complete. Include any applicable requested waivers, fees paid, routing sheet returned	7-18-14
3.	Application formally accepted or denied by Planning Board (90-day review clock by RSA 674:43 to start upon acceptance granted)	
4.	Final approval granted or denied	
5.	Comments:	
		s
	÷	

A-1"

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TRAFFIC IMPACT AND ACCESS STUDY

PROPOSED RETAIL DEVELOPMENT HUDSON, NEW HAMPSHIRE

GPI

181 BALLARDVALE STREET, SUITE 202 WILMINGTON, MASSACHUSETTS 01887 (978) 570-2999

PREPARED FOR:

CLARK, GEER, LATHAM & ASSOCIATES, INC. 3901 SPRINGHILL AVENUE MOBILE, ALABAMA 36608

APRIL 2014

Traffic Impact and Access Study Proposed Retail Development

Hudson, New Hampshire

April 2014

TECHNICAL MEMORANDUM

REF:

MAX-2013046

DATE:

April 11, 2014

TO:

Mr. Thomas Latham

Clark, Geer, Latham & Associates, Inc.

3901 Springhill Avenue Mobile, Alabama 36608

FROM:

Ms. Heather L. Monticup, P.E. Project Manager

Ms. Susannah E. Barnes, E.I.T. Engineer

RE:

Traffic Impact and Access Study

Proposed Retail Development

66 and 68 Derry Road (NH Routes 102/3A) - Hudson, New Hampshire

INTRODUCTION

Greenman-Pedersen, Inc. (GPI) has prepared this *Traffic Impact and Access Study* (TIAS) for a proposed retail development to be located on the west side of Derry Road (NH Routes 102/3A) at 66 and 68 Derry Road in Hudson, New Hampshire. The land at 66 Derry Road is currently vacant and 68 Derry Road contains a vacant building and greenhouse. As proposed the existing structures will be razed and a ±17,209 square foot retail development with two one-story buildings will be constructed on the site; one building containing ±7,225 square feet and the other building containing ±9,984 square feet. Access to the site will be provided via one full access and egress driveway to be located at the center of the site frontage and one right-turn in only driveway to be located at the northern property line of the site along Derry Road. This TIAS has been prepared in conformance with current Town of Hudson and New Hampshire Department of Transportation (NHDOT) guidelines for traffic impact assessment to evaluate the traffic impacts and access/egress requirements for the proposed redevelopment.

The site is bounded by Route 102 Plaza to the north, Soapy's Car Wash to the south, Derry Road to the east, and residential homes to the west. Access to the site is currently provided via one

curb cut at 68 Derry Road (northern property line) providing access and egress. The site location in relation to the surrounding roadways is shown on the map on Figure 1.

EXISTING CONDITIONS

Study Area

Evaluation of the traffic impacts associated with the proposed project requires an evaluation of existing and projected traffic volumes on the adjacent streets, the volume of traffic expected to be generated by the project, and the impact that this traffic will have on the adjacent streets and nearby intersections. In preparing this study for the proposed site development, the following locations have been analyzed:

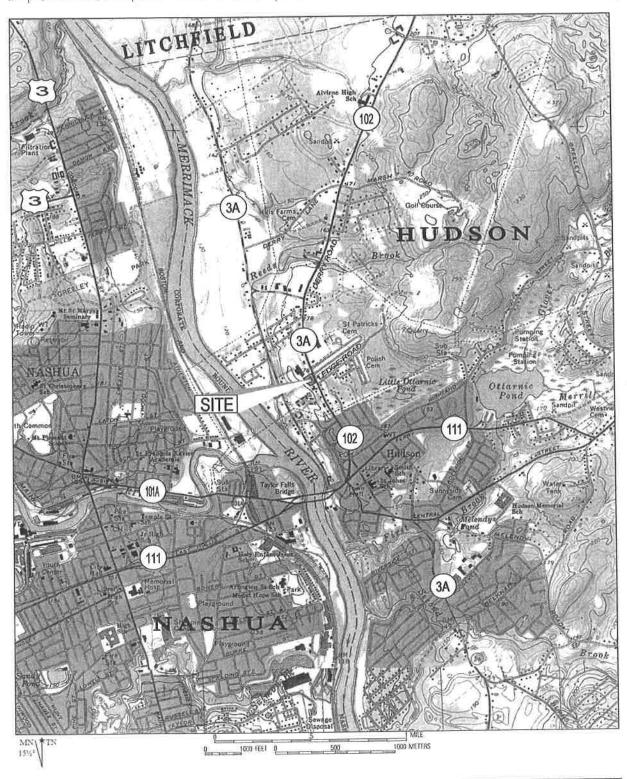
- Derry Road (NH Routes 102/3A) at Ledge Road
- Derry Road (NH Routes 102/3A) at the Proposed Site Driveways

Derry Road (NH Routes 102/3A)

Within the vicinity of the study area, Derry Road is aligned in an overall north-south direction and is within the urban compact section under the jurisdiction of the Town of Hudson. For the purpose of this study, Derry Road has been assigned a north-south direction, inconsistent with the highway signage along the roadway, which is an east-west direction. Derry Road generally provides ± 60 feet of overall pavement width in the vicinity the study area with two travel lanes northbound and one travel lane southbound, with directional flow separated by a two-way left-turn lane (TWLTL), and a posted speed limit of 30 miles per hour (mph) northbound and southbound. Land uses along consists of commercial and residential uses.

Derry Road at Ledge Road

Ledge Road intersects Derry Road from the east to form a T-type unsignalized intersection. Ledge Road consists of a single general-purpose travel lane in each direction with no lane markings. Land use along Ledge Road consists of residential homes. There is no posted speed limit along Ledge Road.



Traffic Volumes

Base traffic conditions within the study area were developed by conducting manual-turning movement counts (TMCs), vehicle classification counts, and automatic traffic recorder (ATR) counts in June 2013 while school was in regular session. The TMCs and vehicle classification counts were performed during the weekday PM peak period (4:00 to 6:00 PM) and the Saturday midday peak period (11:00 AM to 2:00 PM). These peak periods were chosen based on the hours of operation of the proposed use and to be consistent with NHDOT traffic study guidelines. Evaluation of the TMC data revealed that the weekday PM peak hour occurred between 5:00 and 6:00 PM and the Saturday midday peak hour occurred between 11:15 AM and 12:15 PM. ATR counts were collected along Derry Road, adjacent to the site to obtain daily weekday and Saturday traffic volumes and vehicular speed data. All traffic-volume data are provided in the Appendix.

Traffic on a given roadway typically fluctuates throughout the year depending on the area and the type of roadway. Based on NHDOT guidelines for the preparation of a traffic study, existing traffic volumes must represent the peak of the monthly average peak-hour conditions. To determine if the data needed to be adjusted to account for this fluctuation, seasonal adjustment and historical count data provided by NHDOT were reviewed. This information revealed that the June weekday traffic volumes represent peak-month conditions and the June Saturday traffic volumes are 4.6 percent lower than peak-month conditions. Additionally, this information indicated that the June traffic volumes are 0.2 percent lower than the peak-month volumes during weekday PM peak period and are 5.5 percent lower than the peak-month conditions during the Saturday midday peak period. Therefore, the June traffic counts were upwardly adjusted to reflect peak-month conditions, with the exception of the weekday daily volumes as they represent peak-month conditions. The NHDOT seasonal adjustment factors are provided in the Appendix.

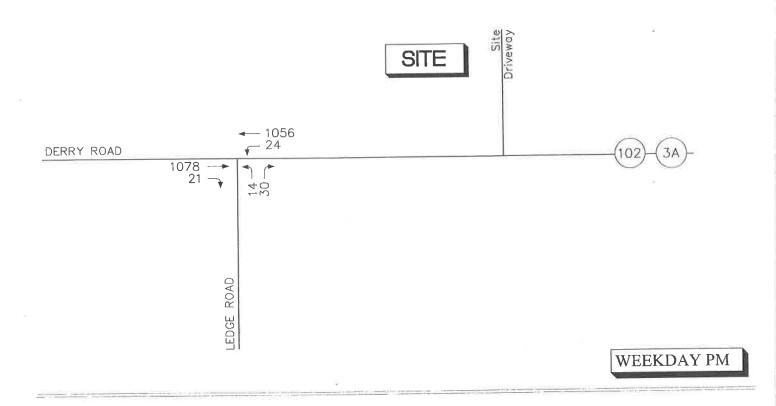
Table 1 summarizes the existing traffic volumes along Derry Road adjacent to the site. The 2013 Existing weekday PM and Saturday midday peak-hour traffic-volume networks are shown on Figure 2.

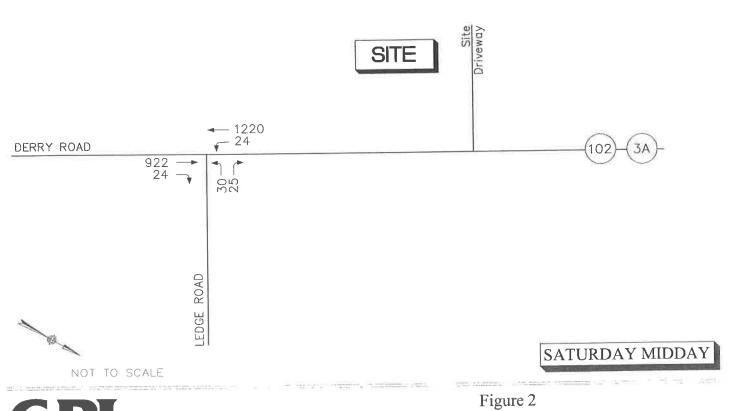
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¹New Hampshire Department of Transportation Traffic Volume Report; 2012, Group 4 – Nashua, NH 111 at Hudson TL.

TRAFFIC IMPACT AND ACCESS STUDY

Proposed Retail Development - Hudson, New Hampshire







2013 Existing Peak Hour Traffic Volumes

Engineers, Architects, Planners, Construction Engineers & Inspectors

Table 1
EXISTING TRAFFIC-VOLUME SUMMARY

Location/Time Period	Daily Volume (vpd) ^a	Peak Hour Volume (vph) b	K Factor	Directional Distribution d
Derry Road (NH Routes 102/3A) adjacent to site: Weekday Daily	26,720			
Weekday PM Peak Hour	20,720	2,188	8.2	51% NB
Saturday Daily Saturday Midday Peak Hour	23,860	2,191	9.2	57% SB

^a In vehicles per day. Traffic counts upwardly adjusted to reflect 2013 peak-month traffic-volumes.

^d NB = northbound; SB = southbound.

Collision History

Collision data for the study area intersections were obtained from the Hudson Police Department for the most recent three-year period available (2010 through 2012). A summary of the Hudson Police Department collision data at the study area intersections is provided in Table 2.

The intersection of Derry Road and Ledge Road has experienced 3 reported collisions over the three-year study period. One collision occurred when a vehicle failed to yield. Another collision occurred due to an obstructed view. Since the site distances were evaluated and there are no permanent obstructions, this is assumed to be due to another vehicle or temporary object in or on the roadway at the time. The other collision occurred due to driver distraction. None of these collisions indicate a collision pattern correctable by engineering measures.

The section of roadway adjacent to the site has not experienced any reported collisions over the three-year study period.

^b In vehicles per hour. Traffic counts upwardly adjusted to reflect 2013 peak-month traffic-volumes.

^c Percentage of daily traffic occurring during the peak hour.

Table 2
COLLISION HISTORY SUMMARY

	Number of Collisions		Severity ^a			Percent During b	
Location	Total	Average per Year	PD	PI	<u>F</u>	Wet/Icy Conditions	Commuter Peak
Route 102 at Ledge Road	3	1.00	0	3	0	0%	100%

Source: Town of Hudson Police Department Crash Data (2010-2012)

^a PD = property damage only; PI = personal injury; F = fatality.

Vehicle Speeds

Vehicle speed measurements were conducted along Derry Road adjacent to the proposed site driveway by measuring the elapsed time for vehicles traveling a short, pre-measured distance between two checkpoints. The travel times were recorded using ATRs and the speeds were derived by dividing the elapsed time into the measured distance between checkpoints. The primary use of this information is explained in the *Sight Distance* section where the speeds are correlated to sight distance measurements taken at the location of the site driveway to assure that adequate sight distances exist at the driveway to provide safe operation. The results of the speed measurements are summarized in Table 3.

Table 3
OBSERVED TRAVEL SPEEDS ^a

Location/Direction	Posted Speed Limit	Average Speed ^b	85 th Percentile Speed ^c
Derry Road (NH Route 102/3A) adjacent to site:	30	27	34
Southbound	30	32	36

^a In miles per hour (mph).

^b Average speed of all observed vehicles.

^b Percent of vehicle incidents that occurred during the weekday AM and weekday PM commuter peak periods.

^c Speed at, or below which 85 percent of all observed vehicles travel.

As shown in Table 3, the average speeds along Derry Road adjacent to the site were found to be between 27 and 32 mph with the 85th percentile speeds between 34 and 36 mph. The observed speeds were found to be generally consistent with the posted speed limit of 30 mph for northbound travel and slightly higher than the posted speed limit for southbound travel.

FUTURE CONDITIONS

To estimate the impact of site-generated traffic within the study area, existing traffic volumes were projected to the expected opening year of the development (2014) and to the expected opening year plus ten years (2024). These design horizons were chosen to be consistent with Town of Hudson and NHDOT guidelines for the preparation of a traffic study. Traffic volumes on the roadway network at these times will include existing traffic, new traffic due to normal traffic growth, and traffic related to any significant developments by others expected to be completed within the area by the 2014 and 2024 design years. Consideration of these factors resulted in the development of 2014 No-Build and 2024 No-Build traffic volumes, which assume that the proposed development is not built. The incremental impacts of the proposed project may then be determined by adding site-generated traffic volumes (Build conditions) and making comparisons to the No-Build conditions.

Traffic Growth

To develop the 2014 and 2024 No-Build forecast traffic volumes, two components of traffic growth were considered. First, an annual growth percentage was determined based on the historical traffic-count data obtained from the Nashua Regional Planning Commission (NRPC) and NHDOT². The historical traffic-count data indicate that traffic volumes in the area have been decreasing at a rate of 0.64 percent since 1995 and 2.8 percent per year since 2005, respectively. In order to provide a conservative (worse-case) analysis scenario, a compounded annual traffic growth rate of 1.0 percent per year was assumed to account for general population growth and the traffic generated by smaller area developments. The NHDOT and NRPC historical traffic-volume data are provided in the Appendix.

Second, any traffic that may be generated by planned developments that could add a substantial volume of traffic through the study area during the design horizons was considered. Based on discussions with the Town of Hudson Planner, there are no developments that are planned in the vicinity of the project that will add traffic to the study area roadways.

Page 8

² NHDOT Traffic Volume Report; 2012.

Planned Roadway Improvements

The Town of Hudson Engineer was contacted to determine if any roadway improvements are planned within the study area. At the time of this study, there no known roadway improvement projects planned in the vicinity of the site to be constructed within the design horizons.

No-Build Conditions

The 2014 and 2024 No-Build peak-hour traffic volumes were accordingly developed by applying 1.0 percent compounded annual traffic-growth rate to the 2013 Existing traffic volumes. The 2014 and 2024 No-Build peak-hour traffic volumes are shown graphically on Figures 3 and 4 for the weekday PM and Saturday midday peak hours, respectively.

Trip Generation

As proposed the existing structures will be razed and a $\pm 17,209$ square foot retail development with two one-story buildings will be constructed on the site; one building containing $\pm 7,225$ square feet and the other building containing $\pm 9,984$ square feet. Traffic to be generated by the proposed development project was forecast using the trip-generation information provided in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*³ for Land Use Code (LUC) 820 (Shopping Center). All trip-generation data are provided in the Appendix.

Not all of the vehicle trips expected to be generated by the proposed retail development represent *new* trips on the study area roadway system. Studies have shown that for developments such as the one proposed, a substantial portion of the site-generated vehicle trips are already present in the adjacent passing stream of traffic or are diverted from another route to the proposed site. Based on information published in the ITE *Trip Generation Handbook*, the average *pass-by* trip percentage is 34 percent during the weekday PM peak hour and 26 percent during the Saturday midday peak hour for Shopping Center.⁴ Table 4 summarizes the results of the trip-generation estimates. The *pass-by* data are provided in the Appendix.

As shown in Table 4, the proposed retail development is expected to generate 42 new vehicles trips (20 entering and 22 exiting) during the weekday PM peak hour, and 61 new vehicle trips (32 entering and 29 exiting) during the Saturday midday peak hour.

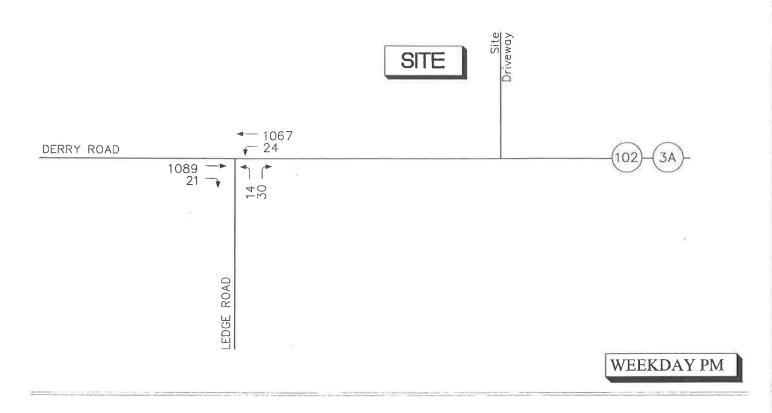
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³Trip Generation Manual, 9th Edition; Institute of Transportation Engineers; Washington, DC; 2012.

⁴ Trip Generation Handbook; 2nd Edition; Institute of Transportation Engineers; Washington, DC; June 2004.

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Proposed Retail Development - Hudson, New Hampshire



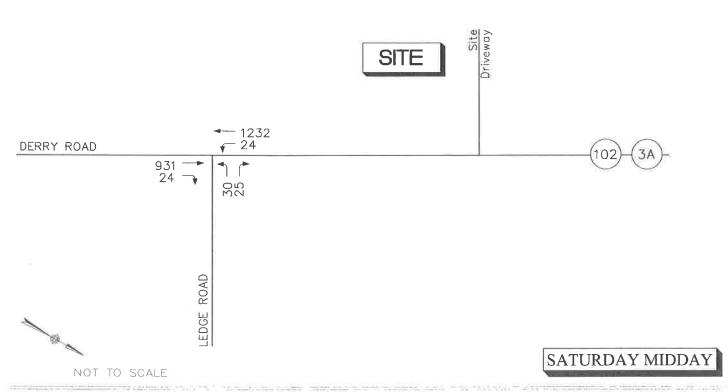


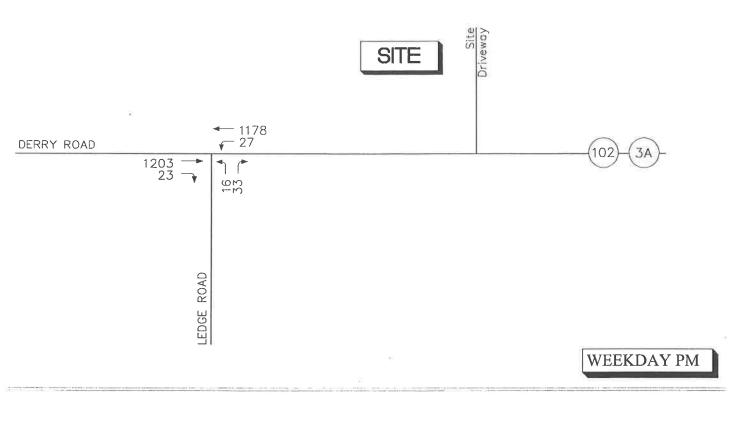


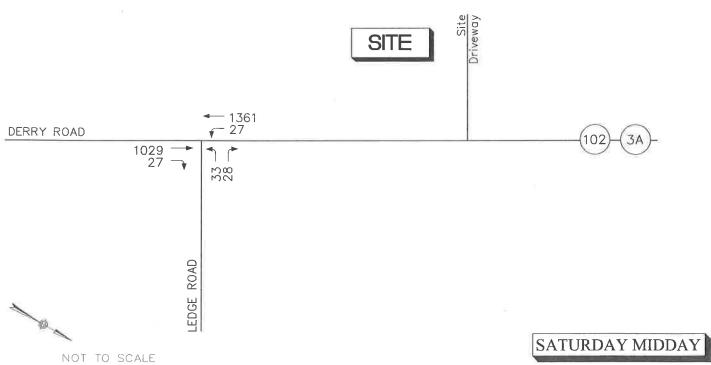
Figure 3

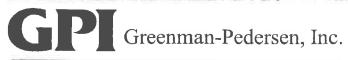
2014 No Build Peak Hour Traffic Volumes

TRAFFIC IMPACT AND ACCESS STUDY

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2024 No Build Peak Hour Traffic Volumes

Figure 4

Engineers, Architects, Planners, Construction Engineers & Inspectors

Table 4
TRIP-GENERATION SUMMARY

Time Period/Direction	Total Trips ^a	Pass-By Trips ^b	New Trips c
Weekday Daily	740	d	20
Weekday PM Peak Hour: Enter <u>Exit</u> Total	31 33 64	11 <u>11</u> 22	20 <u>22</u> 42
Saturday Daily	870	d	
Saturday Midday Peak Hour: Enter Exit Total	43 40 83	11 11 22	32 29 61

^a ITE LUC 820 (Shopping Center) for 7,300 square feet plus 10,000 square feet using rates due to small size of development.

^c Total Trips minus Pass-By Trips.

Trip Distribution

Having estimated project-generated vehicle trips, the next step is to determine the distribution of project traffic and assign these trips to the local roadway network. The directional distribution of site traffic is dependent on expected travel routes to and from the site and existing travel patterns. Accordingly, approximately 49 percent of the site-generated traffic is expected to and from the north along Derry Road, 49 percent is expected to and from the south along Derry Road, and 2 percent is expected to and from the east on Ledge Road.

Sight Distance

Access to the site will be provided via one full access and egress driveway to be located at the center of the site frontage on Derry Road. Another driveway is proposed on the northern property line of the site; however, it will provide right-turn in access only. To identify potential safety concerns associated with site access and egress, sight distances have been evaluated at the proposed site driveway location to determine if the available sight distances for vehicles exiting the site meet or exceed the minimum distances required for approaching vehicles to safely stop.

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^b 34% of Total Trips during the weekday PM peak hour and 26% of Total Trips during the Saturday midday peak hours.

d Daily pass-by percentage information not available.

The available sight distances were compared with minimum requirements, as established by the American Association of State Highway and Transportation Officials (AASHTO)⁵. AASHTO is the national standard by which vehicle sight distance is calculated, measured, and reported. In addition, the available sight distances were compared with the NHDOT's requirement of 400 feet of All-Season Safe Sight Distance.

Sight distance is the length of roadway ahead that is visible to the driver. The Stopping Sight Distance (SSD) is the minimum distance required for a vehicle traveling at a certain speed to safely stop before reaching a stationary object in its path. The values are based on a driver perception and reaction time of 2.5 seconds and a braking distance calculated for wet, level pavements. When the roadway is either on an upgrade or downgrade, grade correction factors are applied. SSD is measured from an eye height of 3.5 feet to an object height of 2 feet above street level, equivalent to the taillight height of a passenger car. The SSD is measured along the centerline of the traveled way of the major road.

Intersection Sight Distance (ISD) is provided on minor street approaches to allow the drivers of stopped vehicles a sufficient view of the major roadway to decide when to enter the major roadway. By definition, ISD is the minimum distance required for a motorist exiting a minor street to turn onto the major street, without being overtaken by an approaching vehicle reducing its speed from the design speed to 70 percent of the design speed. The ISD is measured from an eye height of 3.5 feet to an object height of 3.5 feet above street level. The use of an object height equal to the driver eye height makes ISDs reciprocal (i.e., if one driver can see another vehicle, then the driver of that vehicle can also see the first vehicle). When the minor street is on an upgrade that exceeds 3 percent, grade correction factors are applied. The ISD design values for right turns from a minor street are less than the design values for left turns because, in making right turns, drivers generally accept gaps that are slightly shorter than those accepted in making left turns.

The SSD is generally more important as it represents the minimum distance required for safe stopping while the ISD is based only upon acceptable speed reductions to the approaching traffic stream. The ISD, however, must be equal to or greater than the minimum required SSD in order to provide safe operations at the intersection. In accordance with the AASHTO manual, "If the available sight distance for an entering or crossing vehicle is at least equal to the appropriate stopping sight distance for the major road, then drivers have sufficient sight distance to anticipate and avoid collisions. However, in some cases, this may require a major-road vehicle to stop or slow to accommodate the maneuver by a minor-road vehicle. To enhance traffic operations, intersection sight distances that exceed stopping sight distances are desirable along the major road." Accordingly, the ISD should be at least equal to the distance required to allow a driver approaching the minor road to safely stop.

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⁵ A Policy on Geometric Design of Highways and Streets: 2004. Fifth ed. Washington, DC: American Association of State Highway and Transportation Officials, 2004.

The available SSD and ISD at the proposed full access and egress (main) site driveway was measured in the field and compared to minimum requirements as established by AASHTO. Since the distance required to stop a vehicle is dependent on the speed of that vehicle, speed studies were conducted as presented in the *Existing Conditions: Vehicle Speeds* section. Based on both the posted speed limits and the observed speeds, the SSD and ISD requirements at the proposed site driveway were calculated. The required minimum sight distances for each direction are compared to the available distances, as shown in Table 5.

Table 5
SIGHT DISTANCE SUMMARY

	Stopping Sig	ht Distance (feet)	Intersection Sight Distance (feet)			
Location/Direction	Measured	Minimum Required ^a	Measured	Minimum Required ^b	Desirable ^c	
Derry Road at Main Site Driveway: North of intersection (southbound) South of intersection (northbound)	500+ 1000+	261 240	500+ 1000+	261 240	355 355	

^a Values based on AASHTO requirements for 85th percentile speeds of 36 mph for Derry Road southbound travel (north of intersection) and 34 mph for Derry Road northbound travel (south of intersection).

As indicated in Table 6, available sight distances at the proposed Derry Road main site driveway intersection meet both the minimum and desirable SSD and ISD requirements for safe operation. In addition to meeting AASHTO requirements, these available sight distances meet the NHDOT requirement of 400 feet of All-Season Safe Sight Distance. To ensure the safe and efficient flow of traffic to and from the site, any proposed plantings, vegetation, landscaping, and signing along the site frontage should be kept low to the ground (no more than 3.0 feet above street level) or set back sufficiently from the edge of the site driveway and adjacent roadways so as not to inhibit the available sight lines.

Build Traffic Volumes

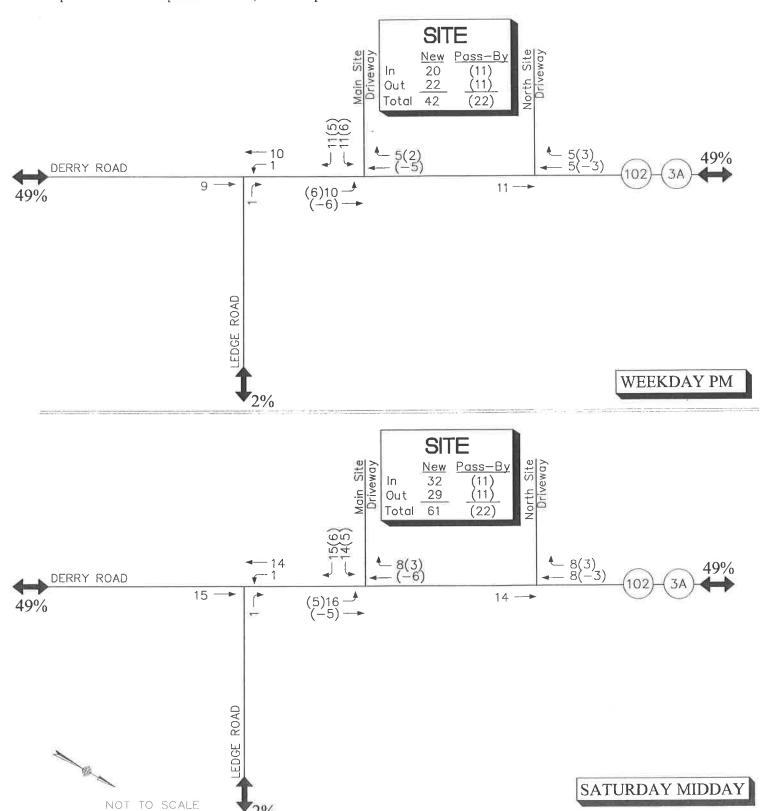
Based on the traffic-generation and distribution estimates for this project, the traffic volumes associated with the proposed development were assigned to the roadway network. The site-generated traffic networks are shown on Figure 5 for the weekday PM and Saturday midday peak hours. The site-generated traffic volumes were then added to the No-Build traffic volumes to

^b Values based on AASHTO requirements for SSD.

^c Values based on AASHTO requirements for posted speed limit of 30 mph on Derry Road.

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Site Generated Peak Hour Traffic Volumes

Figure 5

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develop the Build peak-hour traffic-volume networks. The 2014 and 2024 Build peak-hour flow networks are graphically depicted on Figures 6 and 7, respectively.

Traffic Increases

The proposed development is expected to result in minimal increases in traffic on the study area roadways. As shown on Figure 5, traffic-volume increases beyond the study area during the peak hours are projected to be in the range of 2 to 30 vehicle trips. These increases represent, on average, one additional vehicle trip every 2 to 30 minutes during the critical peak hours.

CAPACITY AND QUEUE ANALYSIS

Capacity and queuing analyses were conducted at the study-area locations under 2013 Existing, 2014 No-Build, 2014 Build, 2024 No-Build, and 2024 Build conditions during the weekday PM and Saturday midday peak hours. The impact of site-generated traffic can be measured by comparing No-Build conditions to Build conditions.

Methodology

The capacity analysis methodology is based on the concepts and procedures in the *Highway Capacity Manual* (HCM) and is described in the Appendix of this report.⁶

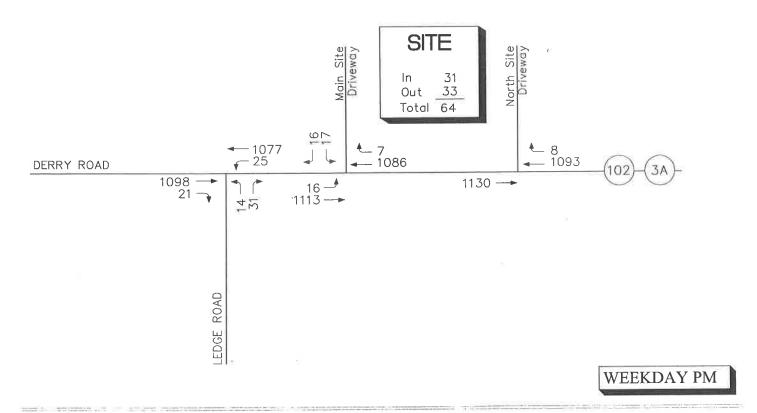
The queue analysis methodology for unsignalized intersections is based on the concepts and procedures described in the HCM. For unsignalized intersections, the 95th percentile queue represents the length of queue of the critical minor-street movement that is not expected to be exceeded 95 percent of the time during the analysis period (typically one hour). In this case, the queue length is a function of the capacity of the movement and the movement's degree of saturation.

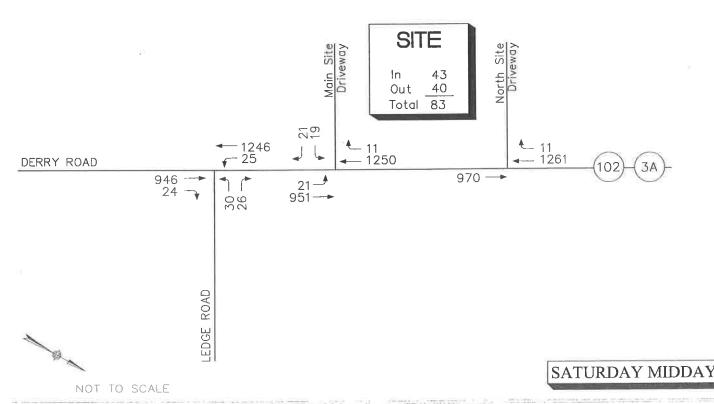
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⁶Highway Capacity Manual 2000; Transportation Research Board; Washington, D.C.; 2000.

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GP Greenman-Pedersen, Inc.

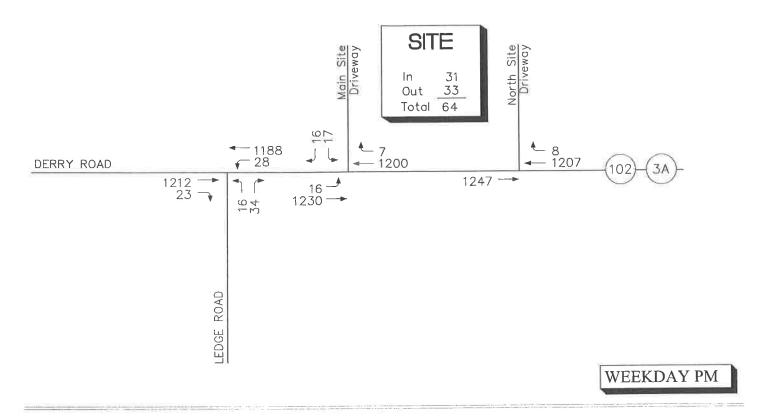
Engineers, Architects, Planners, Construction Engineers & Inspectors

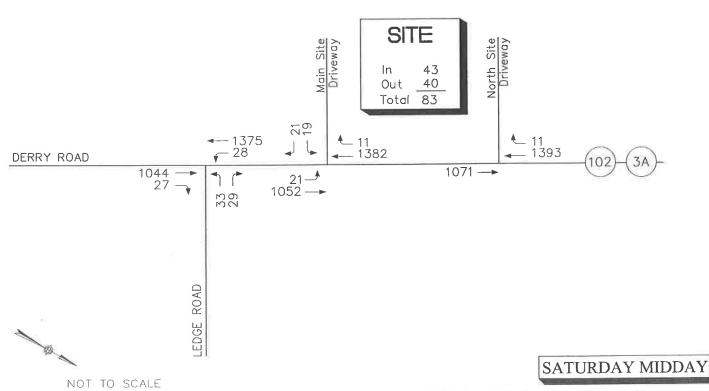
Figure 6

2014 Build Peak Hour Traffic Volumes

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Proposed Retail Development - Hudson, New Hampshire





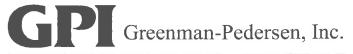


Figure 7

2024 Build Peak Hour Traffic Volumes Proposed Retail Development - Hudson, New Hampshire

Analysis Results

The study area intersections have been analyzed through application of the procedures previously described. The level-of-service (LOS) and queue analysis results are presented in Tables 6 and 7 and are discussed below. All analysis worksheets are provided in the Appendix.

Derry Road (NH Routes 102/3A) at Ledge Road

Under 2014 and 2024 future traffic-volume conditions, the Derry Road major street movements at its intersection with Ledge Road are expected to operate at optimal levels (LOS A) during the weekday PM and Saturday midday peak hours. Under future conditions, the Ledge Road approach is expected to operate at LOS D during all time periods with the exception of the 2024 Saturday midday peak hour condition. With or without the proposed retail development in place, Ledge Road is expected to operate with long delays (LOS E) during the Saturday midday peak hour. Vehicle-to-capacity (v/c) ratios for Ledge Road, however, are expected to be well below 1.00 (0.48 or less) indicating there will be ample capacity available with the proposed development in place. Queue lengths on Derry Road are expected to be less than 1 vehicle, which can be accommodated within the TWLTL that exists on Derry Road. On Ledge Road, queue lengths of 2 to 3 vehicles are expected.

Derry Road (NH Routes 102/3A) at Main Site Driveway

Under 2014 and 2024 future traffic-volume conditions, the Derry Road major street movements at its intersection with the proposed main site driveway are expected to operate at optimal levels (LOS A) during the weekday PM and Saturday midday peak hours. Under future conditions, the site driveway approach is expected to operate at LOS D during the weekday PM peak hour, LOS E during the Saturday midday peak hour under 2014 traffic-volume conditions, and LOS F during the Saturday midday peak hour under 2024 traffic-volume conditions. Although long delays are expected on the site driveway due to the volume of traffic on Derry Road, v/c ratios are expected to be well below 1.00 (0.36 or less) indicating there will be ample capacity available with the proposed development in place. In addition, queue lengths of 1 to 2 vehicles are expected on the site driveway which can be accommodated on-site without disrupting on-site circulation. Queue lengths on Derry Road are expected to be 1 vehicle, which can be accommodated within the TWLTL that exists on Derry Road without affecting the vehicles turning left onto Ledge Road.

Derry Road (NH Routes 102/3A) at Northern Site Driveway

Under 2014 and 2024 future traffic-volume conditions, the Derry Road major street movements at its intersection with the proposed right-turn in only northern site driveway are expected to operate at optimal levels (LOS A) during the weekday PM and Saturday midday peak hours, with no delay and no queues.

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INTERSECTION CAPACITY ANALYSIS SUMMARY - 2014 CONDITIONS Table 6

	Quene		0	3	24		0	3	40			5	0	0 ;	15	,	4 (0 (0 ;	29		(0	0	(0	0
2014 Build	TOS		A	٧	Ω		A	A	Ω			∀ .	A.	¥ I	Ω	•	∢ -	∢ .	V 1	T)		,	∢ .	V	•	∢ .	∢
2014	Del.		0.0	1.6	25.8		0.0	2.4	30.5			0.8	0.0	0.0	25.1	,	5.5	0.0	0.0	38.5			0.0	0.0	ć	0.0	0.0
	A/C		69.0	0.04	0.25		0.59	0.04	0.37			0.03	0.45	0.67	0.17	(0.04	0.38	0.82	0.29			0.35	0.67	0	0.29	0.83
	Queue		0	n	23		0	3	39			E	1	1	ľ		1	Ė	1	I			1	1		ı	į
2014 No-Build	TOS		4	A	О		A	A	Ω			E	1	i	ì		ĵ	Ē	1	1			1	1		I	1
2014 N	Del.		0.0	1.5	25.3		0.0	2.1	29.6			1	1	1	ı		ı	į	ı	1			I	Í		1	1
	A/C		89.0	0.04	0.24		0.58	0.04	0.36			1	1	1	Ī		1	1	1	t			1	ı		1	ŀ
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2013 Existing	TOS °		A	A	C		¥	A	Q			ï	ı	ı	ı		3	ŧ	1	ı			E	ı		ı	1
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	V/C a		0.67	0.04	0.24		0.57	0.04	0.35			į	1	1	I		1	ı	I	1			1	1		1	1
	Intersection/Peak Hour/Lane Group	Derry Road (NH Routes 102/3A) and Ledge Road $Weekday PM$:	Derry Road NB approach	Derry Road SB approach	Ledge Road WB approach	Saturday Midday:	Derry Road NB approach	Derry Road SB approach	Ledge Road WB approach	Derry Road (Routes 102/3A) and Main Site Driveway	Weekday PM:	Derry Road NB left-turn/through	Derry Road NB through	Derry Road SB approach	Site Driveway EB approach	Saturday Midday:	Derry Road NB left-turn/through	Derry Road NB through	Derry Road SB approach	Site Driveway EB approach	Derry Road (Routes 102/3A) and North Site Driveway	Weekday PM:	Derry Road NB approach	Derry Road SB approach	Saturday Midday:	Derry Road NB approach	Derry Road SB approach

^a Volume-to-capacity ratio.

^b Average control delay in seconds per vehicle.

^cLevel of service.

^d Maximum queue length in feet per lane (assuming 25 feet per vehicle) that is not expected to be exceeded 95 percent of the time period.

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Proposed Retail Development - Hudson, New Hampshire

Table 7 INTERSECTION CAPACITY ANALYSIS SUMMARY – 2024 CONDITIONS	MMAR	V - 202	4 CON	DITION	SO.				×			
		2013	2013 Existing			2024 N	2024 No-Build			2024 Build	Build	
Intersection/Peak Hour/Lane Group	V/C a	Del. b	LOS °	Queue d	N/C	Del.	TOS	Queue	N/C	Del.	TOS	Queue
Derry Road (NH Routes 102/3A) and Ledge Road Weekdon, PM:										5		
Derry Road NB approach	0.67	0.0	V	0	0.75	0.0	K	0	92.0	0.0	A	0
Derry Road SB approach	0.04	1.5	V	1.5	0.05	2.4	A	4	0.05	5.6	A	4
Ledge Road WB approach	0.24	25.0	Ö	22	0.31	31.3	Ω	32	0.32	32.0	Д	33
Damy Dod ND angood	0.57	0	٧	<u> </u>	0.64	0 0	A	0	0.65	0.0	<	С
Derry Road SB approach	0.04	2.0	< <	o m	0.05	4.7	: ∢) 4	0.05	5.4	: V	· 4
Ledge Road WB approach	0.35	29.1	Ω	38	0.47	38.9	ш	99	0.48	40.4	田	58
Derry Road (Routes 102/3A) and Main Site Driveway												
Weekday PM:									0	(4	c
Derry Road NB left-turn/through	ı	1	Ī	1	:	1	1	1	0.03	0.0	∢ <	7 0
Derry Road NB through	1	!	Į.	!	1	1	1	ı	0.50	0.0	∢ <	> c
Derry Road SB approach	ı	1	1	1	{	!	ł	1	0.74	0.0	∢ () <u>:</u>
Site Driveway EB approach	ŀ	1	ĵ	ı	1	1	ī	:	0.20	9.67	Ω	× 1
Saturady Midday. Derry Road NB Jeff-turn/through	1	:	1	ŧ	ı	ł	ŀ	1	0.05	1.6	4	4
Derry Road NB through	ı	ł	ı	1	:	:	ŀ	ı	0.43	0.0	Α.	0 (
Derry Road SB approach	i	ŀ	f	1	1	1	1	1	0.91	0.0	∢;	0 5
Site Driveway EB approach	1	1	1	1	1	1	ı	ı	0.30	50.3	L	70
Derry Road (Routes 102/3A) and North Site Driveway												
Weekday FM:		!	1	1	1	ł	:	ŀ	0 38	0.0	<	0
Derry Road NB approach	1 1	1 1	1	1 1	l l	: 1	1	1	0.74	0.0	: ∢	0
Saturday Midday:												
Derry Road NB approach	ŀ	1	ı	ı	1	!	ł	ı	0.32	0.0	∢ <	0 0
Derry Road SB approach	1	I	ı	1	1	1	í	l	0.92	0.0	₹	>

^a Volume-to-capacity ratio.

^b Average control delay in seconds per vehicle.

^cLevel of service.

^d Maximum queue length in feet per lane (assuming 25 feet per vehicle) that is not expected to be exceeded 95 percent of the time period.

Proposed Retail Development - Hudson, New Hampshire

CONCLUSIONS AND RECOMMENDATIONS

Existing and future conditions in the study area have been described, analyzed, and evaluated with respect to traffic operations and the impact of the proposed retail development project. Conclusions of this effort and recommendations are presented below.

- The land at 66 Derry Road is currently vacant and 68 Derry Road contains a vacant building and greenhouse. As proposed the existing structures will be razed and a ±17,209 square foot retail development with two one-story buildings will be constructed on the site; one building containing ±7,225 square feet and the other building containing ±9,984 square feet.
- Access to the site will be provided via one full access and egress driveway to be located at the center of the site frontage and one right-turn in only driveway to be located at the northern property line of the site along Derry Road.
- The proposed development is expected to generate 42 new vehicle trips (20 entering and 22 exiting) during the weekday PM peak hour, 61 new vehicle trips (32 entering and 29 exiting) during the Saturday midday peak hour. Traffic-volume increases beyond the study area during the peak hours are expected to be in the range of 2 to 30 vehicle trips. These increases represent, on average, one additional vehicle every 2 to 30 minutes during the critical peak hours.
- Available sight distances at the proposed main site driveway exceed the minimum and desirable AASHTO requirements for safe operation, as well as the Town of Hudson and NHDOT All Season Safe Sight Distance requirement. To ensure the safe and efficient flow of traffic to and from the site, it is recommended that any proposed plantings, vegetation, landscaping, and signing along the site frontage be kept low to the ground or set back sufficiently from the edge of Derry Road and the site driveway so as not to inhibit the available sight lines.
- Under 2014 and 2024 future traffic-volume conditions, the Derry Road major street movements at its intersection with Ledge Road are expected to operate at optimal levels (LOS A) during the weekday PM and Saturday midday peak hours. Under future conditions, the Ledge Road approach is expected to operate at LOS D during all time periods with the exception of the 2024 Saturday midday peak hour condition. With or without the proposed retail development in place, Ledge Road is expected to operate with long delays (LOS E) during the Saturday midday peak hour. V/C ratios for Ledge Road, however, are expected to be well below 1.00 (0.48 or less) indicating there will be ample capacity available with the proposed development in place. Queue lengths on Derry Road

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are expected to be less than 1 vehicle, which can be accommodated within the TWLTL that exists on Derry Road. On Ledge Road, queue lengths of 2 to 3 vehicles are expected.

- Under 2014 and 2024 future traffic-volume conditions, the Derry Road major street movements at its intersection with the proposed main site driveway are expected to operate at optimal levels (LOS A) during the weekday PM and Saturday midday peak hours. Under future conditions, the site driveway approach is expected to operate at LOS D during the weekday PM peak hour, LOS E during the Saturday midday peak hour under 2014 traffic-volume conditions, and LOS F during the Saturday midday peak hour under 2024 traffic-volume conditions. Although long delays are expected on the site driveway due to the volume of traffic on Derry Road, v/c ratios are expected to be well below 1.00 (0.36 or less) indicating there will be ample capacity available with the proposed development in place. In addition, queue lengths of 1 to 2 vehicles are expected on the site driveway which can be accommodated on-site without disrupting on-site circulation. Queue lengths on Derry Road are expected to be 1 vehicle, which can be accommodated within the TWLTL that exists on Derry Road without affecting the vehicles turning left onto Ledge Road.
- Under 2014 and 2024 future traffic-volume conditions, the Derry Road major street movements at its intersection with the proposed right-turn in only northern site driveway are expected to operate at optimal levels (LOS A) during the weekday PM and Saturday midday peak hours, with no delay and no queues.

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July 30, 2014

Mr. John Cashell, Town Planner Town of Hudson 12 School Street Hudson, NH 03051

Re: Town of Hudson Planning Board Review

66 & 68 Derry Street Retail

Tax Map 165, Lots 145 & 146, PO #1350-842 & #1350-846

CLD Reference Nos. 03-0249.1380 & 03-0249.1390

Dear Mr. Cashell:

CLD Consulting Engineers, Inc. (CLD) has reviewed the first submission of the materials received on July 16, 2014 related to the above-referenced project. A list of items reviewed is enclosed. The scope of our review is based on the Site Plan Review Codes, Stormwater Codes, Driveway Review Codes, Sewer Use Ordinance 77, and criteria outlined in the CLD Proposal approved September 16, 2003, revised September 20, 2004, June 4, 2007, and September 3, 2008.

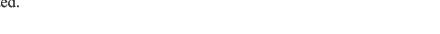
We have included a copy of CLD's evaluation of the checklist for your reference. We did not receive a copy of the applicant's checklist. We note that several items could not be verified by CLD and require action by the Town.

The project consists of an anticipated lot line adjustment of Lots 145 and 146 (under a separate submittal), razing both an existing wood frame 410-square-foot building and 3,617-square-foot greenhouse, and the construction of 7,225-square-foot and 9,984-square-foot retail buildings with associated site improvements. These buildings are proposed to be serviced by municipal water and sewer.

The following items are noted:

1. Site Plan Review Codes

- a. HR 275-8.B. (17) The applicant has shown one temporary benchmark on the plan set, but has not referenced the survey to a specific USGS benchmark.
- b. HR 275-8.B. (20) The applicant has not provided the existing building heights or sizes of the two existing structures on the lots nor have they shown any existing exterior lighting. The building sizes were noted on the copies of the *Preliminary & Final Site Plan Application for Plan Review*. The applicant has also shown pavement within the side yard setback on the southern property line of Lot 145.
- c. HR 275-9.A. See comments below.
- d. HR 275-9.C. The applicant has noted on the plan set that a waiver from the Noise Study requirement is requested.



NEW HAMPSHIRE VERMONT



- e. HR 275-9.D. The applicant has noted on the plan set that a waiver from the Fiscal and Environmental Impact Study requirement is requested.
- f. HR 275-9.E. See comments below.
- g. HR 275-9.F. An easement plan was provided within the plan set; however, copies of deed or easement documents were not received for review as part of the package. We note the applicant has shown several access easements, two drainage easements, and a utility easement. An easement for the existing well encroachment should be added to the plans.
- h. HR 275-9.G. See comments below.

2. Driveway Review Codes (HR 275-8.B. (34)/Chapter 193)

- a. HR 193-10.C. The applicant has proposed a driveway stopping platform greater than 2%.
- b. HR 193-10.G. The applicant has proposed a second driveway for the site.
- c. HR 193-10.I. The applicant has requested a waiver for approval of a shared driveway use.
- d. HR 275-9.B. Traffic Study Review Comments The GPI traffic study appropriately addresses the expected traffic impact of the proposed retail developments, and we have no technical comments on the findings of the study. However, we do note the following:
 - 1) We have a concern about the offset of the proposed main site driveway and Ledge Road, which are only separated by about 140 feet from their respective centerlines. Although the traffic study notes that left-turn queues on Derry Road in each direction should be about one vehicle, we are concerned that this offset creates the opportunity for vehicles in either direction that may concurrently maneuver from the through lane to the center-turn lane to conflict in this short stretch of roadway while they position themselves in this lane to make their respective turns.
 - 2) We do not see that the projected volume of site-generated traffic requires the provision of a southbound right-turn-in-only driveway. With the presence of numerous driveways and roadways in the vicinity of the site, good access management practice would suggest that a low-volume site such as this one be limited to only one access drive. Furthermore, the layout of the second drive appears more conducive to allowing northbound entering traffic than the southbound traffic it is intended for.
 - 3) Route 102 (Derry Road) is tapering from a 5-lane section to a 3-lane section just south of Ledge Road right in front of the site. The Town should consider requesting that the applicant reserve sufficient right-of-way along the frontage of this site for future roadway purposes that would be consistent with continuation of the full 5-lane section to the south.



3. Utility Design/Conflicts (HR 275-9.E.)

- a. The applicant has not shown well protective radius for the two existing wells on Lot 145, but has noted that the well to the north of the wetlands is to be decommissioned in accordance with New Hampshire Department of Environmental Services (NHDES) requirements. The applicant has shown a segment of an existing waterline in the woods slightly encroaching into the wetlands buffer that appears to connect to the well to be decommissioned. Additional information should be provided related to waterlines to be removed.
- b. If the existing structures were ever previously serviced by septic systems, system locations should be shown and noted how construction in or near the area will be addressed (as applicable).
- c. The applicant has shown a new cone into the existing sewer manhole (SMH) in Derry Street more than four feet above the existing invert. The applicant should provide a drop in this SMH and provide a detail for this work.

4. Drainage Design/Stormwater Management (HR 275-9.A./Chapter 290)

- a. HR 290-4.B. (1) Section II D of the Alteration of Terrain (AoT) Permit Project Narrative states, "This detention pond is controlled by an outlet structure and acts is required for detention and pre-treatment." We are unable to tell what the applicant's proposed pretreatment practice is.
- b. HR 290-5.A. (8) The applicant has not accounted for frozen ground conditions in the Stormwater Management calculations.
- c. HR 290-5.A. (10) The AoT Permit was certified by a licensed professional engineer, registered in the state of New Hampshire; however, the individual pre- and post-development drainage plans were not certified.
- d. HR 290-5.B. (2) (g) The applicant should provide a detail for the proposed drainage pipe/guardrail crossing at the northwest corner of the proposed parking lot. With the installation of guardrail and wood fence post within such close proximity, the likelihood of the drainage pipe to be damaged is high.
- e. The applicant should coordinate the discrepancy between the contour labels on the Grading and Drainage Plan (Sheet 6) within Detention Pond #1 and Infiltration Pond #1 as they do not correspond with the elevations utilized within the AoT Permit for the related calculations.
- f. The applicant has shown an existing catch basin that serves the adjacent parcel that appears to drain parking lot water directly to an existing wetland on Lot 145 (outletting within the protective well radius). The applicant should evaluate the need for cross easements and pretreatment and/or treatment.

F:\Proj2003\030249 Hudson\Sec\1380 and 1390 Derry St Retail Letter.doc



5. Erosion Control/Wetland Impacts

- a. HR 290-4.A. (4) and (13) The applicant has stated that all disturbed areas shall be stabilized within 45 days of disturbance; however, we note the Regulation requires disturbed areas be stabilized within 30 days of disturbance.
- b. HR 290-5.B. (1) (d), (m), and (n) The applicant has provided details and indicated on the legend erosion controls that we are unable to locate on the plans, including but not limited to, sediment traps, straw bale barrier, staging and stockpile area(s).
- c. HR 290-5.B. (1) (v) The applicant should note how snow will be managed during winter construction conditions.

6. Landscaping (HR 275-8B (31))

- a. HR 275-8.B.(31)(a) (c) and (d) The applicant has noted on the plan a waiver request from providing 10% of interior parking to be landscaped.
- b. The applicant should confirm proposed landscaping will not conflict with the proposed drainage structures in the northwest corner of the site.

7. State and Local Permits (HR 275-9.G.)

- a. The applicant has noted the need for a NHDES Sewer Discharge Permit and a NHDES AoT Permit. Both permits are noted as pending. Additionally, the applicant has noted it is the contractor's responsibility to file an Environmental Protection Agency (EPA) Notice of Intent (NOI) Acknowledgement prior to commencing construction.
- b. The applicant should note the need for a Sewer Main Extension Permit.
- c. Additional local permitting may be required.

8. Other

- a. The applicant should review the proposed Sidewalk Ramp with Detectable Warning Surface Detail as it does not match the proposed ramp layouts on the plan. We also note that the grade break layout shown on the site plan for the front of the buildings does not meet Americans with Disabilities Act (ADA) guidelines.
- b. The sidewalk driveway tip-downs on Derry Street appear to be uncurbed. The applicant should confirm this is the intent or update the plans and provide a corresponding detail.



Please feel free to call if you have any questions.

lede IV Janball

Very truly yours,

Heidi J. Marshall, P.E.

Paul Konieczka, AICP

HJM/PK:jt

Enclosure

cc: Town of Hudson Engineering Division – File

Keach-Nordstrom Associates, Inc.

10 Commerce Park North, Suite 3B

Bedford, NH 03110 Fax (603) 627-2915 TO:

File

FROM:

Kelsey M. Gagnon KMG

DATE:

July 30, 2014

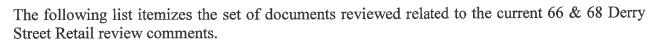
RE:

Town of Hudson Planning Board Review

66 & 68 Derry Street Retail

Tax Map 165, Lots 145 & 146, PO #1350-842 & #1350-846

CLD Reference Nos. 03-0249.1380 & 03-0249.1390



- Various correspondences between Town of Hudson and CLD, dated July 21, to July 24, 2014.
- Letter from the Town of Hudson to CLD, dated July 15 and received July 16, 2014, including the following:
 - 1. Copy of *Project Narrative*, dated July 11, 2014, prepared by Keach-Nordstrom Associates, Inc.
 - 2. Copy of Preliminary & Final Site Plan Application for Plan Review (Also for Wireless) Town of Hudson, New Hampshire for Map 165, Lot 145, dated July 10, 2014.
 - 3. Copy of Preliminary & Final Site Plan Application for Plan Review (Also for Wireless) Town of Hudson, New Hampshire for Map 165, Lot 146, dated July 10, 2014.
 - 4. Copy of *Traffic Impact and Access Study, Proposed Retail Development, Hudson, New Hampshire*, prepared by Greenman-Pedersen, Inc., dated April 2014.
 - 5. Copy of *Alteration of Terrain Application, Derry Street Retail*, prepared by Keach-Nordstrom Associates, Inc., dated July 11, 2014, unless otherwise noted, including the following:
 - a. Pre Development Drainage Area Plan, Sheet 1 of 2, dated July 7, 2014.
 - b. Post Development Drainage Area Plan, Sheet 2 of 2, dated July 7, 2014.
 - c. Pre Development Drainage Area Plan (Half size), Sheet 1 of 2, dated July 7, 2014.
 - d. Post Development Color Coded Plan (Half size), Sheet 2 of 2, dated July 7, 2014.
 - 6. Copy of Non-Residential Site Plan, Derry Street Retail, Map 165, Lots 145 & 146, 66 & 68 Derry Street, Hudson, NH Plan Set, prepared by Keach-Nordstrom Associates, Inc., dated July 7, 2014, unless otherwise noted, including the following:
 - a. Cover Sheet.
 - b. Master Plan, Sheet 1 of 20.
 - c. Existing Conditions Plan, Sheet 2 of 20.
 - d. Removals/Demolition Plan, Sheet 3 of 20.



Memorandum to File CLD Reference Nos. 03-0249.1380 & 03-0249.1390 July 30, 2014

Page - 2

- Non-Residential Site Layout Plan, Sheet 4 of 20.
- f. Easement Plan, Sheet 5 of 20.
- Grading and Drainage Plan, Sheet 6 of 20.
- Erosion Control Plan, Sheet 7 of 20.
- i. Utility Plan, Sheet 8 of 20.
- j. Landscape Plan, Sheet 9 of 20.
- Lighting Plan, Sheet 10 of 20, prepared by Charron Inc. k.
- 1. Drainage Profiles, Sheet 11 of 20.
- m. Site Distance Plan & Profile, Sheet 12 of 20.
- Construction Details, Sheets 13 through 19 of 20. n.
- Test Pit Logs, Sheet 20 of 20.

KMG:jt

John Cashell - Town of Hudson Planner cc: Town of Hudson Engineering Division - File

APPLICATION FOR SITE PLAN REVIEW TOWN OF HUDSON, NEW HAMPSHIRE

Thirty (30) days prior to Planning Board Meeting, a complete <u>site plan</u> to include all supporting materials/documents must be submitted in final form. The site plan shall comply with the following specifications/requirements.

Applicant Initials		Staff Initiols
<u>u)</u>	Submission of nine (9) full sets of Site Plans (sheet size: 22" x 34") at the time of application filing, followed by the submission of seventeen (17) 11" x 17" plan sets (revised if applicable) to the Community Development Department no later than 10:00 AM Tuesday the week prior to the scheduled public hearing/conceptual review date.	JC.
—— b)	A Site Plan narrative, describing the purpose, locations, long range plans, impacts on traffic, schools and utilities.	CLD/KMG
c)	Plan scale at not less the one inch equals fifty feet (1" = 50')	CLD/KMG
d)	Locus plan with 1,000' minimum radius of site to	CLD/KMG
	surrounding area	7/
e)	Plan date by day/month/year	4/
	Revision block inscribed on the plan	CLD/KMG
g)	Planning Board approval block inscribed on the plan	CLD/KMG
h)	Title of project inscribed on the plan	CLD/KMG
i)	Names and addresses of property owners and their signatures inscribed on the plan	gc
(i	North point inscribed on the plan	CLD/KMG
k)	Property lines; exact locations and dimensions	CLD/KMG
1)	Square feet and acreage of site	CLD/KMG
m)	Square feet of each building (existing & proposed)	90
n)	Names and addresses of bordering abutters, as shown on Tax Assessor's records not more than five (5) days prior to application date to be listed on the plan	90

66 & 68 Derry Street Retail, 66 & 68 Derry Street Town of Hudson CLD Reference No. 03-0249.1380 & 03-0249.1390 Reviewed July 30, 2014

e)	Plan date by month/day/year.
i)	Owner's signatures are not inscribed on the plans.
m)	Square footage of the existing buildings are not shown on the plan. The square footage is noted on the <i>Preliminary & Final Site Plan Application</i> .
n)	Abutters' names and addresses are shown on plan; unable to verify 5-day

a) One set received by CLD.

Applicant Initialso)p)p)s)	Location of all structures, roads, wetlands, hydrants, wells, septic systems, 4k reserve areas, floodways/floodplains, driveways, travel areas, parking areas and natural features within 200 feet of the tract Locations of existing and proposed permanent monuments and benchmarks within 200 feet of the development tract Pertinent highway projects Assessor's Map and Lot number(s) Waiver application form shall be submitted with the site plan application, note on plan listing waivers requested/granted; and all waivers granted to the site plan regulations shall be listed on the final plan; waivers to checklist shall be reduced to writing and be signed by the Planning Board Chairman and Planning Board Secretary and recorded	Staff Initials CLD/KMG CLD/KMG	p) q) s)	One temporary benchmark has been shown on the plans. We are unable to verify that all locations of existing monuments within 200 feet of the development tract are shown. No highway projects noted. Requested waivers were noted on the plans; however, waiver application forms were not received for review.
t)	with the plan. Delineate zoning district on the plan Stormwater drainage plan	CVD/KMG	t)	Zoning noted, not delineated.
v) w)	Topographical elevations at 2-foot intervals contours: existing and proposed Utilities: existing and proposed	CLD/KMG	w)	An existing water line is shown in the middle of the woods on Lot 145.
x) y) z)	Parking: existing and proposed Parking space: length and width Aisle width/maneuvering space	CLD/KMG CLD/KMG CLD/KMG		
aa) ab)	Landscaping: existing and proposed Building and wetland setback lines	160	aa) nb)	Applicant noted waiver requested. The applicant has proposed parking within the side and front yard setbacks.
ac)	Curb cuts Right of way: existing and proposed	CLARMO	ac)	The applicant has proposed two driveways on Lot 146.
ae)	Sidewalks: existing and proposed Exterior lighting plan	CLD/KMG CLD/KMG		
ag)	Sign locations: size and design Water mains and sewerage lines	LD/KMG	ag)	The applicant has shown a pylon identification sign on the plans but has not provided a detail.
ni)	Location of dumpsters on concrete pads All notes from plats	CLD/KMG CLD/KMG		
aj)	All notes from piacs	VILLA MINI		

Applica	nt		Stair		
Initials			Initials		
	ak)	Buffer as required by site plan regulations	CLD/KMG		
	al)	Green and open space requirements met with percentages of both types of spaces inscribed on the plan	CLD/KMG		
	am)		A	am)	Regulation was repealed in 2010. Soil types indicated.
		questionable soils, a High Intensity Soil Survey (HISS) may be			
		deemed necessary to submit as part of the application. Said			
		HISS, if required, shall be performed by a State of New			
		Hampshire certified Soil Scientist, who shall affix his/her			
		stamp and signature shall be inscribed on the plan.	O. T. G. 1.40		
	_ ຄນ)	Wetlands (and poorly-drained and very poorly-drained soils),	CLD/KMG		
		also identified as Class 5 and Class 6 High Intensity Soil			
		Survey (HISS soils), and permanent and seasonal wetlands			
		shall be identified on the plan by a New Hampshire certified			
		Wetland or Soil Scientist, who shall affix his/her stamp and			
	,	signature to the respective plan.	CLD/KMG		
	an)	"Valid for one year after approval" statement inscribed on the plan			
	_ap)	Loading bays/docks	CLD/KMG		
	aq)	State of New Hampshire engineer's stamp, signature, surveyor's stamp, and signature	CLD/KMG		
	ar)	Error of closure (1 in 10,000 or better)	CLD/KMG		
-	as)	Drafting errors/omissions	CLD/KMG		
	at)	Developer names, addresses, telephone numbers and signatures	00	at)	Developer's signature is not inscribed on the plan.
	- "")	Photographs, electronic/digital display or video of site and area	100	au)	None received for review.
	av)	Attach one (1) copy of the building elevations	AT MELLING	av)	None received for review.
	aw)		Wa	aw)	Not received, applicant noted waiver requested.
	ax)	Traffic study	11/2	ax)	Not received, applicant noted waiver requested.
	ay)	Noise study	W	ay)	Not received, applicant noted waiver requested.

Applicant Initials az)	Copies of any proposed or existing easements, covenants, deed restrictions, right of way agreements or other similar documents Copy of applicable Town, State, Federal approval/permits to include but not limited to the following: - industrial discharge application - sewer application - flood plain permit - wetlands special exception - variance	Staff	az)	No deeds or easement documents received for review. Several access easements, to drainage easements, and a utility easement are shown on the plan set. No permits received in package for review. Driveway permit noted as requested.
bc)	- erosion control permit (149:8a) - septic construction approval - dredge and fill permit - curb cut permit - shoreland protection certification in accordance with RSA - if applicable, review application with Lower Merrimack F Local Advisory Committee (LMRLAC) and attach LMRI project comments hereto. Presentation plan (colored, with color coded bar chart) Fees paid to clerk Five (5) 22" x 34" copies of the plan shall be brought to the Planning Board meeting and distributed to the Planning Board members at the meeting. Note: for all subsequent meetings involving revised plans, five 22" x 34" copies of said plan sha be brought to the meeting for distribution to the board members.	River LAC	bc)) No presentation plan received, requires a Town action.) Requires Town action.) Requires Town action.
• Under the p	ourview of the Planning Board any and all items may be waived			

F:\Proj2003\030249 Hudson\Sec\1380 & 1390 Derry St Retail Letter Checklist

Page 4 of 4



"C"

August 1, 2014

Town of Hudson Community Development 12 School Street Hudson, NH 03051

RE:

66 & 68 Derry Street Retail – Revised Site Plans Tax Map 165, Lots 145 & 146 – Hudson, NH

PO# 1350-842 & 1350-846

KNA# 13-0509-2



Dear Mr. Cashell,

Our office is in receipt of peer review comments prepared by Heidi J. Marshall, P.E. of CLD Consulting Engineers, Inc. dated July 30, 2014 and John O'Brien, Deputy Fire Chief, of the Town of Hudson's Fire Department dated July 18, 2014. Ms. Marshall's and Mr. O'Brien's letter serves to outline the context of their review of the site plan prepared by this office relative to compliance with the Hudson Site Plan Review Codes, Stormwater Codes, Fire Department Regulations and Driveway Review Codes. In response, we have revised the site plans attached, and below provide a brief summary of our efforts to address each of their concerns as noted. Our response is in *bold italic* following each of their comments.

CLD Comments:

1. Site Plan Review Codes

a. HR 275-8.B. (17) The applicant has shown one temporary benchmark on the plan set, but has not referenced the survey to a specific USGS benchmark.

A note was added regarding vertical datum being NGVD 1929. See note 9 on sheet 2.

b. HR 275-8.B. (20) The applicant has not provided the existing building heights or sizes of the two existing structures on the lots nor have they shown any existing exterior lighting. The building sizes were noted on the copies of the Preliminary & Final Site Plan Application for Plan Review. The applicant has also shown pavement within the side yard setback on the southern property line of Lot 145.

Civil Engineering

Land Surveying

The existing building heights and sizes have been added to the plan. A note stating the building does not contain any exterior lighting has been added. The pavement within the side yard setback is the result of abutting property Map 173, Lot 31, encroaching onto the subject property.

c. HR 275-9.A. See comments below.

No response required.

d. H-R 275-9.C. The applicant has noted on the plan set that a waiver from the Noise Study requirement is requested.

No response required.

e. HR 275-9.D. The applicant has noted on the plan set that a waiver from the Fiscal and Environmental Impact Study requirement is requested.

No response required.

f. HR 275-9.E. See comments below.

No response required.

g. HR 275-9.F. An easement plan was provided within the plan set; however, copies of deed or easement documents were not received for review as part of the package. We note the applicant has shown several access easements, two drainage easements, and a utility easement. An easement for the existing well encroachment should be added to the plans.

Upon final signature, easement documents will be provided to the town. The existing well encroachment is a private matter between owner and abutter. This issue is not subject to planning board approval.

h. HR 275-9.G. See comments below.

No response required.

- 2. Driveway Review Codes ((HR 275-8.B. (34)/Chapter 193)
 - a. HR 193-10.C. The applicant has proposed a driveway stopping platform greater than 2%.

Civil Engineering

Land Surveying

A 2% stopping platform has been added to the main entrance.

b. HR 193-10.G. The applicant has proposed a second driveway for the site.

The current site consists of two parcels. The proposed site will also be two parcels, each having the required frontage, therefore each parcel is allowed a driveway.

c. HR 193-10.I. The applicant has requested a waiver for approval of a shared driveway use.

No response required.

- d. HR 275-9.B. Traffic Study Review Comments. The GPI traffic study appropriately addresses the expected traffic impact of the proposed retail developments, and we have no technical comments on the findings of the study. However, we do note the following:
 - 1) We have a concern about the offset of the proposed main site driveway and Ledge Road, which are only separated by about 140 feet from their respective centerlines. Although the traffic study notes that left-turn queues on Derry Road in each direction should be about one vehicle; we are concerned that this offset creates the opportunity for vehicles in either direction that may concurrently maneuver from the through lane to the center-turn lane to conflict in this short stretch of roadway while they position themselves in this lane to make their respective turns.

Comment to be addressed by GPI. See enclosed memorandum.

2) We do not see that the projected volume of site-generated traffic requires the provision of a southbound right-turn-inonly driveway. With the presence of numerous driveways and roadways in the vicinity of the site, good access management practice would suggest that a low-volume site such as this one be limited to only one access drive. Furthermore, the layout of the second drive appears more conducive to allowing northbound entering traffic than the southbound traffic it is intended for.

Comment to be addressed by GPI. See enclosed memorandum.

3) Route 102 (Derry Road) is tapering from a 5-lane section to a 3-lane section just south of Ledge Road right in front of the site. The Town should consider requesting that the applicant reserve sufficient right-of-way along the frontage of this site for future roadway purposes that would be consistent with continuation of the full 5-lane section to the south.

Comment to be addressed by GPI. See enclosed memorandum.

3. Utility Design/Conflicts (HR 275-9.E.)

a. The applicant has not shown well protective radius for the two existing wells on Lot 145, but has noted that the well to the north of the wetlands is to be decommissioned in accordance with New Hampshire Department of Environmental Services (NHDES) requirements. The applicant has shown a segment of an existing waterline in the woods slightly encroaching into the wetlands buffer that appears to connect to the well to be decommissioned. Additional information should be provided related to waterlines to be removed.

A note was added to the plan regarding decommissioning the associated water lines.

b. If the existing structures were ever previously serviced by septic systems, system locations should be shown and noted how construction in or near the area will be addressed (as applicable).

The site is currently serviced by municipal sewer. Refer to note 11 on sheet 2.

c. The applicant has shown a new core into the existing sewer manhole (SMH) in Derry Street more than four feet above the existing invert. The applicant should provide a drop in this SMH and provide a detail for this work.

Revised as requested.

4. Drainage Design/Stormwater Management (HR 275-9.A./Chapter 290)

Civil Engineering

Land Surveying

a. HR 290-4.B. (1) Section II D of the Alteration of Terrain (AoT)
Permit Project Narrative states, "This detention pond is controlled
by an outlet structure and acts is required for detention and pretreatment." We are unable to tell what the applicant's proposed
pretreatment practice is.

The detention pond above the infiltration pond will act as pretreatment by providing an area for sediment to accumulate. A plunge pool was added to the detention pond to provide additional pre-treatment.

b. HR 290-5.A. (8) The applicant has not accounted for frozen ground conditions in the Stormwater Management calculations.

A supplement to the drainage calculations has been attached to demonstrate the function of the stormwater management system in frozen conditions. The Antecedent Moisture Condition has been adjusted to account for the frozen conditions. The node summary reporting the results for the 2-year pre and post models is attached.

c. HR 290-S.A. (10) The AoT Permit was certified by a licensed professional engineer, registered in the state of New Hampshire; however, the individual pre- and post-development drainage plans were not certified.

Revised as requested.

d. HR 290-5.B. (2) (g) The applicant should provide a detail for the proposed drainage pipe/guardrail crossing at the northwest corner of the proposed parking lot. With the installation of guardrail and wood fence post within such close proximity, the likelihood of the drainage pipe to be damaged is high.

The drainage pipe has 9.7' of cover. The guardrail is only required to be 3.5' deep. This leaves more than 6' between the pipe and guardrail. 6' is more than adequate to not damage the pipe.

e. The applicant should coordinate the discrepancy between the contour labels on the Grading and Drainage Plan (Sheet 6) within Detention Pond #1 and Infiltration Pond #1 as they do not correspond with the elevations utilized within the AoT Permit for the related calculations.

Notes regarding the bottom of the detention pond and infiltration pond have been added to sheet 6. These elevations are consistent with the NHDES BMP worksheets and our HydroCAD model.

f. The applicant has shown an existing catch basin that serves the adjacent parcel that appears to drain parking lot water directly to an existing wetland on Lot 145 (Outletting within the protective well radius). The applicant should evaluate the need for cross easements and pretreatment and/or treatment.

The existing drainage encroachment is a private matter between owner and abutter. This issue is not subject to planning board approval.

5. Erosion Control/Wetland Impacts

a. HR 290-4.A. (4) and (13) The applicant has stated that all disturbed areas shall be stabilized within 45 days of disturbance; however, we note the Regulation requires disturbed areas be stabilized within 30 days of disturbance.

Revised as requested.

b. HR 290-5.B. (1) (d), (m), and (n) The applicant has provided details and indicated on the legend erosion controls that we are unable to locate on the plans, including but not limited to, sediment traps, straw bale barrier, staging and stockpile area(s).

Revised as requested.

c. HR 290-5.B. (1) (v) The applicant should note how snow will be managed during winter construction conditions.

Note 11 on sheet 7 was added to the plan.

6. Landscaping (HR 275-8B (31))

a. HR 275-8.B .(31)(a) (c) and (d) The applicant has noted on the plan a waiver request from providing 10% of interior parking to be landscaped.

No response required.

rveying Landscape Architecture

Bedford, NH 03110

b. The applicant should confirm proposed landscaping will not conflict with the proposed drainage structures in the northwest corner of the site.

We have discussed this with the project landscape architect and the proposed landscaping will not conflict with the proposed drainage structures.

7. State and Local Permits (HR 275-9.G.)

a. The applicant has noted the need for a NHDES Sewer Discharge Permit and a NHDES AoT Permit. Both permits are noted as pending. Additionally, the applicant has noted it is the contractor's responsibility to file an Environmental Protection Agency (EPA) Notice of Intent (NOI) Acknowledgement prior to commencing construction.

No response required.

b. The applicant should note the need for a Sewer Main Extension Permit.

A sewer allocation permit has been filed with the town. Note 22 on sheet I state the needs for a NHDES sewer connection permit.

c. Additional local permitting may be required.

No response required

8. Other

a. The applicant should review the proposed Sidewalk Ramp with Detectable Warning Surface Detail as it does not match the proposed ramp layouts on the plan. We also note that the grade break layout shown on the site plan for the front of the buildings does not meet Americans with Disabilities Act (ADA) guidelines.

Revised as requested. We have added additional spot shots to clarify the grading in this area. See detail on sheet 13 regarding the proposed ramps.

b. The sidewalk driveway tip-downs on Derry Street appear to be uncurbed. The applicant should confirm this is the intent or update the plans and provide a corresponding detail.

Land Surveying

Landscape Architecture

10 Commerce Park North, Suite 3B

Revised as requested. A detail was provided on sheet 13.

Fire Comments:

1. The entrance way on the Northern side of the property is currently marked on the drawings submitted as 18 feet wide. According to NFPA 1 Sec 18.2.3.4.1.1. Fire Dept. access roads shall have an unobstructed width of not LESS than 20 feet. The Hudson Fire Dept. will require a minimum width of 20 feet.

Revised as requested.

Planning Comments: There were no comments on this Site Plan from Planning.

We trust that these plan revisions and/or explanations will adequately address the Town's comments. Please do not hesitate to contact us if you have any questions or further comments.

Best regards,

Brenton Cole Project Engineer

Keach-Nordstrom Associates, Inc.



Greenman - Pedersen, Inc.

Engineering and Construction Services

REF.: MAX-2013046

August 1, 2014

Mr. Thomas Latham Clark, Geer, Latham & Associates, Inc. 3901 Springhill Avenue Mobile, Alabama 36608

SUBJECT: Proposed Retail Development

66 & 68 Derry Road (NH Routes 102/3A) - Hudson, New Hampshire

Response to Traffic Peer Review Comments

Dear Mr. Latham:

Greenman-Pedersen, Inc. (GPI) has received the CLD Consulting Engineers (CLD) comments on the Driveway Review Codes, including the Traffic Impact and Access Study (TIAS) prepared for the proposed retail development to be located at 66 and 68 Derry Road (NH Routes 102/3A) in Hudson, New Hampshire. The CLD comment letter is attached to this letter for your reference. We have prepared the following responses to the CLD comments and they are presented in the order they appear in the letter received.

Comment 2a:

The applicant has proposed a driveway stopping platform greater than 2%.

Response 2a:

The grading on the main site driveway is being revised to provide a 2% stopping platform for 20 feet. See the updated Non-Residential Site Plan set.

Comment 2b:

The applicant has proposed a second driveway for the site.

Response 2b:

Comment acknowledged.

Comment 2c:

The applicant has requested a waiver for approval of a shared driveway use.

Response 2c:

Comment acknowledged.

Comment 2d(1)

We have a concern about the offset of the proposed main site driveway and Ledge Road, which are only separated by about 140 feet from their respective centerlines. Although the traffic study notes that left-turn queues on Derry Road in each direction should be about one vehicle, we are concerned that this offset creates the opportunity for vehicles in either direction that may concurrently maneuver from the



Mr. Thomas Latham August 1, 2014 Page 2 of 2

through lane to the center-turn lane to conflict in this short stretch of roadway while they position themselves in this lane to make their respective turns.

Response 2d(1):

The proposed main site driveway cannot be located opposite Ledge Road due to the fact that the Applicant doesn't control the adjacent site to the south. In addition, as stated in Comment 2c, the Applicant is requesting a shared driveway use due to the two parcels that make up the site. Accordingly, the main site driveway has been placed between the two parcels and approximately halfway between Ledge Road and the St. Patrick's Cemetery entrance.

The two-way left-turn lane (TWLTL) along NH Routes 102/3A (Derry Road) begins at the proposed site and ends 0.5 miles south of the site just before Highland Avenue. Within this 0.5 mile stretch there are 23 curb cuts to different businesses, residences, and streets with more than one situation where 2 curb cuts are off-set in the same manner as the proposed site driveway and Ledge Road and provide less than 140 feet of separation. It is expected that since the TWLTL is present for a long section of the roadway, and not just a short distance between Ledge Road and the Route 102 Plaza, that motorists are familiar with the operations of the TWLTL and the potential conflicts. As stated, queue lengths for both the site driveway and Ledge Road are expected to be one vehicle or less leaving 90 feet remaining between the 2 vehicles waiting.

Comment 2d(2):

We do not see that the projected volume of site-generated traffic requires the provision of a southbound right-turn-in-only driveway. With the presence of numerous driveways and roadways in the vicinity of the site, good access management practice would suggest that a low-volume site such as this one be limited to only one access drive. Furthermore, the layout of the second drive appears more conductive to allowing northbound entering traffic than the southbound traffic it is intended for.

Response 2d(2):

The site is made up of two parcels, and according to the Town's regulations, each parcel is allowed a driveway. For this reason, the project is requesting the two driveways. The northern enter-only driveway is intended to provide right-in only access. Accordingly, the Site Plan has been updated to reduce the curb radii on the southern side of the driveway and also install a DO NOT ENTER (R5-1) sign facing northbound traffic to inform motorists that they cannot enter this driveway from the south. See the updated Non-Residential Site Plan set.

Comment 2d(3):

Route 102 (Derry Road) is tapering from a 5-lane section to a 3-lane section just south of Ledge Road right in front of the site. The Town should consider requesting that the applicant reserve sufficient right-of-way along the frontage of this site for



Mr. Thomas Latham August 1, 2014 Page 3 of 2

future roadway purposes that would be consistent with the continuation of the full 5-lane section to the south.

Response 2d(3):

Comment acknowledged.

Should you have any questions, require additional information, or if I can be of any assistance during the review of the project, please feel free to contact me at (978) 570-2968.

Sincerely,

GREENMAN - PEDERSEN, INC.

Heather Monticup

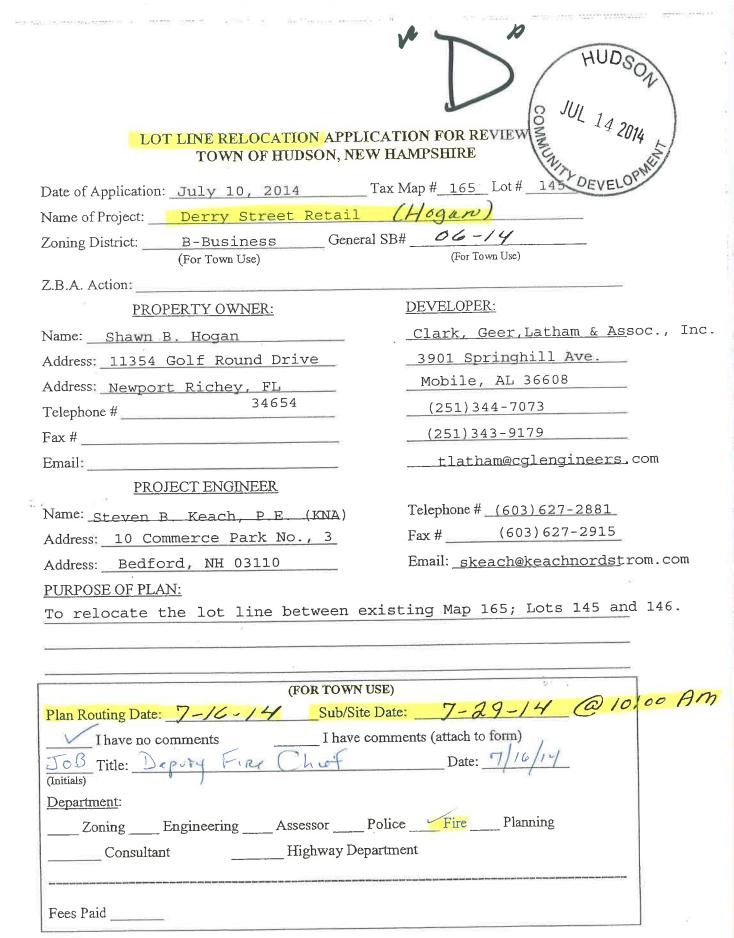
Heather L. Monticup, P.E.

Project Manager

enclosure(s)

cc: (via email)

Mr. Anthony Basso, Keach-Nordstrom Assoc., Inc.





TOWN OF HUDSON

FIRE DEPARTMENT

39 FERRY STREET, HUDSON, NEW HAMPSHIRE 03051



Emergency Business 911

603-886-6021

Fax

603-594-1164

Robert M. Buxton Chief of Department

TO: John M. Cashell Town Planner

FR: John J. O'Brien Deputy Fire Chief

DT: July 18, 2014

RE: Derry Street Retail Map 165; Lots 145 & 146 66 and 68 Derry St Hudson N.H

A site plan review was conducted for the above proposed development. Fire Dept comments are listed below.

1) The entrance way on the Northern side of the property is currently marked on the drawings submitted as 18 feet wide. According to NFPA 1 Sec 18.2.3.4.1.1. Fire Dept. access roads shall have an unobstructed width of not LESS than 20 feet. The Hudson Fire Dept. will require a minimum width of 20 feet.

If I can be of any further assistance please call at 886-6021 or e mail jobrien@hudsonnh.gov

`John J. O'Brien Deputy Fire Chief

LOT LINE RELOCATION APPLICATION FOR REVIEW TOWN OF HUDSON, NEW HAMPSHIRE

	VITA ORNE
Date of Application: July 10, 2014 Tax 1	Map # 165 Lot # 145 DEVELO
Name of Floject. Derry Street Return	
Zoning District: B-Business General SB: (For Town Use)	# 06-14 (For Town Use)
Z.B.A. Action:	
PROPERTY OWNER:	DEVELOPER:
Name: Shawn B. Hogan	Clark, Geer, Latham & Assoc., Inc.
Address: 11354 Golf Round Drive	3901 Springhill Ave.
Address: Newport Richey, FL	Mobile, AL 36608
Telephone #34654	(251)344-7073
Fax #	(251)343-9179
Email:	tlatham@cglengineers.com
PROJECT ENGINEER	
Name: Steven B. Keach, P.E. (KNA)	Telephone # (603) 627-2881
Address: 10 Commerce Park No., 3	Fax #(603) 627-2915
Address: Bedford, NH 03110	Email: <u>skeach@keachnordstrom.com</u>
PURPOSE OF PLAN:	r.
To relocate the lot line between exist	ting Map 165; Lots 145 and 146.
(FOR TOWN USE)	O . Landon
Plan Routing Date: 7-16-14 Sub/Site Date	: <u>7-29-14</u> @ 10,00 Fin
I have no comments I have comm	nents (attach to form),
(Initials) POIN ACTUT	Date: 7//8/14
Department:	
Zoning Engineering Assessor Polic	e Fire Planning
ConsultantHighway Departm	ent
Face Paid	
Fees Paid	

LOT LINE RELOCATION APPLICATION FOR REVIEW TOWN OF HUDSON, NEW HAMPSHIRE

TO THE TOTAL TOTAL OF THE OPEN
Date of Application: July 10, 2014 Tax Map # 165 Lot # 145 DEVELOPMENT
Name of Project: Derry Street Retail (Hogaro)
Zoning District: B-Business General SB# 06-14 (For Town Use) (For Town Use)
Z.B.A. Action:
PROPERTY OWNER: DEVELOPER:
Name: Shawn B. Hogan Clark, Geer, Latham & Assoc., Inc.
Address: 11354 Golf Round Drive 3901 Springhill Ave.
Address: Newport Richey, FL Mobile, AL 36608
Telephone # 34654(251) 344-7073
Fax #(251)343-9179
Email:tlatham@cglengineers.com
PROJECT ENGINEER
Name: Steven B Keach, P.E. (KNA) Telephone # (603)627-2881
Address: 10 Commerce Park No., 3 Fax # (603)627-2915
Address: Bedford, NH 03110 Email: skeach@keachnordstrom.com
PURPOSE OF PLAN:
To relocate the lot line between existing Map 165; Lots 145 and 146.
(FOR TOWN USE)
Plan Routing Date: 7-16-14 Sub/Site Date: 7-29-14 @ 10,00 Am
I have no comments I have comments (attach to form)
WHO Title: 2.A Date: 1/16/14 Chitials) PASSEN ZBA APPIZOUAS Department:
(Initials) PASSELD CIBA APPRIZODAS
Department: Zoning Engineering Assessor Police Fire Planning
Consultant Highway Department
Fees Paid

LOT LINE RELOCATION APPLICATION FOR REVIEW TOWN OF HUDSON, NEW HAMPSHIRE

Date of Application: July 10, 2014 Tax Map # 165 Lot # 145 DEVELOPM
Name of Project: Derry Street Retail (Hogan)
Zoning District: B-Business General SB# 06-14 (For Town Use) (For Town Use)
Z.B.A. Action:
PROPERTY OWNER: DEVELOPER:
Name: Shawn B. Hogan Clark, Geer, Latham & Assoc., Inc.
Address: 11354 Golf Round Drive 3901 Springhill Ave.
Address: Newport Richey, FL Mobile, AL 36608
Telephone #
Fax #(251)343-9179
Email:tlatham@cglengineers.com
PROJECT ENGINEER
Name: Steven B. Keach, P.E. (KNA) Telephone # (603)627-2881
Address: 10 Commerce Park No., 3 Fax # (603)627-2915
Address: Bedford, NH 03110 Email: skeach@keachnordstrom.com
PURPOSE OF PLAN:
To relocate the lot line between existing Map 165; Lots 145 and 146.
(FOR TOWN USE)
Plan Routing Date: 7-16-14 Sub/Site Date: 7-29-14 @ 10,00 Am
I have no comments I have comments (attach to form) Title: Assessor Date:
Department:
Zoning Engineering Assessor Police Fire Planning
ConsultantHighway Department
Fees Paid



The State of New Hampshire

DEPARTMENT OF ENVIRONMENTAL SERVICES

Thomas S. Burack, Commissioner

NOTICE OF ACCEPTANCE OF PERMIT APPLICATION LAND RESOURCES MANAGEMENT

July 15, 2014

CITY OF HUDSON MUNICIPAL CLERK 12 SCHOOL STREET HUDSON, NH 03051

TOWN OF HUDSON PATRICIA BARRY, CLERK DATE 7-16-14 TIME 10:30AM CC: SELECTMEN

> INSPECTIONAL SERVICES DIV. COMMAINITY TO ROLL TO TOWN TO THE TOWN TO THE TOWN THE TO

LAND USE DIV.

Alteration of Terrain Bureau Permit Application (RSA 485-A:17)

Project Name: Derry Street Retail DES File Number: 140714-119

Subject Property: Tax Map #165, Lot# 145 & 146

Dear Sir or Madam:

Pursuant to RSA 541-A:39, please be advised that the Department of Environmental Services (NHDES) accepted an application on July 14, 2014 for the permit program and subject property referenced above.

The application requests a permit to disturb approximately 103,000 square feet of earth at the subject property. Pursuant to Env-Wq 1503.05 (f), the applicant is required to provide a copy of the application and plans to the municipality. If you have not received the required information, please contact the agent:

> KATHERINE BASSO C/O KEACH-NORDSTROM ASSOCIATES, INC. 10 COMMERCIAL PARK NORTH SUITE 3 BEDFORD, NH 03110

If you wish to comment on the application, please submit your comments by August 23, 2014. All comments should reference the DES file number and be directed to the following address:

> NHDES Alteration of Terrain Bureau 29 Hazen Drive P.O. Box 95 Concord, NH 03302-0095

Please provide a copy of this notice to all interested departments, boards and commissions. Also note that under current state law and regulations, NHDES is not authorized to consider local zoning and regulatory issues pertaining to a project; these must be addressed at the local level.

If you have any questions, please contact the Application Receipt Center at (603) 271-4057.

Thank you, Land Resources Management

cc: Katherine Basso Thomas Latham Shawn Hogan

66 Derry St. Retail (Map 165 Lot 145)

Date: 08/13/14 Sector #: 1 Map/Lot: 165-145 Project Name: 66 Derry St. Retail Development Shopping Center Proposed ITE Use #1: Proposed Building Area (square footage): 7, 225 S.F. CAP FEES: (THREE CHECKS NEEDED) 1. \$1.10 per sf X 7,225 =\$7,947.50 (2070-090)Route 3A: \$2.18 "" " = \$15,750.50 (2070-091)Route 102: = \$10,187.25 \$1.41" " " " (2070-086)Route 111: Total CAP Fee: \$33,885.25

68 Derry St. Retail (Map 165 Lot 146)

Date: 08/13/14 Sector #: 1 Map/Lot: 165-146

Project Name: 68 Derry St. Retail Development

Proposed ITE Use #1: Shopping Center

Proposed Building Area (square footage): 9,984 S.F.

CAP FEES: (THREE CHECKS NEEDED)

1. (Bank 08) (2070-090) Route 3A: \$1.10 per sf X 9,984 =\$10,982.40 (2070-091) Route 102: \$2.18 " " " = \$21,765.12 (2070-086) Route 111: \$1.41" " " = \$14,077.44

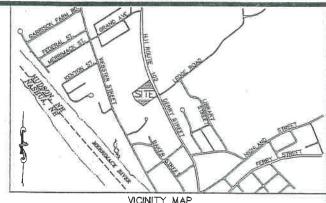
Total CAP Fee: **\$46,824.96**

GRAND TOTAL for 66 & 68 Derry St. Shopping Ctr.:

\$80,710.21

NON-RESIDENTIAL SITE PLAN DERRY STREET RETAIL

MAP 165; LOTS 145 & 146 66 & 68 DERRY STREET HUDSON, NEW HAMPSHIRE



VICINITY MAP SCALE: 1" ≈ 1,00



OWNER:

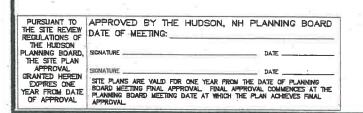
SHAWN B. HOGAN 11354 GOLF ROUND DRIVE NEW PORT RICHEY, FLORIDA 34654

PREPARED FOR:

CLARK, GEER, LATHAM & ASSOCIATES, INC. 3901 SPRINGHILL AVENUE MOBILE, ALABAMA 36608

PREPARED BY:

KEACH-NORDSTROM ASSOCIATES, INC. 10 COMMERCE PARK NORTH, SUITE 3B BEDFORD, NEW HAMPSHIRE 03110 (603) 627-2881





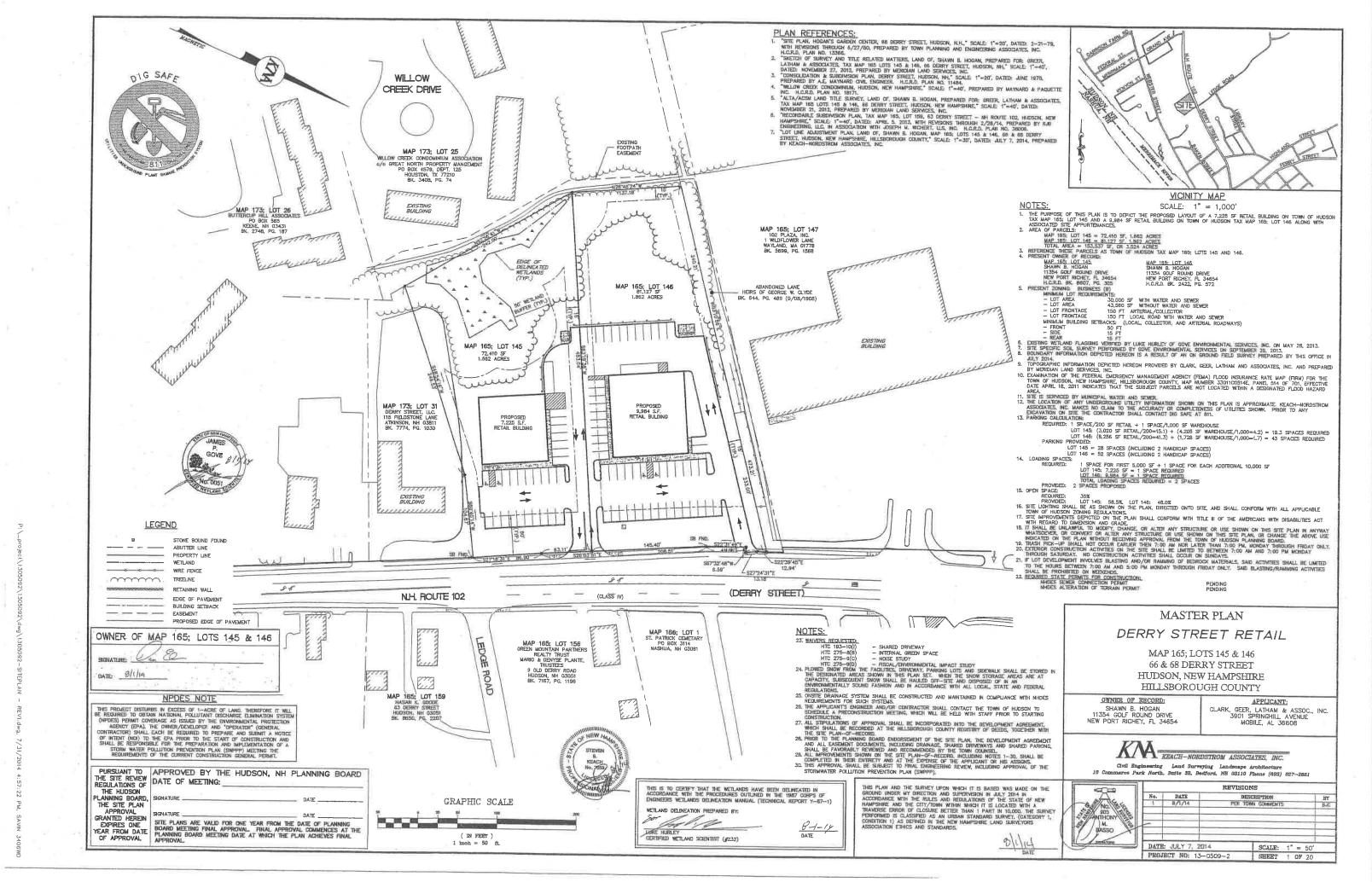




KEACH-NORDSTROW ASSOCIATES, INC.
Civil Angineering Land Surveying Landscape Architecture
Communero Park Worth, Smite SE, Bedford, NE 63110 Phone (803) 627-2881

JULY 7, 2014
REVISED: AUGUST 1, 2014
PROJECT NO. 13-0509-2

SHEET TITLE	SHEET No.
MASTER PLAN	1
EXISTING CONDITIONS PLAN	2
DEMOLITION/REMOVALS PLAN	3
NON-RESIDENTIAL SITE LAYOUT PLAN	4
EASEMENT PLAN	5
GRADING AND DRAINAGE PLAN	6
EROSION CONTROL PLAN	7
UTILITY PLAN	8
LANDSCAPE PLAN	9
LIGHTING PLAN	10
DRAINAGE PROFILES	11
SIGHT DISTANCE PLAN & PROFILE	12
CONSTRUCTION DETAILS	13 - 19
TEST PIT LOGS	20





SITE SPECIFIC SOIL MAP UNIT KEY

38006.
7 "LOT LINE ADJUSTMENT PLAN, LAND OF, SHAWN B. HOGAN, MAP 165; LOTS 145 & 146, 66 & 68 DERRY STREET, HUDSON, NEW HAMPSHIRE, HILLSBORGUGH COUNTY," SCALE: 1"=30", DATED: JULY 7, 2014, PREPARED BY KECAP-NORDSTROM ASSOCIATES, INC.

EXISTING CONDITIONS PLAN DERRY STREET RETAIL

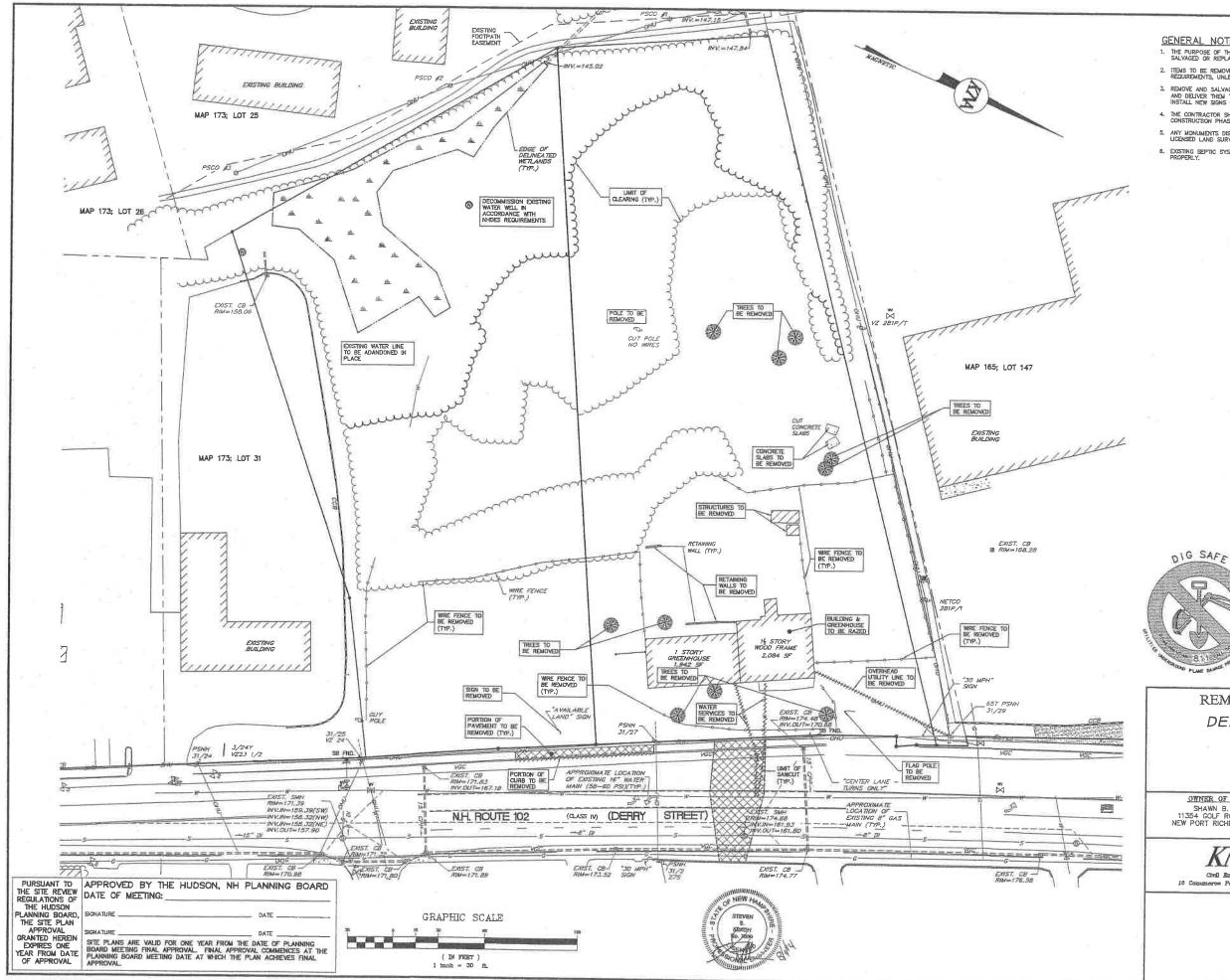
66 & 68 DERRY STREET HUDSON, NEW HAMPSHIRE HILLSBOROUGH COUNTY

> APPLICANT: CLARK, GEER, LATHAM & ASSOC., INC. 3901 SPRINGHILL AVENUE MOBILE, AL 36608

KEACH-NORDSTROM ASSOCIATES, INC.



		REVISI	ONS	
No.	DATE	10	ESCRIPTION	BY
	8/1/14	PER	TOWN COMMENTS	BJK
				\pm
DATE	JULY 7, 2	014	SCALE: 1" =	30'
PROJ	ECT NO: 13	-0509-2	SHEET 2 OF	20



GENERAL NOTES:

- THE PURPOSE OF THIS PLAN IS TO SHOW EXISTING FEATURES ON SITE TO BE REMOVED, SALVAGED OR REPLACED.
- ITEMS TO BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH THE TOWN OF HUDSON REQUIREMENTS, UNLESS OTHERWISE SHOWN HEREON OR DIRECTED BY OWNER.
- J. REMOVE AND SALVAGE ALL STREET SIGNS, POSTS AND LIGHT POLES WITHIN THE WORK AREA AND DELIVER THEM TO PLANT OPERATIONS DEPARTMENT (603) 589—2780 FOR REUSE, INSTALL NEW SIGNS ON NEW POSTS AS SPECIFIED HEREON.
- THE CONTRACTOR SHALL CONTROL ALL DUST GENERATED DURING THE REMOVAL PHASE AND CONSTRUCTION PHASE SO THAT NO DUST LEAVES THE SITE.
- ANY MONUMENTS DISTURBED DURING CONSTRUCTION SHALL BE RESET BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR AT THE SITE CONTRACTORS EXPENSE.
- EXISTING SEPTIC SYSTEM IS A POSSIBILITY. REMOVAL OF SEPTIC SYSTEM TO BE HANDLED PROPERLY.

LEGEND

STONE BOUND FOUND UTILITY POLE

GAS VALVE

M	WATER VALVE
#	HYDRANT
0	WELL
\$	SEWER MANHOLE
0	DRAWAGE MANHOLE
D	CATCH BASIN
	ABUTTER LINE
	PROPERTY LINE
	WETLAND
	WIRE FENCE
OHU	OVERHEAD UTILITIES
	GAS LINE
	WATER LINE
—ss	SEWER LINE
=======	DRAINAGE LINE
$\cdots \cdots$	TREELINE
500000000000000000000000000000000000000	RETAINING WALL
	EDGE OF PAVEMENT
	BUILDING SETBACK
	EXISTING EASEMENT

REMOVALS/DEMOLITION PLAN

MAP 165; LOTS 145 & 146 66 & 68 DERRY STREET HUDSON, NEW HAMPSHIRE HILLSBOROUGH COUNTY

DERRY STREET RETAIL

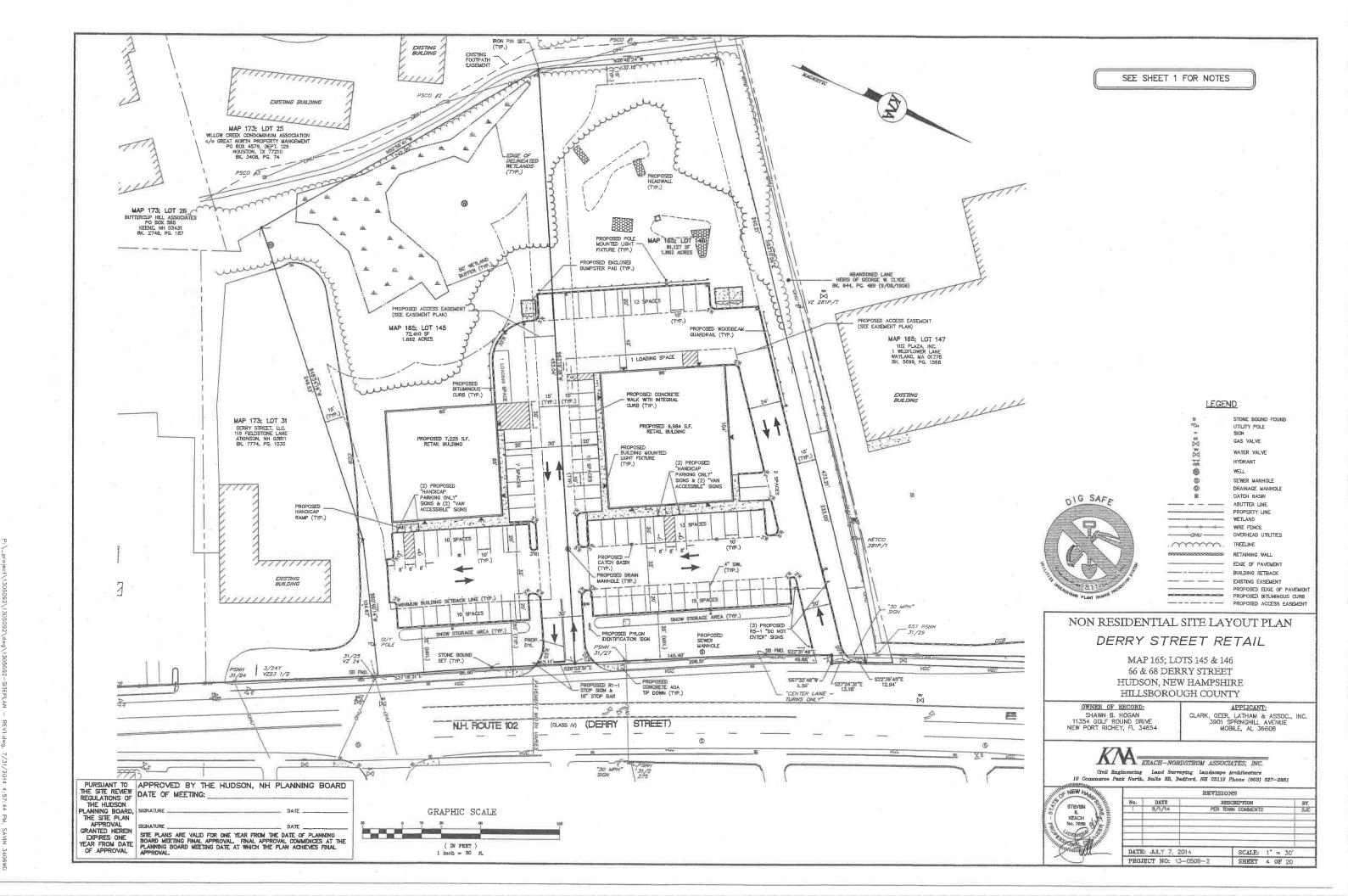
OWNER OF RECORD: SHAWN B. HOGAN 11354 GOLF ROUND DRIVE NEW PORT RICHEY, FL 34654

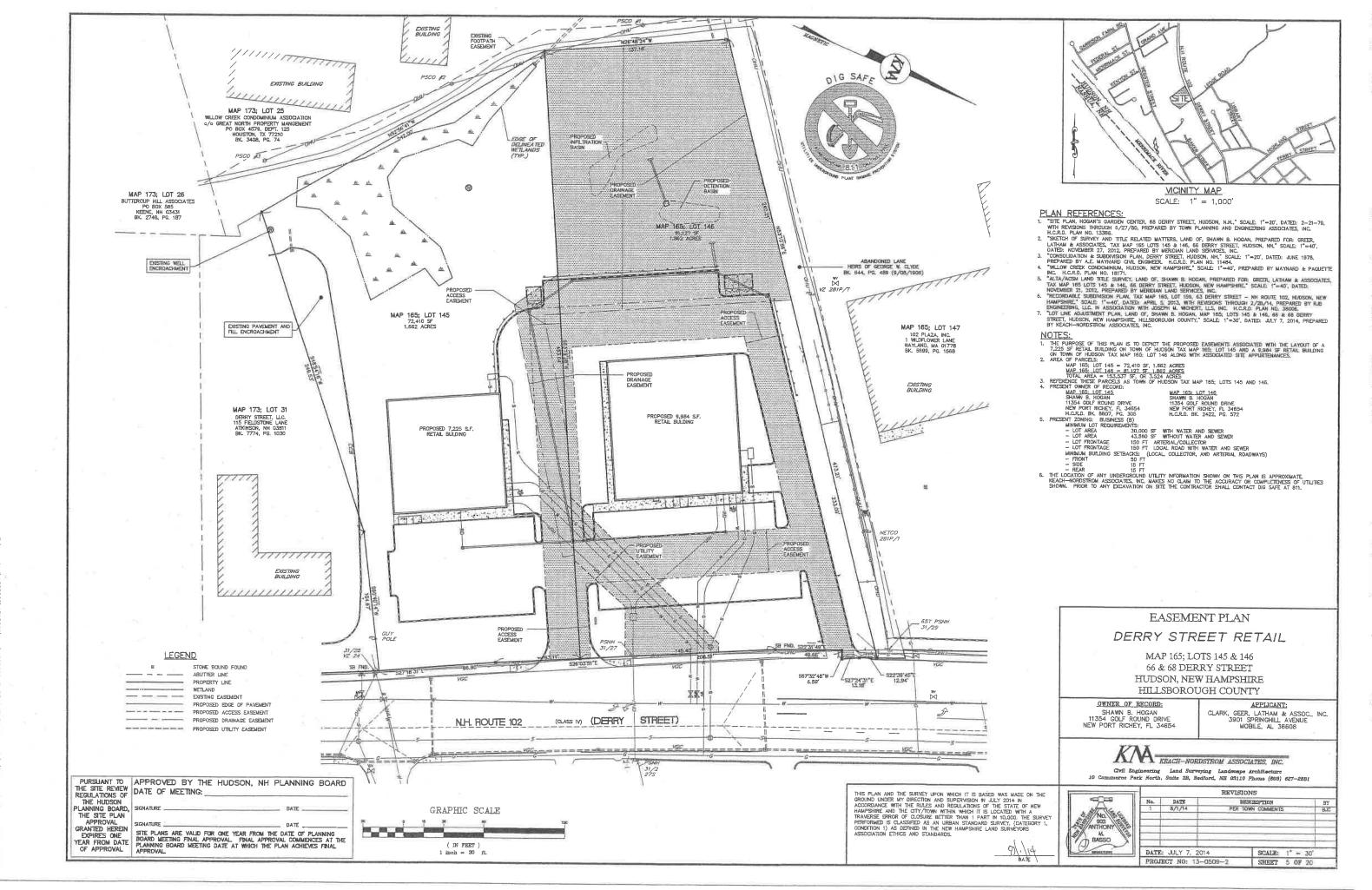
APPLICANT: CLARK, GEER, LATHAM & ASSOC., INC. 3901 SPRINGHILL AVENUE MOBILE, AL 36608



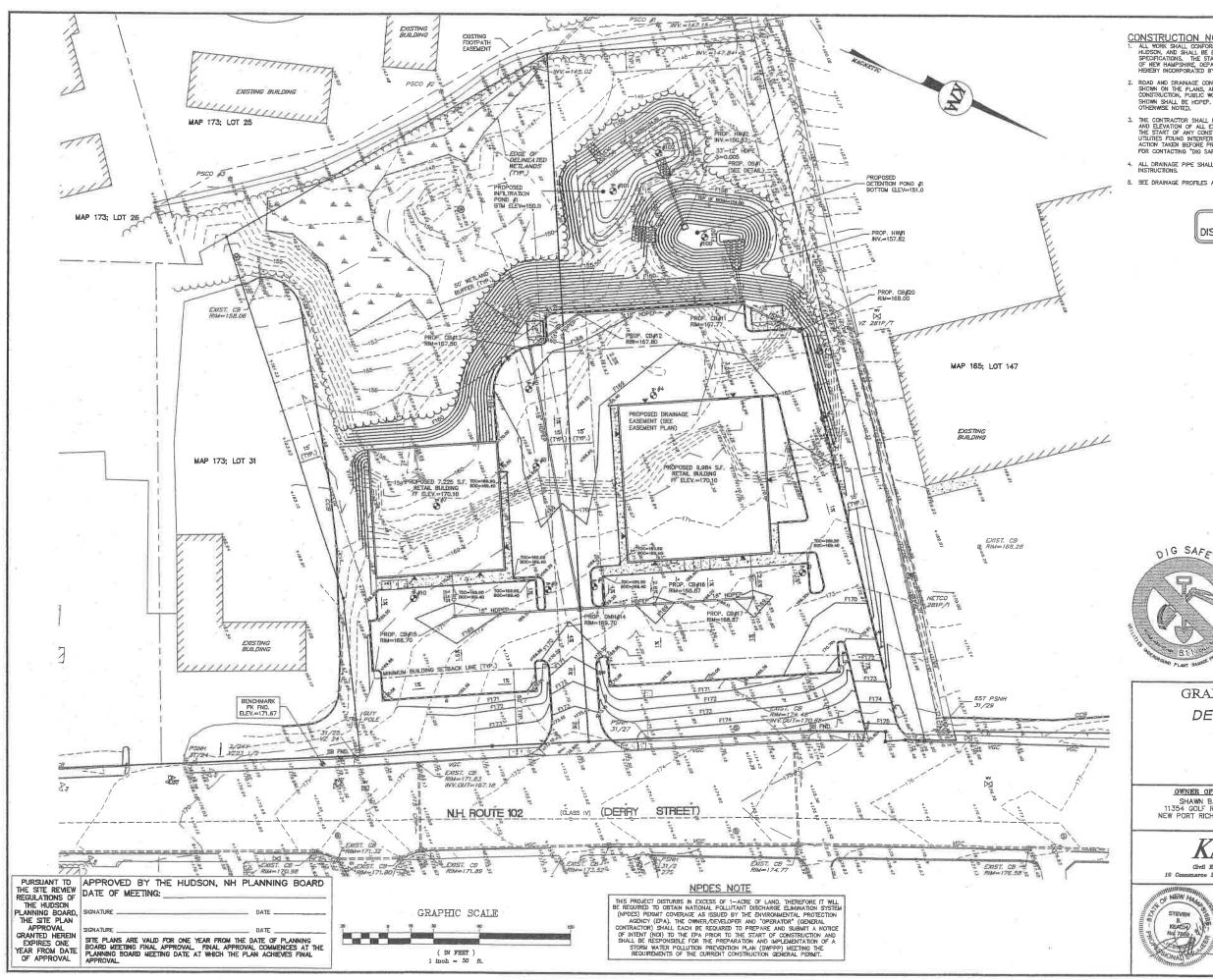
Civil Engineering Land Surveying Landscape Architecture 10 Commerce Park North, Suite 3B, Sedford, NH 03110 Phone (603) 627-2881

		REVISI	ONS		
No.	DATE	D	ESCRIPTION		BY
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70 / 8000					Ė
	: JULY 7, 2		SCALE	: 1" = 30	,
PROJ	ECT NO: 13	-0509-2	SHEET	3 OF 20	





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- CONSTRUCTION NOTES:

 1. ALL WORK SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE TOWN OF HUBSON, AND SHALL SEE BUILT IN A WORKMANLIKE MANNER IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION, APPROVED AND ADDITED 2010 ARE HEREBY MICORPORATIO BY REPERBENT AND ADDITED 2010 ARE
- ROAD AND DRAINAGE CONSTRUCTION SHALL CONFORM TO THE TYPICAL SECTIONS AND DETAILS SHOWN ON THE PLANS, AND SHALL MEET THE REQUIREMENTS AND SPECIFICATIONS FOR ROAD CONSTRUCTION, PUBLIC WORKS DEPARTMENT, HUDSON, NEW HAMPSHIRE. ALL DRAINAGE PIPES SHOWN SHALL BE HOPEP. CATCH BASINS SHALL BE TYPE B, AND HAVE 3" SUMPS UNLESS OTHERWISE NOTED.
- 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERBYING AND DETERMINING THE LOCATION, SZE AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION THE ENGINEES SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION, AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTRACTING "DIG SAFE" AT 811 AT LEAST 72 HOURS BEFORE DIGGING.
- ALL DRAINAGE PIPE SHALL BE INSTALLED FOLLOWING MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 5. SEE DRAINAGE PROFILES AND CONSTRUCTION DETAILS FOR SPECIFIC CONSTRUCTION INFORMATION.

LOAM & SEED ALL DISTURBED AREAS (TYP.)

LEGEND

STONE BOUND FOUND

UTILITY POLE

GAS VALVE WATER VALVE

HYDRANT SEWER MANHOLE DRAINAGE MANHOLE

(A)	CATCH BASIN
	ABUTTER LINE
	PROPERTY LINE
	WETLAND
0-0-	WIRE FENCE
	DRAINAGE LINE
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	TREELINE
	RETAINING WALL
	EDGE OF PAVEMENT
	5' CONTOUR
	1' CONTOUR
	BUILDING SETBACK
	EXISTING EASEMENT
-	PROPOSED EDGE OF PAVEMENT
-	PROPOSED BITUMINOUS CURB
	PROPOSED DRAINAGE LINE
	PROPOSED 1' CONTOUR

# PROPOSED DRAINAGE EASEMENT

# GRADING AND DRAINAGE PLAN DERRY STREET RETAIL

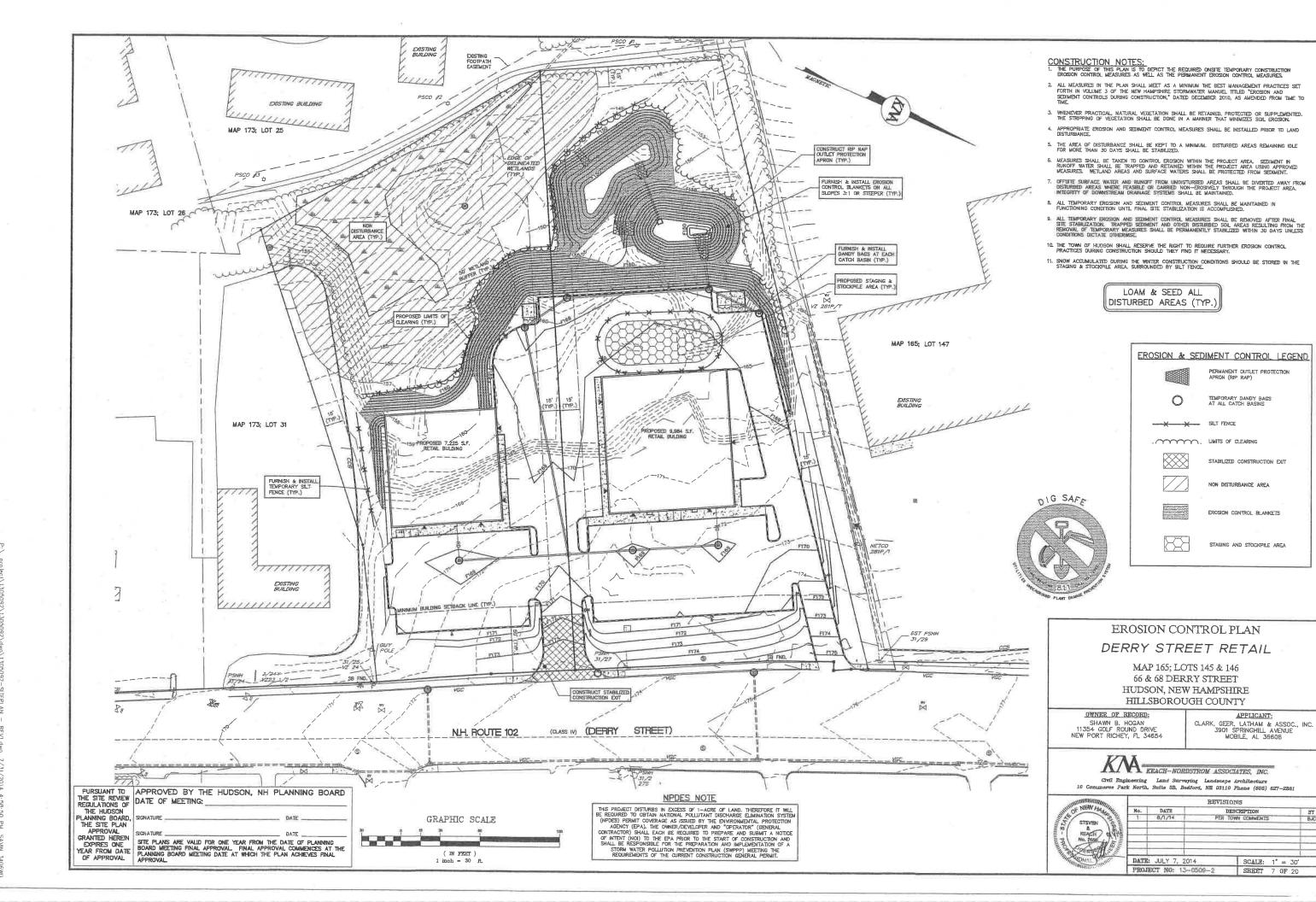
MAP 165; LOTS 145 & 146 66 & 68 DERRY STREET HUDSON, NEW HAMPSHIRE HILLSBOROUGH COUNTY

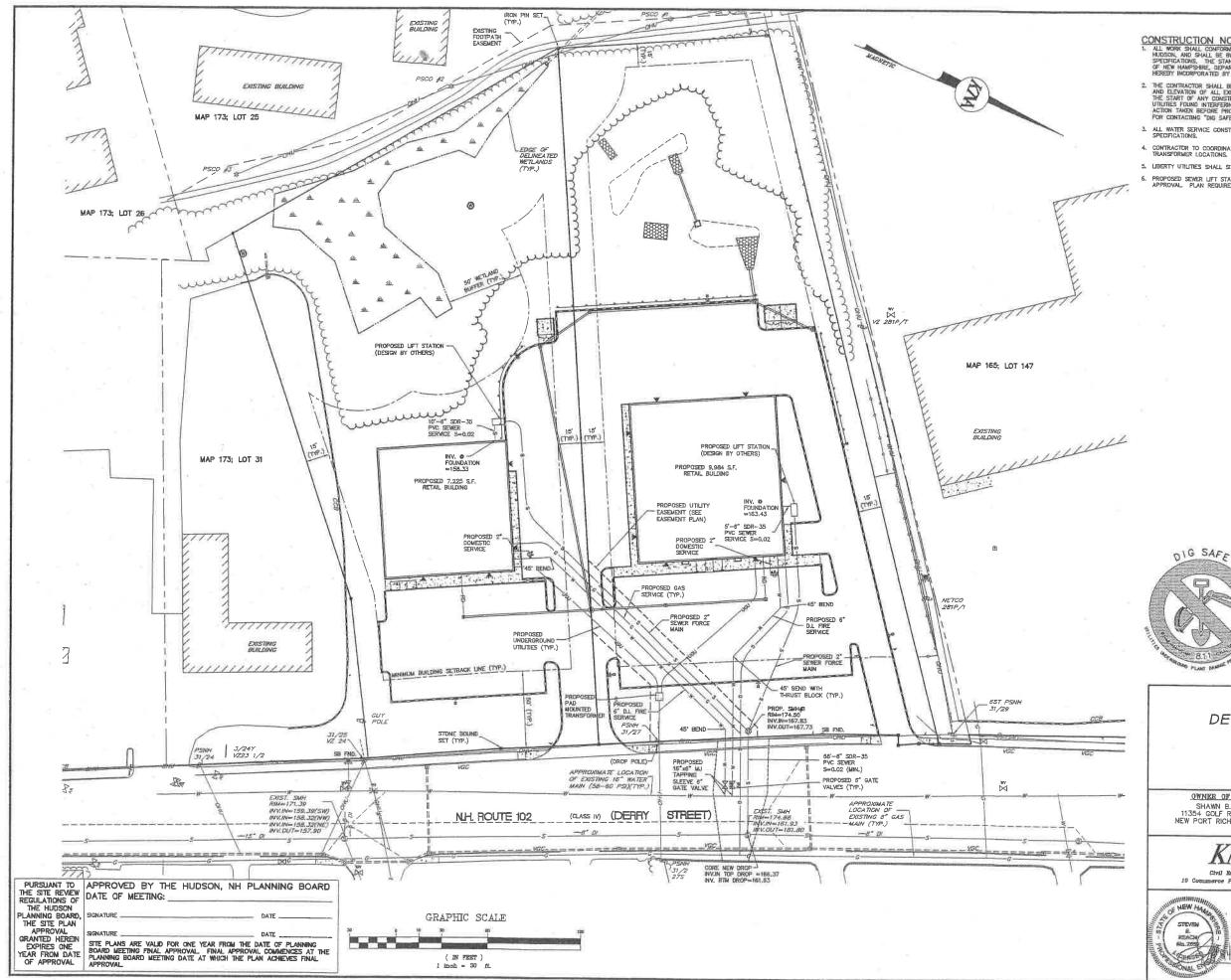
OWNER OF RECORD: SHAWN B. HOGAN 11354 GOLF ROUND DRIVE NEW PORT RICHEY, FL 34654

APPLICANT: CLARK, GEER, LATHAM & ASSOC., INC. 3901 SPRINGHILL AVENUE MOBILE, AL 36608



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NEW Harm		8/1/14	PER TO	WN COMMENT	S	BJA
No 7869						
WAL	DATE	: JULY 7, :	2014	SCALE:	1" = 30'	
dirina.	PROJ	ECT NO: 1.	3-0509-2	SHEET	6 OF 20	





CONSTRUCTION NOTES:

1. ALL WORK SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE TOWN OF HUDSON, AND SHALL BE BUILT IN A WORKMANLIKE MANNER IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE STANDARD SPECIFICATIONS FOR ROLD AND BRIDGE CONSTRUCTION, STATE OF HER MAINFORTHE DEPARTMENT OF TRANSPORTATION, APPROVED AND ADDITED 2010 ARE HEREBY INCORPORATED BY REFERENCY.

- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND SESSAIDS OF ALL EMISTING UNLITES, SHOWN OR NOT SHOWN ON THESE PLANS, FRICK TO THE START OF ANY CONSTRUCTION THE ENONERS SHALL BE NOTIFIED IN WITHING OF ANY UTILITIES FOUND INTERFERINS WITH THE PROPOSED CONSTRUCTION, AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING "DIG SAFE" AT 811 AT LEAST 72 HOURS BEFORE DIGGING.
- 3. ALL WATER SERVICE CONSTRUCTION SHALL CONFORM WITH HUDSON WATER UTILITY CONSTRUCTION SPECIFICATIONS.
- 4. CONTRACTOR TO COORDINATE WITH PSNH AND FAIRPOINT REGARDING DROP POLE AND TRANSFORMER LOCATIONS.
- 5. LIBERTY UTILITIES SHALL SIZE AND INSTALL PROPOSED GAS SERVICES.
- PROPOSED SEWER LIFT STATIONS AND FORCE MAINS WILL BE DESIGNED FOLLOWING SITE PLAN APPROVAL. PLAN REQUIRES NHOES WASTE WATER CONNECTION PERMIT PRIOR TO CONSTRUCTION.

# LEGEND

STONE BOUND FOUND UTILITY POLE

GAS VALVE WATER VALVE HYDRANT

SEWER MANHOLE

DRAINAGE MANHOLE CATCH BASIN

WELL

	ABUTTER LINE
	PROPERTY LINE
	WETLAND
0 0 0	WIRE FENCE
они	OVERHEAD UTILITIES
	GAS LINE
ww	WATER LINE
SS	SEWER LINE
=======	DRAINAGE LINE
. ~~~~~	TREELINE
200000000000000000000000000000000000000	RETAINING WALL
	EDGE OF PAVEMENT
	BUILDING SETBACK
	EXISTING EASEMENT
-	PROPOSED EDGE OF PAVEMENT
-	PROPOSED BITUMINOUS CURB
	PROPOSED DRAINAGE LINE
OHU	PROPOSED OVERHEAD UTILITIES
	PROPOSED UNDERGROUND UTILITIE
	PROPOSED GAS LINE
——W———W——	PROPOSED WATER LINE
s	PROPOSED SEWER LINE

----- PROPOSED UTILITY EASEMENT

# UTILITY PLAN DERRY STREET RETAIL

MAP 165; LOTS 145 & 146 66 & 68 DERRY STREET HUDSON, NEW HAMPSHIRE HILLSBOROUGH COUNTY

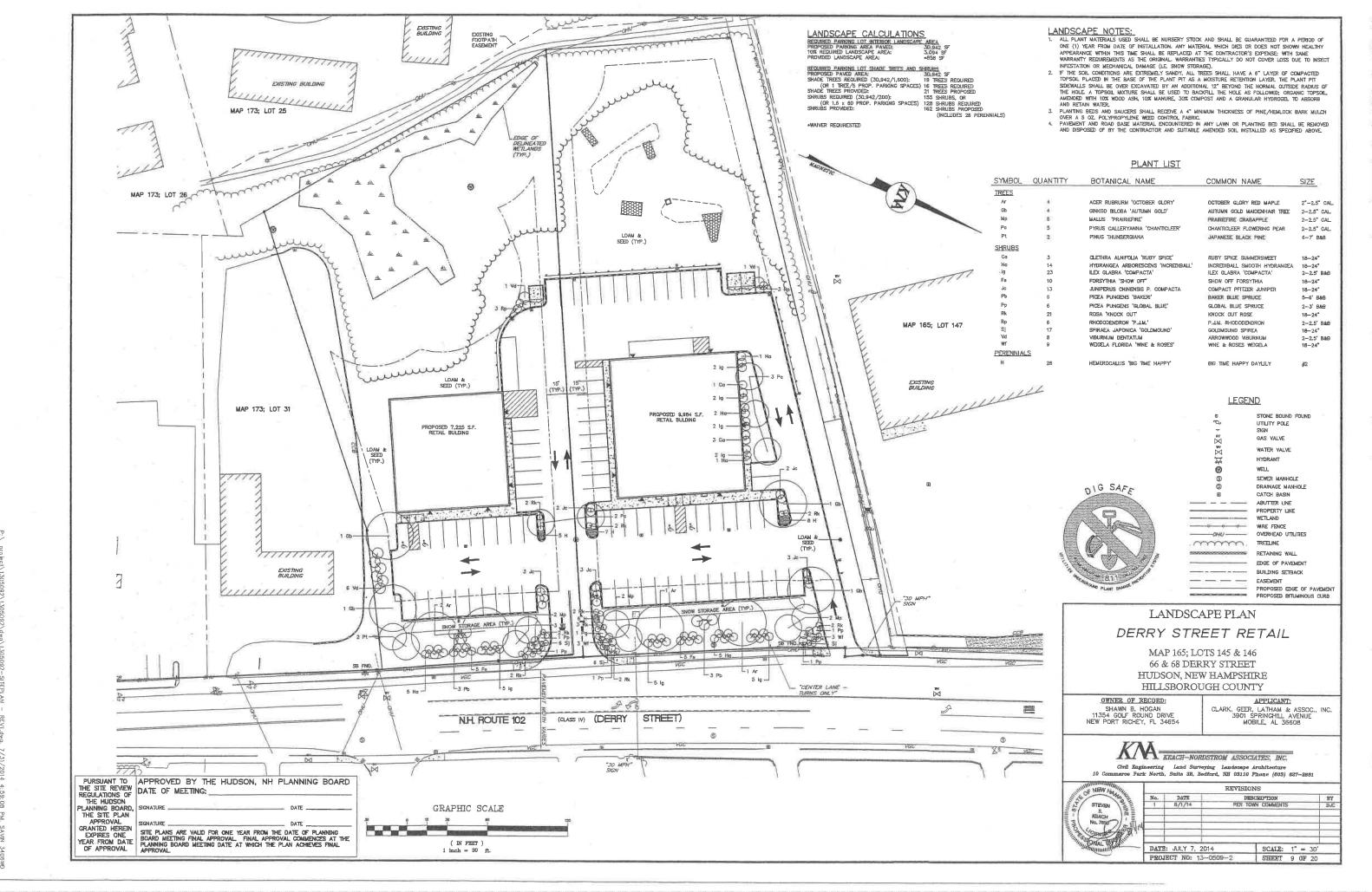
OWNER OF RECORD: SHAWN B. HOGAN 11354 GOLF ROUND DRIVE NEW PORT RICHEY, FL 34654

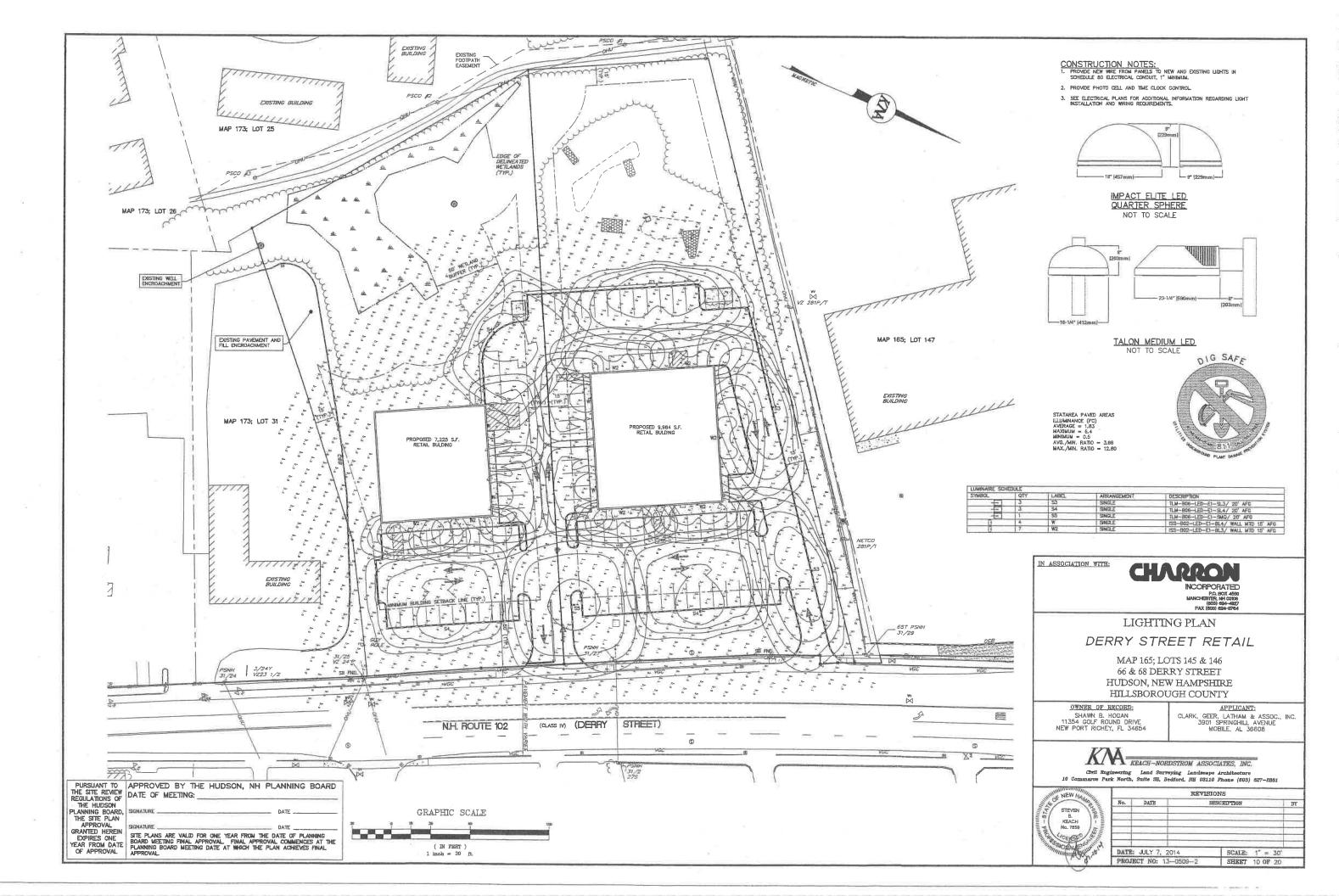
APPLICANT: CLARK, GEER, LATHAM & ASSOC., INC. 3901 SPRINGHILL AVENUE MOBILE, AL 36608



Civil Engineering Land Surveying Landscape Architecture 10 Commerce Park North, Suite 3B, Bedford, NH 08110 Phone (803) 827-2881

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No.	DATE	: JULY 7,	2014	SCALE: 1" = 30'	
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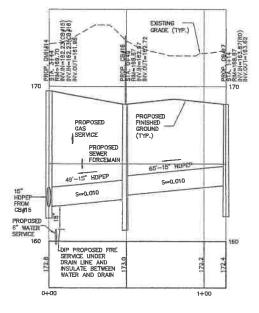
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DRAINAGE PROFILE (PROP. CB#11 TO PROP. CB#20)

SCALE: 1" = 30' (HORIZ.)

1" = 3' (VERT.)

DIG SAFE



DRAINAGE PROFILE (PROP. DMH#14 TO PROP. CB#17)

SCALE: 1" = 30' (HORIZ.)

1" = 3' (VERT.)

# DRAINAGE PROFILES DERRY STREET RETAIL

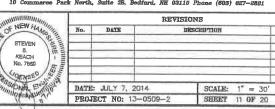
MAP 165; LOTS 145 & 146 66 & 68 DERRY STREET HUDSON, NEW HAMPSHIRE

HILLSBOROUGH COUNTY

OWNER OF RECORD: SHAWN B. HOGAN 11354 GOLF ROUND DRIVE NEW PORT RICHEY, FL 34654

APPLICANT: CLARK, GEER, LATHAM & ASSOC., INC. 3901 SPRINGHILL AVENUE MOBILE, AL 36608

KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
0 Commerce Park North, Suite 38, Sectors, No. 03110 Phase (603) 627-2881



PURSUANT TO
THE SITE REVIEW
REGALATIONS OF
THE HUDSON
PLANNING BOARD,
THE SITE PLAN
APPROVAL
GRANTED HEREIN
EXCPIRES ONE
YEAR FROM DATE
OF APPROVAL
OF APPROVAL
APPROVAL
BOARD MEETING:

DATE

DATE

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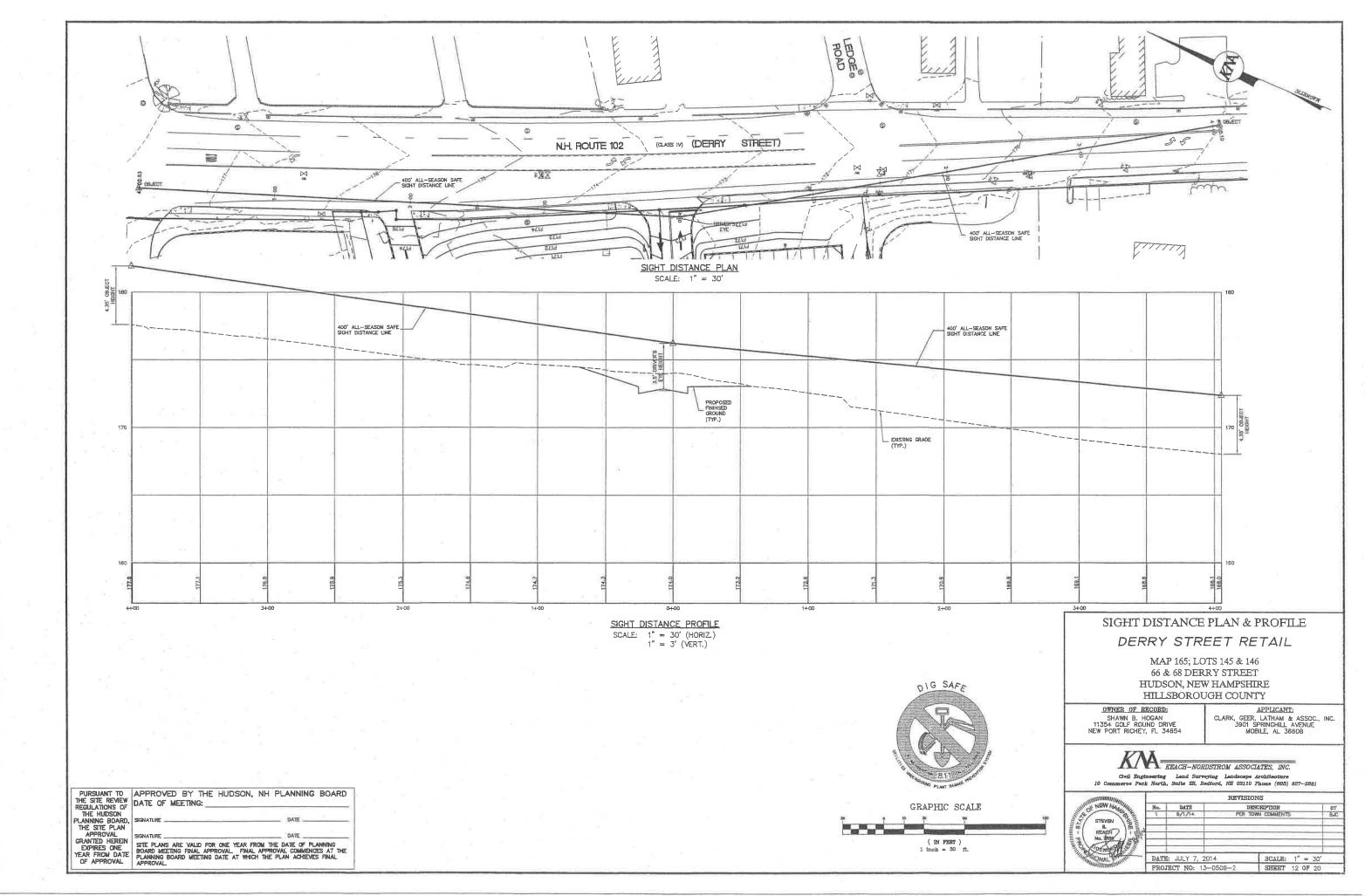
SIGNATURE

PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING
BOARD MEETING FINAL APPROVAL

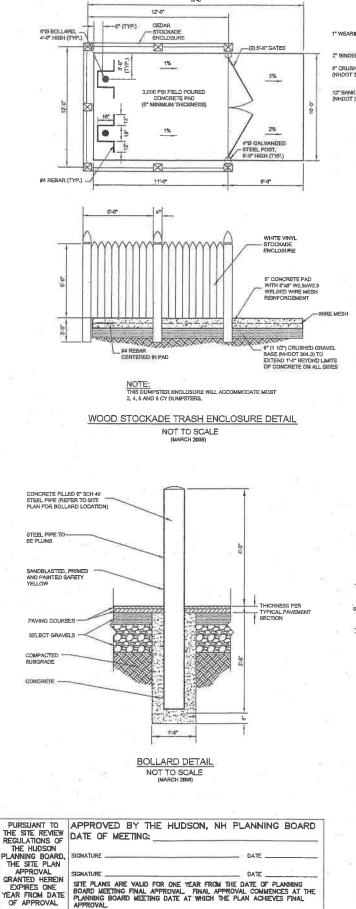
APPROVAL

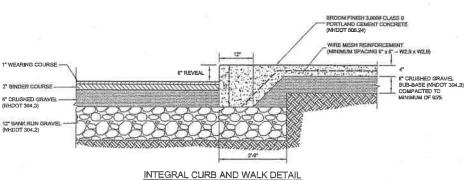
APPROVAL





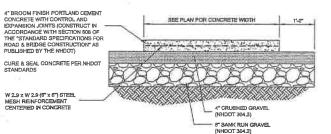
P:_project\1305092\1305092\dwg\1305092-SITEPLAN - REVIdwg, 7/31/2014 4:59:36 PM, SAVIN 3406W





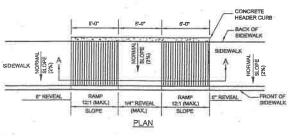
NOT TO SCALE

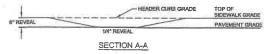
# 1" WEARING COURSE : (3/8" AGGREGATE) Z' BINDER COURS 12" BANK RUN GRAVEL (NHDOT 304.2) BITUMINOUS CURB TYPE B DETAIL



NOT TO SCALE

# CONCRETE WALK DETAIL NOT TO SCALE





- 2 A BROOM FINISH TRANSVERSE TO THE SLOPE OF THE RAMP SHALL BE USED
- 3. MAINTAIN THE NORMAL PAVEMENT PROFILE THROUGHOUT THE RAMP AREA.
- 4. MAINTAIN A MAXIMUM 1/4" OF CURB REVEAL AT THE RAMP, SEE SECTION A-A

# SIDEWALK RAMP WITH DETECTABLE WARNING SURFACE

NOT TO SCALE (JUNE 2012)

TRAFFIC SIGN NOTES: ALL TRAFFIC SIGN FACES AND SHAPES SHALL CONFORM WITH THE MUTCO.

ALL SIGN POST MOUNTS SHALL CONFORM WITH THE AASHTO AND NHDOT SPECIFICATIONS.

30" x 30"

STOP SIGN DETAIL NOT TO SCALE

> DO NOT ENTER

POST SECTION POST MOUNTING

NOTE: POST SHALL CONFORM TO NHDOT 615.2.5.3

STEEL SIGN POST DETAIL NOT TO SCALE



Ė ONLY VAN VAN ACCESSIBLE HANDICAP

HANDICAP PARKING SIGN DETAIL

PARKING SIGN DETAIL

RESERVED PARKING

NOT TO SCALE

NOT TO SCALE (MARCH 2008)

8 VARIES



HANDICAP STRIPING DETAIL

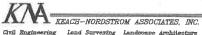
NOT TO SCALE

# CONSTRUCTION DETAILS DERRY STREET RETAIL

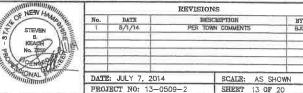
MAP 165; LOTS 145 & 146 66 & 68 DERRY STREET HUDSON, NEW HAMPSHIRE HILLSBOROUGH COUNTY

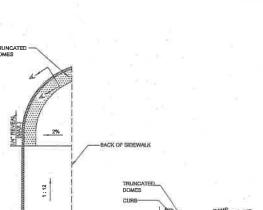
OWNER OF RECORD: SHAWN B. HOGAN 11354 GOLF ROUND DRIVE NEW PORT RICHEY, FL 34654

APPLICANT: CLARK, GEER, LATHAM & ASSOC., INC. 3901 SPRINGHILL AVENUE MOBILE, AL 36608



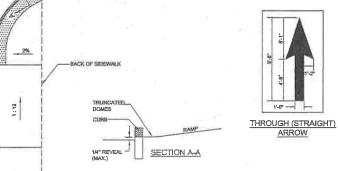
Civil Engineering Land Surveying Landscape Architecture 10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881





DRIVEWAY AND PARKING LOT SECTION

NOT TO SCALE



3" HOT BITUMINOUS PAVEMENT (NHDOT 403.11) 1" THICK 3/8" AGGREGATE WEARING COURSE 2" THICK 3/4" AGGREGATE BINDER COURSE

STRIPING NOTES:

ALL PAVEMENT MARKINGS SHALL BE IN CONFORMANCE WITH THESE STANDARDS AND THE CURRENT EDITION OF MUTCD.

THE WET FILM THICKNESS OF A PAINTED LINE SHALL BE A MINIMUM OF 15 MLS THROUGHOUT THE ENTIRE WIDTH AND LENGTH OF LINE SPECIFIED.

4. OVERSPRAY SHALL BE KEPT TO AN ABSOLUTE MINIMUM

STOP BAR

- NOTES:

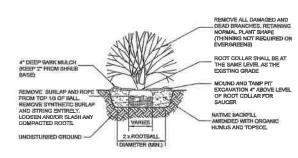
  A BROOM FINISH TRANSVERSE TO THE SLOPE OF THE RAMP SHALL SE USED ON PORTLAND CEMENT CONCRETE RAMPS.
- 2 MAINTAIN THE NORMAL GUITTER PROFILE THROUGHOUT THE RAMP AREA
- 1. INTERCEPT DRAINAGE ALONG THE CURB IN ADVANCE OF THE RAMP.
- 4. MAINTAIN A MAXIMUM 1/4" OF CURB REVEAL AT THE RAMP, SEE SECTION A-A.

# CORNER SIDEWALK RAMP DETAIL

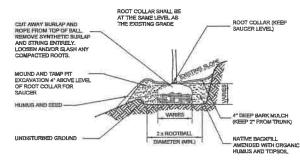
NOT TO SCALE

NOTE:
GUYING AND STAKING TO BE DETERMINED IN THE FIELD BY THE LANDSCAPE ARCHITECT FIELD CONDITIONS AS WELL AS PLAN GUY MATÉRIAL AT TREE (HALF UP TREE OR TO FIRST BRANCH, WHICHEVER IS LOWER) WEVER CUT LEADER 4'x12" PLASTIC FLAG SECURED VERTICAL STAKES 4" DEEP BARK MULCH IKEEP 2" FROM TRUNK CUT AWAY BURLAP AND ROPE FROM TOP OF BALL REMOVE SYNTHETIC BURLAP AND STRING ENTIRELY. HUMUS AND TOPSOE

DECIDUOUS TREE PLANTING DETAIL



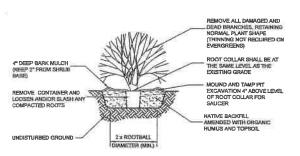
# BALLED & BURLAP SHRUB PLANTING DETAIL NOT TO SCALE



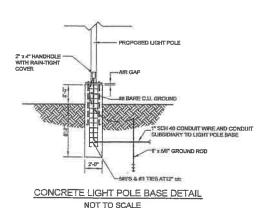
TYPICAL PLANTING PIT ON SLOPE 4:1 OR GREATER NOT TO SCALE

PURSUANT TO APPROVED BY THE HUDSON, NH PLANNING BOARD THE SITE REVIEW DATE OF MEETING: THE HUDSON
PLANNING BOARD,
THE SITE PLAN SIGNATURE ___ GRANTED HEREIN GRANTED HEREIN
EXPIRES ONE
YEAR FROM DATE
OF APPROVAL

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# CONTAINER SHRUB PLANTING DETAIL NOT TO SCALE



# TURF ESTABLISHMENT SCHEDULE

PURPOSE:
TO ESTABLISH AND MAINTAIN PERMANENT AND TEMPORARY TURF AREAS, RESTORE
GREWITH TO EXISTING TURF AREAS DISTURBED DURING CONSTRUCTION AND CONTROL SOIL

PREPARATION AND EXECUTION:

1. RAKE THE SUBGRADE OF ALL AREAS TO BE LOAMED AND SEEDED TO REMOVE RUBBISH, STICKS, ROOTS AND STORKS LARGER THAN 1 INCH.

- 2. PLACE LOAM OVER AREAS TO BE SEEDED AND SPREAD.
- FINE GRADE SURFACE AND SUPPLEMENT WITH SUITABLE LOAM WHERE NEEDED TO CREATE A UNIFORM SURFACE ACCORDING TO THE FINISH GRADES MONCATED, TOP AND BOTTOM OF SLOPES SHALL BE ROUNDED. NO LOAM SHALL BE SPREAD IF THE SUBGRADE IS EXCESSIVELY WET OR PROZEM.
- APPLY LIME EVENLY OVER LOAM SURFACE AND THOROUGHLY INCORPORATE LIME INTO THE LOAM BY HEAVY RAKING TO AT LEAST ONE-HALF THE DEPTH OF THE LOAM.
- 5. APPLY FERTILIZER AND MIX WITH THE UPPER 2 INCHES OF LOAM.
- 6. DETERMINE APPROPRIATE MOTURE FOR AREA TO BE SEEDED BASED ON EXAMINATION OF PROJECT PLANS. UNIFORMLY SPREAD THE SEED BY BROADCASTING OR HYDROSEEDING. FEROADCASTING, LIGHTLY PARKE INTO THE PREPARED SURFACE AND ROLL. F. HYDROSEEDING, USE 4 TIMES THE RECOMMENDED RATE OF INCOLLANT. AFTER SEED IS SPREAD, WATER THROODIGHT WITH A FIRE SPRAY.
- SEEDING FOR PERMANENT COVER SHALL OCCUR BETWEEN SEPTEMBER 15 AND OCTOBER 15 AND BETWEEN APRIL 15 AND JUNE 15. SEEDING SHALL NOT BE DONE DURING WINDY WEATHER, WHEN THE GROUND IS FROZEN OR EXCESSIVELY WET OR OTHERWISE UNTILABLE.
- WITHIN 24 HOURS AFTER SEEDING OPERATION, UNIFORMLY MULCH THE AREA WITH HAY, ANCHOR MALCH ON ALL SLOPES EXCEEDING 3:1 USING MULCH NETTING INSTALLED IN ACCORDANCE WITH THE MANUFACTURER.
- PROTECT AND PREVENT AGAINST WASHOUTS, ANY WASHOUTS WHICH OCCUR SHALL BE PROMPTLY REGRADED AND RESERVED.
- 10. WHEN IT IS IMPRACTICAL TO ESTABLISH PERMANENT GROWTH ON DISTURBED EARTH BY WHICH IT IS IMPROCIFIED. TO ESTABLISH PERMANDENT GROWN HOW DISTURBED EAR OCTOBER 15, A TEMPORARY SEED MIXTURE SHALL BE USED. WHEN TEMPORARY SEEDING CANNOT ESTABLISH VISIBLE GROWTH, THE DISTURBED AREA SHALL BE COVERED WITH SIX INCHES OF MULCH FOR THE WINTER.

MAINTENANCE:
ALL SEDER AREAS SHALL BE KEPT WATERED AND IN GOOD CONDITION. RESIDED AS NECESSARY TO ESTABLISH HEALTHY UNIFORM GROWTH OVER THE ENTIRE SEEDED AREA. MAINTAIN SEZDED AREAS IN AN APPROVED CONDITION UNTIL FINAL ACCEPTANCE. MAINTENANCE SHALL INCLUDE REPAIRS FOR DAMAGE CAUSED BY EROSION.

- APPLICATION RATES:
  1. LOAM SHALL BE APPLIED AT A MINIMUM COMPACTED THICKNESS OF 4 INCHES.
- 2 LIME SHALL BE APPLIED AT A RATE OF 75 TO 100 POLINDS PER 1 000 S F
- 3. FERTILIZER SHALL BE APPLIED AT A RATE OF 30 POUNDS PER 1,000 S.F.
- SEED MIXTURE FOR LAWN AREAS SHALL BE APPLIED AT A RATE OF AT LEAST 80 POUNDS PER ACRE OR 2 POUNDS PER 1,000 S.F.
- 5. TEMPORARY SEED MIXTURE SHALL BE APPLIED AT A RATE OF 2 POUNDS PER 1,000 S.F.
- SEED MIXTURE FOR SLOPE AREAS SHALL BE APPLIED AT A RATE OF 80 POUNDS PER ACRE OR 2 POUNDS PER 1,000 S.F.
- SEED MIXTURE FOR STORMWATER MANAGEMENT AREAS SHALL BE APPLIED AT A RATE OF 70 POUNDS PER ACRE OR 1.5 POUNDS PER 1,000 S.F.
- 8. MULCH SHALL BE APPLIED AT A RATE OF 90 POUNDS PER 1,000 S.F.

MATERIALS:

1. LOAM USED FOR TOPSOL SHALL BE FRIBILE, FERTILE, HATURAL FREE OF PAINING LOAM, FREE OF ROOTS, GRASS, STICKS, WEEDS, CLAY, SOD LUMPS, DEBRIS AND STONES LARGER, THAN 1 INCH IN ANY DIMENSION. SOR, SHALL, MOT SE EXCESSIVELY ACID OR ALKALM-AND CONTAIN NOT TODIC MATERIALS.

- 3. FERTILIZER SHALL BE 10-20-20 COMMERCIAL GRADE.
- SEED MIXTURE FOR LAWN AREAS SHALL BE 99% PURE LIVE SEED AND CONSIST OF THE

25% CREEPING RED FESCUE 25% KENTUCKY BLUEGRASS 25% REDTOP 25% MANHATTAN PERENNIAL RYEGRASS

TEMPORARY SEEDING MIXTURE SHALL BE AN APPROVED CONSERVATION MIX OR CONSIST OF THE POLLOWING:

15% BLACKWELL OR SHELTER SWITCHGRASS 30% NIAGRA OR KAW BIG BLIJESTEM 30% CAMPER OR BLAZE LITTLESTEM 16% NE.27 OR BLAZE SAND LOVEGRASS 10% VIKING BIROSFOOT TREFOIL

INOCULLIM SPECIFIC TO BIRDSFOOT TREFOIL MUST BE USED WITH THIS MIXTURE.
#F SEEDING BY HAND, A STICKING AGENT SHALL BE USED. #F SEEDING WITH A
HYDROSEEDER, USE FOUR TIMES THE RECOMMENDED AMOUNT OF INOCULLIM.

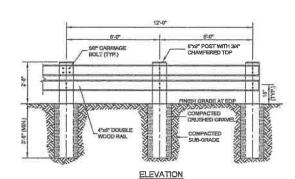
SEED MIXTURE FOR SLOPE AREAS SHALL BE 99% PURE LIVE SEED AND SHALL CONSIST OF THE FOLLOWING:

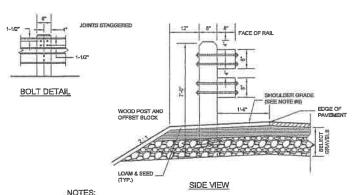
50% CREEPING RED FESCUE 40% PERENNIAL RYE GRASS 15% REDTOP 15% BIRDSFOOT TREFOIL

19% BUTLISHOOT TREFOIL
"IN ADDITION TO THE MIX SPECIFIED ABOVE, GROWN VETCH SHALL BE USED ON
ALL SLOPES STEEPER THAN 3:1. CROWN VETCH SHALL BE APPLIED AT A RATE OF
10 POUNDS PER ACRE AND INOCULUM SPECIFIC TO CROWN VETCH MUST BE
USED.

25% CREEPING HED FESCUE 15% SWITCH GRASS 15% FOX SEDGE 15% CREEPING BENTGRASS 10% PLATPEA 20% WILDFLOWER VARIETY

HAY USED FOR MULCH SHALL CONSIST OF MOWED AND PROPERLY CURED GRASS OR LEGUME MOWINGS, FREE FROM WEEDS, TWIGS, DEBRIS OR OTHER DELETERIOUS MATERIAL AND ROT OR MOLD.





ALL TIMBERS SHALL BE PRESSURE TREATED.

2. PAY LIMIT = PER LINEAR FOOT INCLUDING END SECTION. 3. ALL HARDWARE SHALL BE HOT DIPPED GALVANIZED.

WOOD BEAM GUARDRAIL NOT TO SCALE

# CONSTRUCTION DETAILS DERRY STREET RETAIL

MAP 165; LOTS 145 & 146 66 & 68 DERRY STREET HUDSON, NEW HAMPSHIRE HILLSBOROUGH COUNTY

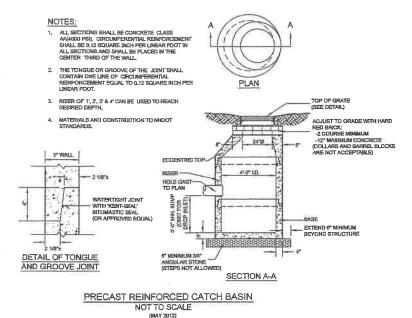
OWNER OF RECORD: SHAWN B. HOGAN 11354 GOLF ROUND DRIVE NEW PORT RICHEY, FL 34654

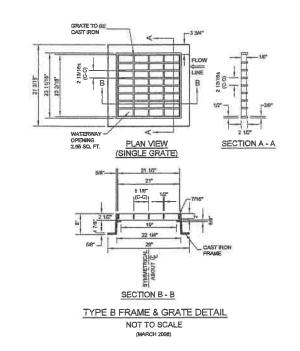
APPLICANT: CLARK, GEER, LATHAM & ASSOC., INC. 3901 SPRINGHILL AVENUE MOBILE, AL 36608

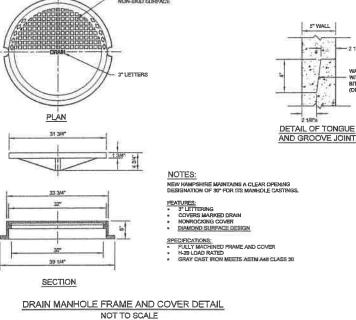
KA REACH-NORDSTROM ASSOCIATES, INC. Civil Engineering Land Surveying Landscape Architecture 10 Commerce Park North, Suite 3B, Sedford, NE 03110 Phone (803) 627-2881



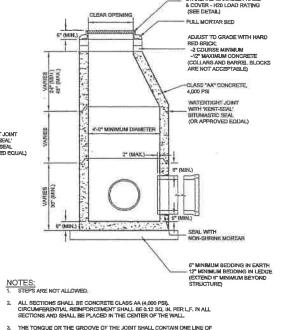
		REVISI	ONS	
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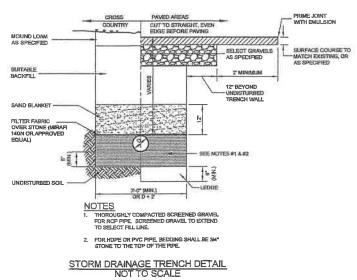
"L" HEADWALL

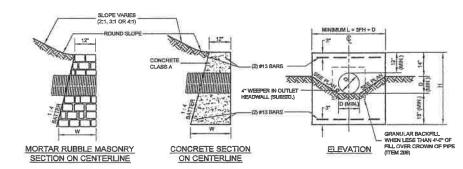


THE TONGUE OR THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMPERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER L.F.

4. MATERIALS AND CONSTRUCTION TO NHDOT STANDARDS.

PRECAST REINFORCED DRAIN MANHOLE DETAIL NOT TO SCALE





NOTE:
DIMENSIONS SHOWN ARE TO PAYMENT
LINES. MORTAR RUBBLE MASONRY TO BE
STEPPED OUTSIDE PAYMENT LINES ON
SLOPING FACES.

IAMETER D (UNCH)	AREA OF PIPE (ST)	MASONRY PER FOOT DF WALL (CU. YD.)	MASONRY PER HOLE (CU. FT.)	MASONRY PER STANDARD HEADER (CU, YD.)	STEEL PER STANDARD HEADER (LB)	LENGTH OF BARS	PIPE EXC. 1' DEPTH 1' LENGTH (CU, YD.)	HEADER EXC PER HEADER 1' DEPTH (CU. YD.)	PER LINEAR POOT	HEADER LENGTH L	HEADER HEIGHT H	HEIGHT HEIGHT	BOTTOM OF HEADER W	MASONRY IN CORNER FRUGTRUM (CU. YU)	HEADER EXC. PER HEADER 1' DEPTH (CU. YD.)
12"	0.79	0.186	1,08	0.61	9	3'-2"	0,111	0.780	0.30	31-6"	34.6"	10"	11-10 1/2"	0.28	1,057
15"	1.23	0.202	1,73	0.85	11	3-10	0,120	0.947	0.35	4.6	3'-9"	1545	1411 1M*	0.31	1.232
10"	1.77	0.222	2.52	1.13	14	5-2	0,150	1,111	0.39	5-6"	4'-0"	T-C	2-0"	0.35	1.406
24"	3.74	0.260	4.71	1.78	20	7-2	0.745	1,451	0.48	7-6"	456	17-10*	2-1 1/2	0.42	1,776
30"	4.91	0.301	7.07	2.5h	25	9-2	0.165	1.610	0.65	9-6"	5'-0"	2.5	2-3"	0.01	2,184
36"	7.07	0.344	11,49	3.63	31	117-2"	0,222	2,187	0.85	11.8.	5'-6"	2'-10"	24 1/2	0.61	2.572
42"	9.62	0.389	16,24	4.65	36	13-2	0,250	2,581	1.07	13'-6"	5'-0"	3-6	7-67	6.72	3.000
40.	12.57	0.436	21.00	9,05	42	16-2	0.296	3,000	1,31	15'-6"	6'-6"	3'-10"	2-7 1/2	0.64	3.447
54"	15.90	0.488	25.63	7.44	47	57-2	0.333	3.432	1,58	17-61	7:0	4.6	2-V	0.00	3,81€
SC	19.63	0.538	36.62	9.13	53	19-2"	9,370	3.882	1.87	197-6"	7'-6"	4'-10"	Z-10 1/Z	1,12	4.401
68"	23.76	0.593	45.03	11.04	58	211-27	0,407	4,350	2.17	211-61	B-0*	(D-4"	3-0"	1,26	4.907
72	25.27	0.649	56.55	13,17	63	23/-2"	0.445	4,636	2.50	23'-6"	8'-6"	5010	3-11/2	1,46	5,433

MORTAR RUBBLE MASONRY AND CONCRETE HEADWALLS

NOT TO SCALE

# CONSTRUCTION DETAILS

DERRY STREET RETAIL

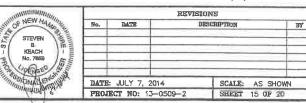
MAP 165; LOTS 145 & 146 66 & 68 DERRY STREET

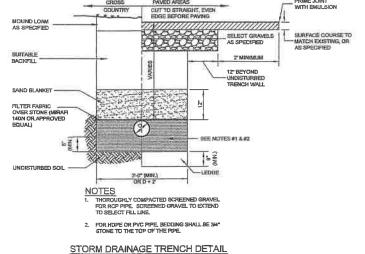
HUDSON, NEW HAMPSHIRE HILLSBOROUGH COUNTY

OWNER OF RECORD: SHAWN B, HOGAN
11354 GOLF ROUND DRIVE
NEW PORT RICHEY, FL 34654

APPLICANT: CLARK, GEER, LATHAM & ASSOC., INC. 3901 SPRINGHILL AVENUE MOBILE, AL 36608

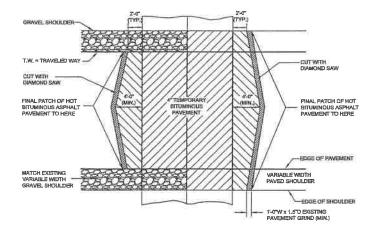




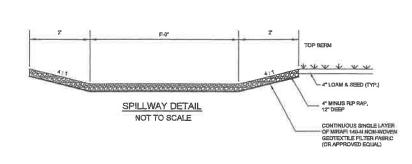


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PERMANENT PAVEMENT REPAIR



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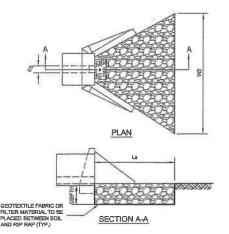
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# PIPE OUTLET TO FLAT AREA WITH NO DEFINED CHANNEL NOT TO SCALE

LOCATION	Les	W1	W2	d50	DEPTI
PROP. HWM	20*	೯	18	6"	15"
PROP. HWW2	12"	6"	6"	4"	12°

PERCENT OF WEIGHT	
SMALLER THAN THE GIVEN SIZE	SIZE OF STONE
100%	1.5 TO 2.0 d50
85%	1,3 TO 1.8 d50
50%	1_D TO 1.5 d50
1.5%	0.3 TO 0.5 d50

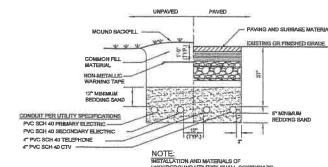
# CONSTRUCTION SPECIFICATIONS:

- I. THE SUBGRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC AND RIP RAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS
- GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE FLACEMENT OF THE ROCK RIP RAP, DAMAGED ARAS BY THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC, ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A BINNBULM OF 12 INCHES.
- 4. STONE FOR THE RIP RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SZEE.

### MAINTENANCE:

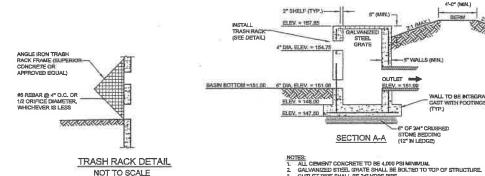
MAIN LENANCE:

THE OUTLET PROTECTION SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR RAIN EVENT. FITHE RIP RAP HAS BEEN DISPLACED, INDEPAINED, DO RAMAGED, IT SHOULD BE REPARTED BIMEDIATELY. THE CHANNEL BIMEDIATELY BE DOWNED WITH COUTLET SHOULD BE REPROSED TO SEE THAT ERGISIN IS NOT OCCUPRING. THE DOWNET BEAM CHANNEL SHOULD BE KEFT CLEAR OF OBSTRUCTIONS. SUCH AS FALLEN TREES, DERIES, AND SEDMENT THAT COULD CHANGE FLUX PATTERNS ANDIOR TALLIVATIES DEPTHS ON THE PIPES, REPARS MUST BE CAPRIED OUT MEMOLATELY TO AVOID ADDITIONAL DAMAGE TO THE OUTLET PROTECTION AFRON.



NOTE: INSTALLATION AND MATERIALS OF UNDERGROUND UTILITIES SHALL CONFORM TO LOCAL UTILITY COMPANY SPECIFICATIONS.

UTILITY TRENCH DETAIL NOT TO SCALE (MARCH 2008)



NOTES:

1. ALL CEMENT CONCRETE TO BE 4,000 PSI MINIMUM.

2. GALVANIZED STEEL GRATE SHALL BE BOLTED TO TOP OF STRUCTURE.

3. OUTLEF PIPE BALL BE 2/F HOPE PIPE.

4. ALL OPENINGS CAST IN AS REGUIRED.

**OUTLET STRUCTURE (OS) DETAIL** 

PLAN VIEW × OUTLET PIPE 0 ELEVATION

4'-0" (MIN.) PROPOSED GRADE LINE OUTLET CONTRO - ZONE II ZONE II-ZONE I 5 1 DAM № SEED - - DOST. GROUND HOPE OUTLET ACAM AND AND AND A REMOVE TOP SOIL AND/OR OTHER ORGANIC SOILS PRIOR TO PLACING FILL MATERIALS 4'-0" -CUT--OFF TRENCH (ZONE I MATERIAL) CUT 2'-0" MINIMUM INTO UNDISTURBED GROUND (USE SAME MATERIAL AS BERM)

ANTI SEEP COLLAR

### TYPICAL CROSS SECTION STORMWATER BASIN NOT TO SCALE

# STORMWATER BASIN CONSTRUCTION SEQUENCE

- STORMWATER BASIN CONSTRUCTION SEQUENCE

  1. CONTRACTOR TO NOTIFY DIG-SAFE 72 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.

  2. MINISTER OF MILE MINISTER OF CONSTRUCTION AND A CONSTRUCTION.

  2. MINISTER OF MILE MINISTER OF CONSTRUCTION AND A CONSTRUCTION.

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# MATERIAL TYPE/SPECIFICATIONS

ZONE I
WELL GRADED MIXTURE OF GRAVEL, SAND, SILT OR CLAY
WITH MAX. 6—NICH
SIZE STONE AND GEADATION AS INDICATED BELOW.
PLACE IN MAX. 12—INCH
THICK LIFTS TO BBX OF MAX. DRY DENSTY IN
ACCORDANCE WITH ASTM D1557.
SCARPY SURFACE PRIOR TO PLACING SUBSECUENT LIFT.
IN ADDITION, REMOVE ORGANIC SOLES.

SIEVE SIZE 6-INCH NO. 4 NO. 40 NO. 200 PERCENT BY WEIGHT PASSING 100 50 TO 100 30 TO 70 20 TO 40

ZONE II. DRAMAGE LAYER: PLACE IN MAX 12-INCH THICK LIFTS TO 95% OF MAX DRY DENSITY IN ACCORDANCE WITH ASTM 01557.

PERCENT BY WEIGHT PASSING SIEVE SIZE 0-12 (IN SAND PORTION ONLY)

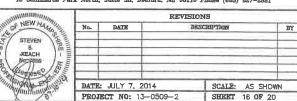
# CONSTRUCTION DETAILS DERRY STREET RETAIL

MAP 165; LOTS 145 & 146 66 & 68 DERRY STREET HUDSON, NEW HAMPSHIRE HILLSBOROUGH COUNTY

OWNER OF RECORD: SHAWN B. HOGAN 11354 GOLF ROUND DRIVE NEW PORT RICHEY, FL 34654

APPLICANT: CLARK, GEER, LATHAM & ASSOC., INC. 3901 SPRINGHILL AVENUE MOBILE, AL 36608

KA KEACH-NORDSTROM ASSOCIATES, INC. Civil Engineering Land Surveying Landscape Architecture numerow Park North, Suite SE, Bedford, NH 03110 Phone (603) 627-2881



SANITARY SEWER TRENCH DETAIL

ORDERED EXCAVATION OF UNSUITABLE MATERIAL BELOW GRADE. REFILL WITH BEDDING MATERIAL, ALSO SEE NOTE #7.

BEDDING: CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33-03 STONE SIZE NO. 67.

100% PASSING 1 INCH SCREEN 20 - 55% PASSING 3/6 INCH SCREEN

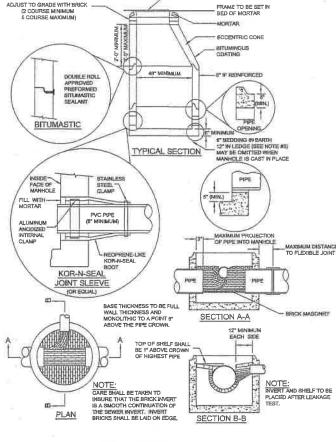
WHERE ORDERED BY THE ENGINEER TO STABILIZE THE TRENCH BASE, GRADED CRUSHED STONE 1/2 INCH TO 1-1/2 INCHES SHALL BE USED.

- 2. SAND BLANKET; GRADED CLEAN SAND FREE FROM ORGANIC MATTER. SO SAND BURNET: RANDED CLEAN SAND FREE FROM DREAMEN HER, SU THAT 100% PASSES A 12 INCH SIEVE AND NOT MORE THAN 15% WILL PASS A # 200 SIEVE. BLANKET MAY BE OMITTED FOR CAST IRON, DUCTILE IRON AND REINFORCED CONCRETE PIPE PROVIDED, HOWEVER, THAT NO STONE LARGER THAN 2 INCHES IS IN CONTACT WITH THE PIPE.
- 3. MIRAFI 140 N FILTER FABRIC, OR APPROVED EQUAL, SHALL BE INSTALLED
- SUITABLE MATERIAL: IN ROADS, ROAD SHOULDERS, WALKWAYS AND TRAVILED WAYS SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE MATURAL MATERIAL EXCANATED DURING THE COURSE OF CONSTRUCTION, BIT SHALL EXCLUDE DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOP SOIL, ALL WET OR ROFT MICK, PEAT OR CLAY, ALL EXCANATED LENGE MATERIAL, AND ALL ROCKS OVER 6 IN OCHS IN LARGEST DIMENSION, OR ANY MATERIAL WHICH, AS DETERMINED BY THE ENGINEER, WILL NOT PROVIDE SUPPLICATED SUPPORT OR MAINTAIN THE COMPLETED CONSTRUCTION N A
- IN CROSS COUNTRY CONSTRUCTION, SUITABLE MATERIAL SHALL BE AS DESCRIBED ABOVE, EXCEPT THAT THE ENGINEER MAY PERAIT THE USE OF TOP SOIL, LOAM, MUCK OR PEAT IF HEARIE IS SATISTIED THAT THE COMPLETED CONSTRUCTION WILL BE EYTRIELY STABLE AND PROVIDED THAT EASY ACCESS TO THE SENER WILL BE FRESENED FOR MAINTEANACE AND POSSIBLY RECONSTRUCTION, WHEN NECESSARY.
- BASE COURSE, IF ORDERED BY THE ENGINEER, SHALL MEET THE REQUIREMENTS OF DIVISION 300 OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE STATE OF NEW HAMPSHIRE, DEPARTMENT OF PUBLIC WORKS AND
- WOOD SHEETING, IF REQUIRED, WHERE PLACED ALONGSIDE THE PAPE, AND EXTENDING BREJON WIND-DIAMETER, SHALL BE CUT OFF AND LEFT IN PLACE TO AN BE EAVITON NOT LESS THAN 1 FOOT ABOVE THE TOP OF THE PRE-WHERE SHEETING IS ORDERED BY THE ENGINEER TO BE LEFT IN PLACE, IT SHALL BE CUT OFF AT LEAST 3 FEET BELOW FRISHED GRADE, BUT NOT LESS THAN 1 FOOT ABOVE THE TOP OF THE PIPE.
- 7. W = MAXIMUM ALLOWABLE TRENCH WIDTH TO A PLANE 12 INCHES ABOVE THE PIPE. FOR PIPES 15 INCHES NOMINAL DIAMETER OR LESS, W SHALL BE NO MORE THAN 35 INCHES, FOR PIPES GREATER THAN 15 INCHES NOMINAL DIAMETER. W SHALL BE 24 INCHES PLIES PIPE O.D. W SHALL ALSO BE THE PAYMENT WIDTH FOR LEDGE EXCAVATION AND FOR ORDERED EXCAVATION
- FOR CROSS COUNTRY CONSTRUCTION, BACKFILL OR FILL SHALL BE MOUNDED TO A HEIGHT OF 6 INCHES ABOVE THE DRIGINAL GROUND

- L NEW HAMPSHIRE DEPARTMENT, OF ENVIRONMENTAL SERVICES DESIGN STANDARDS REQUIRE 10 FEET OF SEPARATION BETWEEN WATER AND SEWER, HOWEVER, SHOULD CONSTRUCTION REVEAL OR EXPOSE A WATERLINE (MAIN OR SERVICE) RUNNING APPROXIMATELY PARALLE, AND LESS THAN 10 FEET HORZONTALLY FROM THE PROPOSED BEWER INSTALLATION AND WHERE IT IS NOT PRACTICAL TO RELOCATE THE SEWER, A DEVARTION MAY BE GRANTED PROVIDED THAT THE SEWER IS CONSTRUCTED IN ACCORDANCE WITH THE PORCE MAIN CONSTRUCTION REQUIREMENT SPECIFIED BELOW:
- A. FORCEMAINS SHALL BE CONSTRUCTED FROM DUCTILE IRON, HIGH DENSITY POLYTETHYLENE, OR PVC PER ENV-WQ 704.09(a). PVC SHALL CONFORM TO ASTM D234-35 OR ASTM D1785-05 HDPE SHALL OCHFORM TO ASTM D335-03a. DI SHALL BE CORROSION PROTECTED IN CORROSIVE ENVIRONMENTS.
- 10. WHERE WATER LINES AND SEWER LINES CROSS, THEY SHOULD CROSS AS PERPENDICULAR AS POSSIBLE AND THE WATER MAIN SHALL CROSS AT LEAST 16" NICHES ABOVE THE SEWER JURITHER. THE SEWER JUNITS BHALL BE LOCATED AT LEAST 6 FEET HORIZONTALLY FROM THE WATER MAIN.
- 11. ALL SEWERS AT 8 PÉRCENT SLOPÉ, OR GREATER, SHALL HAVÉ IMPERVIOUS
- 12. UNLESS OTHERWISE NOTED, ALL GRANULAR MATERIAL SHALL BE PLACED IN 12" LIFTS AND COMPACTED TO 85% OF THE MODIFIED PROCTOR TEST.
- 13. WHERE WATER MAINS CROSS UNDER SEWER MAINS, BOTH THE SEWER AND WATER MAINS SHALL BE PRESSURE RATED PIPE PER EN-YALGA AND TESTED PER AWAYA CROS-OS AT 1.5 THESE DESIGN PRESSURE OR 100 PSI, WHICHEVER IS GREATER, WITH NO J

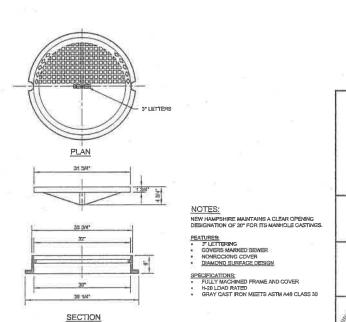
- POINT AND 16" MINIMUM VERTICAL SEPARATION.

  14. GRAVITY PIPE SEWER TESTING:
  A. ALL NEW GRAVITY SEWERS SHALL BE TESTED FOR WATER TIGHTNESS
  BY THE USE OF LOW-PRESSURE AIR TESTING.
  1. ASTIM FI417-B22003) "STIMOARD TEST METHOD FOR INSTALLATION
  1. ASTIM FI417-B22003) "STIMOARD TEST METHOD FOR INSTALLATION
  1. ASTIM FI417-B22003" STIMOARD TEST METHOD FOR INSTALLATION
  1. ASTIM FI417-B22003" STIMOARD TEST METHOD FOR INSTALLATION
  1. ASTIM FI417-B22003" STIMOARD TESTIMO FOR INSTALLATION
  2. UNI-PRESSURE AIR
  2. UNI-PRESSURE AIR
  2. UNI-PRESSURE AIR
  3. ALL NEW GRAVITY SEWERS SHALL BE CLEANED AND VISUALLY
  1. INSPECTED AND SHALL BE TIME TO UNE AND GRADE FOLLOWING
  1. INSTALLATION AND PRIOR TO USE.
  D. ALL PLASTIC SEWER PIPE SHALL BE TO BE TO LINE AND GRADE FOLLOWING
  1. THE MAXIMUM ALLOWABLE DEFLECTION OF FLEXIBLE SEWER PIPE
  SHALL BE 7-1/2 PERCENT OF AVERAGE INSIDE DIAMETER.



NHOOT FRAME AND COVER, CLEAR OPENING 30"

SANITARY SEWER MANHOLE NOT TO SCALE



SEWER MANHOLE FRAME AND COVER DETAIL NOT TO SCALE

NOTES: (NHDES ENV WQ700 - 2008)

- NOTES: (NHDES ENV WQ700 2008)

  1. ALL COMPONENT PARTS OF MANHOLS ESTRUCTURES SHALL HAVE THE STRENGTH, LEAK RESISTANCE AND SPACE NECESSARY FOR THE INTENDED ESTRUCE.

  AND SPACE NECESSARY FOR THE INTENDED ESTRUCE.

  3. MANHOLE STRUCTURES SHALL HAVE A LIFE DEPETANCY IN EXCESS OF 23 YEARS.

  3. MANHOLE STRUCTURES SHALL HE DESIGNED TO WITHSTAND HOLD LOADING AND SHALL NOT LEAK IN EXCESS OF ONE GPD PER VERTICAL FOOT OF MANHOLE FOR THE LIFE OF THE STRUCTURE.

  4. BARRILLS AND COME SECTIONS SHALL BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE AND SHALL CONFIDENT OF AND CYTA.

  5. BEDDING: CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33 1004 PASSING THAT SCREEN 20-58 A PASSING 38 INCH SCREEN 2-58% PASSING 38 INCH SCREEN 1-10% PASSING 18 SIEVE 1-58% PASSING 38 S
- WHERE ORDERED BY THE ENGINEER TO STABILIZE THE BASE, CRUSHED STONE 1/2 INCK TO 1-1/2 INCK SHALL BE USED.

  BASE SECTIONS SHALL BE OF MONOLITHIC CONSTRUCTION TO A POINT AT LEAST 5 INCHES ABOVE THE CROWN OF THE INCOMING PIPE.

- SHALL BE USED.

  BASE SECTIONS SHALL BE OF MONOLITHIC CONSTRUCTION TO A POINT AT LEAST 5 INCHES ABOVE THE CROWN OF THE INCOMING PITE.

  CROWN OF THE INCOMING PITE.

  ON CONTINUAL JOINTS BETT MEED SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE OF AN OWN OF THE INCOMING PITE.

  PITE OF THE ASSOCIATION OF AN ELASTOMERIC OR MISTICLUSE SEALANT.

  PITE TO MANHOLE JOINTS SHALL BE AS FOLLOWS:

  BE ASSTOMERIC, RUBBER SLEENE WITH WATERTIGHT JOINTS AT THE MANHOLE OPENING AND PITE TO MANHOLE JOINTS SHALL BE AS FOLLOWS:

  B. CAST INTO THE WALL OR SECURED WITH STAINLESS STEEL CLAMPS:

  C. LASTOMERIC SEALING RING CAST IN THE MANHOLE OPENING WITH SEAL PORMED ON THE SURFACE OF THE PITE BY COMPRESSION OF THE RING; AND

  D. NON-SHERING REQUED JOINTS WHERE WATERTIGHT SONDING TO THE MANHOLE AND PIPE CLAMPS:

  MANHOLE AND BE OBTAINED.

  J. MANHOLE AND BE OBTAINED.

  J. MANHOLE SHALL HAVE BE DECENTRIC IN SHAPE.

  J. MANHOLE SHALL HAVE A BRICK PAYED SHELL HAVE THE DATE OF MANUFACTURE AND THE NAME OR TRADEMARK OF THE MANUFACTURES IN PIRE SHALL HAVE THE JUST OF MANUFACTURE TO THE SIZE OF THE SIZE OF THE SHALL SHALL HAVE THE JUST OF SHAPE IN CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW. AT CHANGES IN DIRECTION, THE INVESTIS SHALL BE LAD OUT IN CURVES OF THE LONGEST FADILS POSSIBLE TANGENT TO THE ESTED INFORMATION BY AND SHAPE SHALL AND SHALL BE LEVED TO THE SIZE OF THE SIZE OF THE SIZE OF SHALL BE LAD OUT IN CURVES OF THE LONGEST FADILS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWEN PIPES. SHALL BE LAD OUT IN CURVES OF THE LONGEST FADILS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWEN PIPES. SHELVES SHALL BE CONTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE OROWN AND SLOPED TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. WIDERLAY/WIGHT OF INVEST AND SHELPS SHALL CONSTONED TO BRICK MASONRY. INVERTS AND SHELVES SHALL BE AS FOLLOWS.

  A. CONCRETE FOR CAST-IN-PLACE ASSESS OR COMPETE MAINFOLLES SHALL CONFORM TO THE REQUIREMENTS OF CHAST AND SHELPS SHALL CONFORM TO THE REQUIREMENTS OF THE NEW HAMPSHIRE DEP

- THE MANHOLE FRAME AND COVER SHALL PROVIDE A 30-INCH DIAMETER CLEAR OPENING;
  THE MANHOLE COVER SHALL HAVE THE WORD "SEWER" IN 3-INCH LETTERS CAST INTO THE
- TOP SURFACE;
  THE CASTINGS SHALL BE OF EVEN-GRAINED CAST IRON, SMOOTH AND FREE FROM SCALE,
  LIMPS, BLUSTERS, SAND HOLES AND DEFECTS;
  CONTACT SURFACES OF COVERS AND FRAMES SHALL BE MACHINED AT THE FOUNDRY TO
  PREVENT ROCKING OF COVERS IN ANY ORIENTATION;
- PREVENT FOCKING OF COVERS IN ANY ORIENTATION:
  CASTINGS SHALL BE EQUAL TO CLASS 30, CONFICIONING TO ASTIM ANAMAMACS;
  BRICK MASCARY FOR SHELF, INVERT AND GRADE ADJUSTMENT SHALL DOMPLY WITH ASTIM
  CC246, CLAY OR SHALE, FOR GRADE SS HAND BRICK;
  MORTAR SHALL BE COMPOSED OF PORTLAND CEMENT AND SAND WITH OR WITHOUT
  HYDRATED LIVE ADDITION.
  PROPORTIONS IN MORTAR OF PARTS BY VOLUMES SHALL BE:
  1.14 FOR PARTS BAND MAY 15 PARTS CHEMENT.

- HYDRATED LIME ADDITION;

  K. PROPORTIONS IN MORTAR OF PARTS BY VOLUMES SHALL BE:

  1. 4.5 PARTS SAND AND 1.5 PARTS CEMENT; OR

  2. 4.5 PARTS SAND, ONE PARTS CEMENT; OR

  2. 4.5 PARTS SAND, ONE PARTS CEMENT; ON D.5 PARTS HYDRATED LIME;

  L. CEMENT SHALL BE TYPE II PORTLAND CEMENT CONFORMING TO ASTM C190-05;

  M. HYDRATED LIME SHALL BE ITYPE 3 CONFORMING TO THE ASTM C237-08 STANDARD SPECIFICATIONS FOR HYDRATED LIME FOR MASONRY PURPOSES;

  NIMD 6HALL CONISET OF INSET NATURAL BAYD CONFORMING TO THE ASTM C23-03

  O. CONCRETE FOR DROP SUPPORTS SHALL CONFORM TO THE REQUIREMENT FOR CLASS ANA CONCRETE FOR DROP SUPPORTS SHALL CONFORM TO THE REQUIREMENT FOR CLASS ANA CONCRETE OF THE NEW HAMPSHINGE DEPARTMENT OF TRANSPORTATIONS "STANDARD SPECIFICATIONS FOR ROAD AND BRUGGE CONSTRUCTION".

  SUBLISET TO (10) BELOW, A FLEXIBLE IPPE JOINT SHALL BE PROVIDED WITHIN THE FOLLOWING DISTANCES FROM ANY MANHOLE CONNECTION:

  1. WITHIN 49-HICHES FOR REINFORCED CONCRETE (RC) PIPE AND CANDELLE LIMIT SHALL BE REPOSITED FOR THAN 15-HICH DIAMETER;

  NO FLEXIBLE JOINT SHALL BE REQUIRED FOR DIP FOR FOR POY PEPE UP THROUGH IS-RICH DIAMETER; AND SHEET, AN ENERGY OF ROR POY PEPE UP THROUGH IS-RICH DIAMETER; AND SHEET, A REINFORCED CONCRETE SLAB COVER MAY BE USED IN LIEU OF A CONE SECTION, PROVIDED THE SLAB HAS AN ECCHYTRIC ENTRANCE BECTOON, PROVIDED THE SLAB HAS AN ECCHYTRIC ENTRANCE BECTOON, PROVIDED THE SLAB HAS AN ECCHYTRIC ENTRANCE

  NAME OF STANDARD OF SUPPORTIONED THE SYSTEM OWNER:

  8. EMBRINGHED ONLY AT THE REQUIST OF THE SYSTEM OWNER:

  8. EMBRINGHED ONLY AT THE REQUIST OF THE SYSTEM OWNER:

  8. EMBRINGHED ONLY AT THE REQUIST OF THE SYSTEM OWNER:

  8. EMBRINGHED ONLY AT THE PLAST OF SUPPORTIONED STEED STRUCT PLASTIC;

  C. BE SHAPED SO THAT THEY CANNOT BE PULLED OUT OF THE CONCRETE WALL INTO WHICH THEY ARE SPECIFIED.
- BE MANUFACTURED OF STAINLESS, PLASTIC-COVERED STEEL OR PLASTIC; BE SHAPED SO THAT THEY CANNOT BE PULLED OUT OF THE CONCRETE WALL INTO WHICH
- G. BIS SHAPELD ON LITED THE THE THE SECURED.

  MEET THE TREE CUINEMENTS OF ASTM C478-08 FOR LOAD CARRYING CAPACITY AND PULL-OUT RESISTANCE;

  RESISTANCE;
- RESISTANCE: NOT BE SECURED WITH MORTAR; NOT BE SECURED WITH MORTAR; NOT BE SECURED WITH MORTAR; SEE APPROXIMATELY 14-INCHES BY 10-INCHES IN DIMENSION; BE APPROXIMATELY 14-INCHES BY 10-INCHES IN DIMENSION; SELPPAGE OFF THE STEP; AND STEP; AND STEP; AND SECURED SECURED SERVICES OF THE FOOT CONTACT SURFACES.

- AL TEATING:
  A. MANHOLES SHALL BIE TESTED FOR LEAKAGE USING A VACUUM TEST.
  B. THE MANHOLE VACUUM TEST SHALL COMPORAT TO THE FOLLOWING:
  1. THE MITIAL VACUUM GAUGE TEST PRESSURE SHALL BE 10 (MCHES HIG AND
  2. THE MINIMUM ACCEPTABLE TEST HOLD TIME FOR A 1-INCH Hig PRESSURE DROP TO 9 INCH

- 2. THE MINIMUM ACCEPTABLE TEST HOLD TIME FOR A 1-NICH HIP PRESSURE DROP TO 9
  HIS SHALL BE:

  a. NOT LESS THAN 2 MINUTES FOR MANHOLES LESS THAN 10 FEET DEEP IN DEPTH;
  b. NOT LESS THAN 2 SMINUTES FOR MANHOLES HOTO 15 FEET DEEP; AND
  c. NOT LESS THAN 3 MINUTES FOR MANHOLES MORE THAN 15 FEET DEEP.
  C. THE MANHOLE SHALL BE REPAIRED AND RETESTED FIVE TEST HOLD TIMES FAIL TO
  ACHIEVE THE ACCEPTANCS LIMITS SPECIFIED IN (8) ABOVE.
  D. FOLLOWING COMPLETION OF THE LEAKAGE TEST, THE FRAME AND COVER SHALL BE
  PLACED ON THE TOP OF THE MANHOLE OR SOME OTHER MEANS USED TO PREVENT.
- ACCIDENTAL ENTRY BY UNAUTHORIZED PERSONS, CHLIRTEN OR ANIMALS UNTIL THE CONTRACTOR IS READY TO MAKE FINAL ADJUSTMENTS TO GRADE.

# CONSTRUCTION DETAILS DERRY STREET RETAIL

# MAP 165; LOTS 145 & 146

66 & 68 DERRY STREET HUDSON, NEW HAMPSHIRE HILLSBOROUGH COUNTY

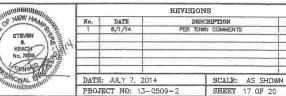
OWNER OF RECORD SHAWN B. HOGAN 11354 GOLF ROUND DRIVE NEW PORT RICHEY, FL 34654

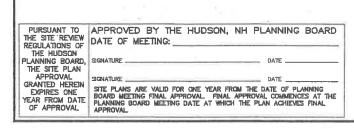
APPLICANT: CLARK, GEER, LATHAM & ASSOC., INC. 3901 SPRINGHILL AVENUE MOBILE, AL 36608

BJC



Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suits 3B, Bedford, NE 05110 Phone (603) 627-2881





INLET SEWER C OPEN FOR ACCESS END CAP CUT IN HALF TEE OR CROSS FLOW

> REMOVABLE STAINLESS ST SEAL (SEE STANDARD MANHOLE DETAILS) BRICK SHELF ← FLOW 90° ELBOW (WITH

INTERNAL DROP SEWER MANHOLE NOT TO SCALE

KABBBBBBBBB

SEAL WITH NON-SHRUNK MORTAR

1. DROP DIAMETER TO MATCH INLET DIAMETER.

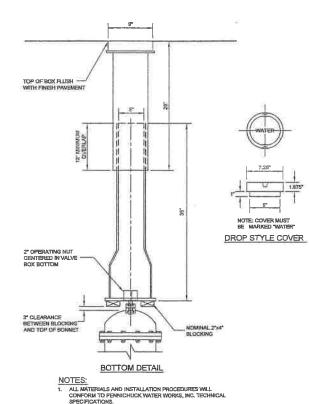
MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SEWER MANHOLE DETAILS.

3. INSIDE DROP MANHOLES SHALL HAVE A MAXIMUM OF: A. ONE 10" INTERNAL DROP PIPE FOR 4"-0" DIAMETER MANHOLES; AND

B. ONE 15" DROP PIPE, OR UP TO TWO 10" DROP PIPES,

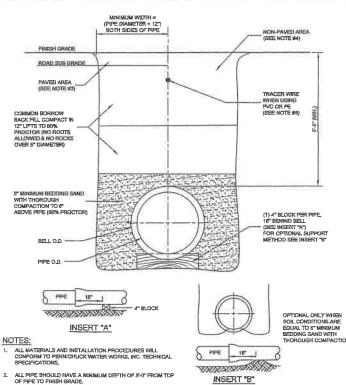
ANCHOR STRAPS AND BOLTS TO BE STAINLESS STEEL AND NOT MORE THAN 2-0" ON CENTER. STRAPS - 2" WIDE BOLTS - 1/2" x 2-1/2" LONG

INVERT DETAIL AT SIDE DROPS



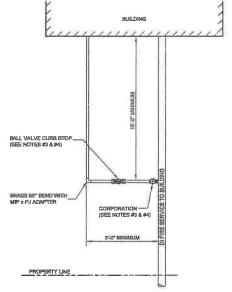
ALL PIPE SHOULD HAVE A MINIMUM DEPTH OF 5-0" FROM TOP OF PIPE TO FINISH GRADE.

VALVE BOX DETAIL (A-09) NOT TO SCALE



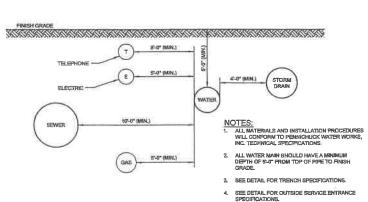
TO THE PROPERTY OF THE PARTY OF INSERT "B"

TRENCH DETAIL NOT TO SCALE



- ALL MATERIALS AND INSTALLATION PROCEDURES WILL CONFORM TO PENNICHUCK WATER WORKS, INC. TECHNICAL SPECIFICATIONS.
- 2. ALL PIPE SHOULD HAVE A MINIMUM DEPTH OF 5'-0' FROM TOP OF PIPE TO FINSH GRADE.
- 3. SEE DETAIL FOR 1" SERVICE AND VALVE BOX INSTALLATION DETAIL.
- 4. SEE DETAIL FOR 1 1/4" 2" SERVICE AND VALVE BOX INSTALLATION DETAIL
- 5. SEE DETAIL A-11 FOR OUTSIDE SERVICE ENTRANCE PLAN VIEW.

DOMESTIC SERVICE TAPPED OFF FIRE SERVICE NOT TO SCALE



UTILITY SEPARATION (MAIN) DETAIL

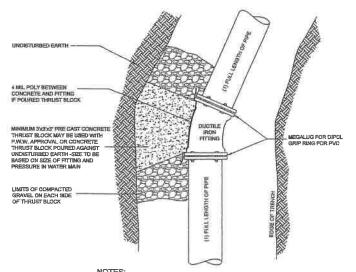
(A-01) NOT TO SCALE (MARCH 2008)

PURSUANT TO THE STE REVIEW REGULATIONS OF THE HUDSON, NH PLANNING BOARD DATE OF MEETING:

PLANNING BOARD, THE SITE PLAN ADDROVAL THE SITE MLAN
APPROVAL
GRANTED HEREIN
EXPRESONE
YEAR FROM DATE
YEAR FROM DATE
OF APPROVAL
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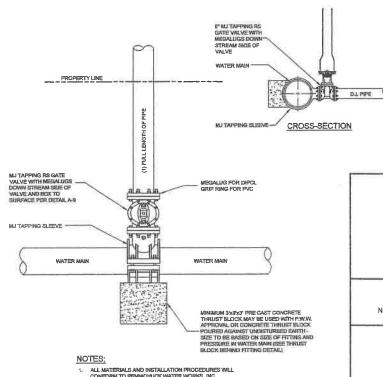


REQUIREMENTS FOR SUBBASE AND BASE MATERIAL TYPE ARE TO BE IN ACCORDANCE WITH LOCAL AUTHORITY HAVING LOCAL JURISDICTION IN PAVED AREAS.

- ALL MATERIAL AND INSTALLATION PROCEDURES WILL CONFORM TO PENNICHUCK WATER WORKS, INC. TECHNICAL SPECIFICATIONS.
- ALL PIPE SHOULD HAVE A MINIMUM DEPTHS OF 5-0" FROM TOP OF PIPE TO FRISH GRADE.
- 3.41/9 S.S. RODS SHALL BE USED IN CONJUNCTION WITH REQUIRED S.S. NUTS. RODS ARE TO DE ATTACHED TO FITTINGS WITH EITHER STAR BOLTS OF RULC LIDES.
  10" FITTING OR SHAULER! #(2)" 34"8 S.S. RODS & ASSOCIATED HARDWARE LIZE "HITTING OIL CARGER #(3)" 34"8 S.S. RODG & ASSOCIATED HARDWARE.
- 4. MIN 3'X3'X5' PRIE CAST CONCRETE THRUST BLOCK MAY BE USED WITH PENNICHICK WATER WORKS, INC, APPROVAL OR CONCRETE THRUST BLOCK POURED AGAINST UNDISTURBED EARTH SIZE TO SE BASED ON SIZE OF FITTING AND PRESSURE IN WATER MAIN.

# THRUST BLOCK BEHIND FITTINGS INSTALLATION

NOT TO SCALE (MARCH 2008)



- ALL MATERIALS AND INSTALLATION PROCEDURES WILL CONFORM TO PENNICHLICK WATER WORKS, INC. TECHNICAL SPECIFICATIONS.
- ALL PIPE SHOULD HAVE A MINIMUM DEPTH OF 5-0" FROM TOP OF PIPE TO FINISH GRADE.

# LARGE SERVICE AND/OR TAPPING SLEEVE DETAIL

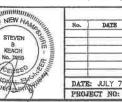
NOT TO SCALE

# CONSTRUCTION DETAILS DERRY STREET RETAIL

MAP 165; LOTS 145 & 146 66 & 68 DERRY STREET HUDSON, NEW HAMPSHIRE HILLSBOROUGH COUNTY

OWNER OF RECORD: SHAWN B. HOGAN 11354 GOLF ROUND DRIVE NEW PORT RICHEY, FL 34654 APPLICANT:
CLARK, GEER, LATHAM & ASSOC., INC.
3901 SPRINGHILL AVENUE
MOBILE, AL 3660B

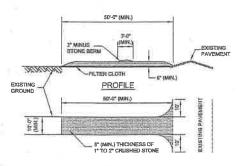
KEACH-NORDSTROM ASSOCIATES, INC. Civil Engineering Land Surveying Landscape Architecture uneros Park North, Suits 35, Bedford, NE 03110 Phone (603) 627–2881



REVISIONS DESCRIPTION DATE: JULY 7, 2014 SCALE: AS SHOWN PROJECT NO: 13-0509-2 SHEET 18 OF 20

MATS/BLANKETS SHOULD BE

**EROSION CONTROL BLANKETS - SLOPE INSTALLATION** NOT TO SCALE



# PLAN VIEW

# STABILIZED CONSTRUCTION EXIT DETAIL NOT TO SCALE

# MAINTENANCE:

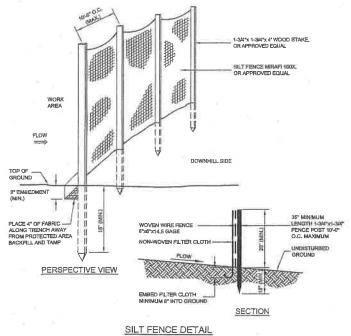
MUD AND SOIL PARTICLES WILL EVENTUALLY CLOG THE VOIDS IN THE CRUSHED STONE AND THE EFFECTIVENESS OF THE CRUSHED STONE PAO WILL NOT BE SATISFACTORY. WHEN THIS OCCURS, THE PAD SHOULD BE TOPDRESSED WITH NEW CRUSHED STONE OR COMPLETE REPLACEMENT OF THE PAD WE BE RECESSARY WHEN THE PAD BECOMES COMPLETELY

IF WASHING FACILITIES ARE USED, THE SEDIMENT TRAPS SHOULD BE CLEANED OUT AS OFTEN AS NECESSARY TO ASSURE THAT ADECIDITE TRAPPING EFFICIENCY AND STORAGE VOLUME IS AVAILABLE. VEGETATIVE FILTER STRIPS SHOULD BE MAINTAINED TO SURGE A VIGOROUS STAND OF VEGETATION AT ALL TIMES.

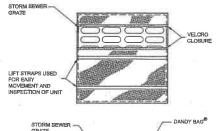
# CONSTRUCTION SPECIFICATIONS:

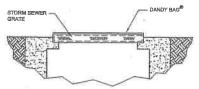
- 1. STONE FOR A STABILIZED CONSTRUCTION EXIT SHALL BE 1 TO 2 INCH STONE, RECLAIMED STONE OR RECYCLED
- THE LENGTH OF THE STABILIZED EXIT SHALL NOT BE LESS THAN 50 PEET, EXCEPT FOR A SINGLE RESIDENTIAL LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY.
- 3. THE THICKNESS OF THE STONE FOR THE STABILIZED EXIT SHALL NOT BE LESS THAN 8 INCHES.
- 4. THE WIDTH OF THE EXIT SHALL NOT BE LESS THAN THE FULL WIDTH OF THE AREA WHERE INGRESS OR EGRESS OCCURS OR 10 FEET, WHICHEVER IS GREATER.
- GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE. FILTER CLOTH IS NOT REQUIRED FOR A SINGLE FAMILY RESIDENCE LOT.
- ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION EXIT SHALL BE PIPED BENEATH
  THE EXIT. IF PIPING IS IMPRACTICAL, A BERM WITH 6:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE
  SUBSTITUTED FOR THE PIPE.
- THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEMMENT ONTO PUBLIC RICHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOPORESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR (JELENOLUT OF ANY MEASURES USED TO TRAY SEMMENT. ALL SEDIMENT SPILLED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED PROMPTLY.
- WHEELS SHALL BE CLEANED TO REMOVE MUD PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

١		APPROVED BY THE HUDSON, NH PLANNING BOARD						
I	THE SITE REVIEW	DATE OF MEETING:						
1	THE HUDSON							
1	PLANNING BOARD, THE SITE PLAN	SIGNATURE DATE						
1	APPROVAL	SIGNATURE DATE						
1	GRANTED HEREIN EXPIRES ONE YEAR FROM DATE	SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING						
1		BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN ACHIEVES FINAL						
1	OF APPROVAL	APPROVAL						



NOT TO SCALE





# HI-FLOW DANDY BAG® (SAFETY ORANGE)

MECHANICAL PROPERTIES	TEST METHOD	UNITS	MARV
GRAII TENSILE STRENGTH	ASTM D 4632	ktv (ljava	1.52 (355) × 0.89 (200)
GRAB TENSILE ELONGATION	ASTM D 4832		24 r 10
PUNCTURE STRENGTH	ASTM D 4833	hit (Ibs)	0.40 (90)
MULLEN BURST STRENGTH	ASTM D 3785	kPa (psil)	3097 (450)
TRAPEZOID TEAR STRENGTH	ASTM D 4535	ktN (fox)	0.51 (1151 x 0.33 (75)
UV RESISTANCE	ASTM D 4055	%	90
APPARENT OPENING SIZE	A5TM D 4751	Mm (LIS Stat Sleever)	0.425 (40)
FLOW RATE	ASTM D 4491	1/min/m2 (mal/min/h2)	5907 (345)
PERMITTIVITY	4 S734 D 44D1	flee 7	24

DANDY BAG® NOT TO SCALE

### CONSTRUCTION SPECIFICATIONS:

- THE GEOTEXTILE FABRIC SHALL MEET THE DESIGN CRITERIA FOR SILT FENCES
- THE FABRIC SHALL BE EMBEDDED A MINIMUM OF 8 INCHES INTO THE GROUND AND THE SOIL COMPACTED OVER THE
- WOVEN WIRE FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIE OR STAPLES WHERE NOTED OR AS DIRECTED BY DESIGN ENGINEER.
- FILTER CLOTH SHALL BE FASTENED SECURELY TO THE WOVEN WIRE FENCE WITH TIES SPACED EVERY 24 INC THE TOP, MIDSECTION AND BOTTOM.
- FENCE POSTS SHALL BE A MINIMUM OF 36 INCHES LONG AND DRIVEN A MUNIMUM OF 16 INCHES INTO THE GROUND. WOOD POSTS SHALL BE OF SOUND QUALITY HARDWOOD AND SHALL HAVE A MUNIMUM CROBES SECTIONAL AREA OF 3.0 SQUARE
- 7. MAINTÉNANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL RÉMOVED WHEN "BULGES" DEVELOP IN THE SILT

# MAINTENANCE:

- SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH
- IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
- SEDIMENT DEPOSITS SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE RABBIES
- SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

# CONSTRUCTION SEQUENCE

- FIRST CUT AND CLEAR TREES AND BRUSH ONLY WITHIN DESIGNATED LIMITS OF CLEARING AS NECESSARY TO FACILITATE PROPOSED CONSTRUCTION. ALL TREES, BRANCHES AND OTHER VEGETATIVE MATERIALS SHALL BE PROPERLY DISPOSED OF OFF SITE BY THE CONTRACTOR. THIS PROJECT IS MANAGED TO MEET THE RECURREMENTS AND INTENT OF RISA 430-25 AND AGS 3000 RELATIVE TO INVASIVE SPECIES.
- PRIOR TO COMMENCEMENT OF ANY EARTHMOVING OPERATIONS, ALL APPLICABLE TEMPORARY EROSION CONTROL MEASURES, INCLIDING SPECIPIED PERIMETER SILTATION FENGING AND STABILIZED CONSTRUCTION EXIT SMALL BE IN PLACE AS SHOWN ON THE PROJECT FUNDS.
- 1. COMPLETE GRUBBING OPERATIONS, ALL STUMPS AND SIMILAR ORGANIC DEBRIS SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR, NATTIVE ORGANIC SOIL MATTERIALS SUTFABLE FOR USE AS TOPSOIL SHALL BE STOCKPILED WITHIN AREAS OUT OF THE WAY OF OTHER CONSTRUCTIONS ACTIVITIES AND IDRAPAGE FLOW, STOCKPILES SHALL BE TEMPORARILY SEEDED WITH WINTER HYE AND BE SURROUNDED WITH HAY BALES ANDOR PABRIC SILTATION FERUE IN ORDER TO PREVENT LOSS DUE TO ERGISOR.
- 4 BEGIN EARTHMOVING OPERATIONS, COMMENCING WITH WORK NEEDED TO BALANCE SITE AND FACILITATE BUILDING FOUNDATION CONSTRUCTION, PERMANENT DOWNSLOPE WORK SHALL BE PROTECTED FROM UPGRADIENT STORMWATER PLOW BY THE CONSTRUCTION OF TEMPORARY EARTHEN DIKES OR EXCAYATED SYMALES.
- ONCE BUILDING FOUNDATION WORK IS UNDERWAY, CONTINUE EARTHMOVING OPERATIONS UNTIL DESIGN SUBGRADE IS ACHIEVED.
- 8. #NSTALL DRAINAGE SYSTEMS AND OTHER UTILITIES WORKING FROM LOW TO HIGH. INCOMPLETE WORK SHALL BE PROTECTED FROM SILTATION BY THE USE OF SILTATION BARRIERS AROUND SWALES UNTIL THE SITE HAS BECOME
- PLACE GRAVEL AND CRUSHED GRAVEL OVER PROPOSED DRIVEWAY, WALKS AND PARKING AREAS AND COMPACT IN SPECIFIED LIFT THICKNESS.
- COMPLETE EXCAVATIONISTABILIZATION GRADING ACTIVITIES. WHEN COMPLETE, IMMEDIATELY BEGIN TOPSOILING PROPOSED TURE AREAS USING STOCKPILED LOAM SUPPLEMENTED WITH BORROW LOAM, IF NECESSARY, TO LEAVE A THICKNESS OF A INCHES OF FRABLE LOAM.
- FINE GRADE ALL, FUTURE TURF AREAS AND HYDROSEED WITH THE SPECIFIED SEED MIXTURE IMMEDIATELY AFTER FINE GRADING IS COMPLETED. ALL AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISH GRADE.
- 10. INSTALL THE BINDER COURSE OF PAVEMENT OVER ALL DESIGNATED AREAS.
- 11. CONTINUE TO MONITOR AND RECTIFY MINOR SITE AND SLOPE EROSION UNTIL ENTIRE SITE APPEARS TO BE COMPLETELY STABLUZED AND VEGETATED WITH A HEALTHY STAND OF TURN FOR GROUND COVER, MAINTAIN SPECIFIED SILTATION/REPOSION CONTROL MEASURES THROUGH ONE WHITER.
- 12. INSTALL THE SPECIFIED WEARING COURSE OF PAVEMENT OVER THE BINDER COURSE.
- 13, COMPLETE INSTALLATION OF LANDSCAPING, SIGNAGE AND OTHER SITE AMENITIES.

# **EROSION CONTROL NOTES**

- EXPOSED EARTHWORK SHALL BE CONFINED TO AS LIMITED AN AREA AS IS PRACTICAL AT ANY GIVEN TIME THROUGHOUT THE CONSTRUCTION SEQUENCE. AT NO TIME SHALL MORE THAN FIVE (5) ACRES OF SITE AREA BE IN AN UNSTABLE CONDITION. NO GR
- TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH PROJECT PLANS. IN ADDITION, SIMILAR MEASURES SHALL BE INSTALLED WHERE AND WHEN THE FRELD CONDITION, OR RELD OPERATION OF THE INDIVIDUAL SITE CONTRACTOR, MAY WARRANT, ALL TEMPORARY EROSION CONTROL MEASURES USED SHALL BE INSPECTED WEEKLY AND WITHIN 24 HOURS AFTER 0.25" OF RUMFALL OR MORE. THEY SHALL BE CLEANED AND MAINTAINED AND OTHERWISE KEPT IN AN EFFECTIVE OPERATING MANNER THROUGHOUT THE CONSTRUCTION PREMOR.
- ALL DISTURBED AREAS DESIGNATED TO BE TURF, SHALL RECEIVE A MINIMUM APPLICATION OF 4 INCHES OF LOAM (COMPACTED THICKNESS), PRIOR TO FINAL SEEDING AND MULCHING.
- 4. ALL SWALES AND DITCHLINES SHALL BE PERIODICALLY CLEAVED OF DEPOSITED SEDIMENT SO AS TO MAINTAIN AN EFFECTIVE GRADE AND CROSS SECTION. ALL SWALES AND DITCHLINES SHALL BE FULLY STABILIZED PRIOR. TO HAVING STORMAYETE DIRECTED TOWARDS THEM.
- 5. IN THE EVENT THAT, DURING CONSTRUCTION OF ANY PORTION OF THIS PROJECT, A WINTER SHUTDOWN IS NECESSARY, THE CONTRACTOR SHALL STABILIZE ALL INCOMPLETE WORK AND PROVIDE FOR SUITABLE METHODS OF DIVERTING RUNOFF IN ORDER TO ELIMINATE SHEET FLOW ACROSS FROZEN SURFACES.
- AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED
   A. BASE COURSE GRAVELS ARE INSTALLED IN AREAS TO BE PAVED:

  - A. BIASE COURSE GRAVELS ARE INSTALLED IN AREAS TO BE PAVED?

    1. A MINIMUM OF 50 MY SEGTATED GROWTH ANS BEEN ESTABLISHED; RIP

    2. A MINIMUM OF 50 PROM-ERGISHE MATERIAL SUCH AS STONE OR RIP RAP HAS BEEN INSTALLED; OR

    5. FORSION CONTROL BLANKETS HAVE BEEN PROPEREY, INSTALLED.
- DUST SHALL BE CONTROLLED BY THE USE OF WATER AS NECESSARY THROUGHOUT THE CONSTRUCTION PERIOD, IN ACCORDANCE WITH ENV-A 1000.
- 8. IN NO WAY ARE THOSE TEMPORARY EROSION CONTROL MEASURES INDICATED ON THESE PLANS TO BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR SHALL USE AUDIGMENT IN INSTALLING SUPPLEMENTA-EROSION CONTROL MEASURES WHERE AND WHEN SPECIFIC SITE CONDITIONS AND/OR CONSTRUCTION. METHODOLOGIES MAY WARRANT,
- AREAS HAVING FINISH GRADE SLOPES OF 3:1 OR STEEPER, SHALL BE STABILIZED WITH JUTE MATTING WHEN AND IF FIELD CONDITIONS WARRANT, OR IF SO ORDERED. JUTE MATTING INSTALLED TO CONFIDEN WITH THE RECOMMENDED BEST MANAGEMENT PRACTICE OUTLINED IN YOLUME 3 OF THE NEW HAMPSHIRE STORMWATER MANUAL "EVOSION AND SEDIMENT CONTROLS DURING CONSTRUCTION."
- ALL DETENTION PONDS AND TREATMENT SWALES SHALL BE CONSTRUCTED PRIOR TO ANY EARTH MOVING ACTIVITIES THAT WILL INFLUENCE STORMWATER RUNOFF.
- 11. ALL ROADWAYS AND PARKING AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
- 12. ALL CUT AND FILL SLOPES SHALL BE SEEDED AND MULCHED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE

# CONSTRUCTION DETAILS DERRY STREET RETAIL

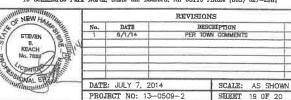
MAP 165; LOTS 145 & 146 66 & 68 DERRY STREET HUDSON, NEW HAMPSHIRE HILLSBOROUGH COUNTY

OWNER OF RECORD: SHAWN B. HOGAN 11354 GOLF ROUND DRIVE NEW PORT RICHEY, FL 34654

APPLICANT: CLARK, GEER, LATHAM & ASSOC., INC. 3901 SPRINGHILL AVENUE MOBILE, AL 36608



KA KEACH-NORDSTROM ASSOCIATES, INC. Civil Engineering Land Surveying Landscape Architecture merce Park North, Suite 3B, Bedford, NE 03110 Phone (603) 627-2881



# WINTER CONSTRUCTION NOTES:

- ALL PROPOSED POST-DEVELOPMENT VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALING ERGOING CONTROL. BLANKETS ON SLOPES GREATER THAN 41, AND SEEDING AND PLASTING 3 TO A 10TH OF THE ACHIEN OF THE ACHIEN OF ERCOSION CONTROL BLANKETS OF MILCH AND ANCHORED NETTING, ELSEWHERE. THE PLACEMENT OF ERCOSION CONTROL BLANKETS OR MILCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZOR GROWDO AND SHALL BE OWNERED TO THE ACHIEN OF STREAM MELT.
- ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 18TH, OR WHICH ARE DISTURBED AFTER OCTOBER 18TH, SHALL BE STABILEDD WITH STONE OR EROSION CONTROL BLANKERS APPROPAULE FOR THE DESIGN FLOW CONDITIONS.
- AFTER NOVEMBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHOOT ITEM 504.3 OR, IF CONSTRUCTION IS TO CONTINUE THROUGH THE WITER SEASON, BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT.
- AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:

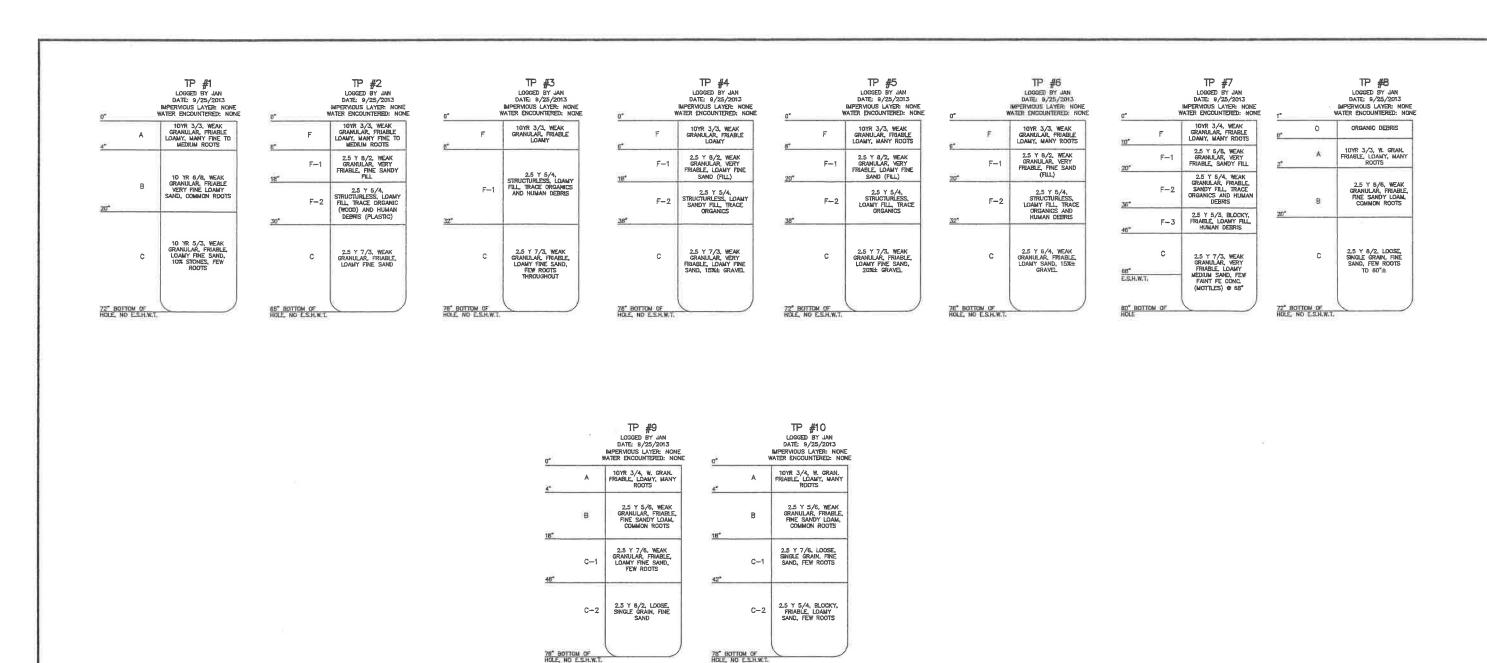
  A. BASE COURSE GRAVELS ARE INSTALLED IN AREAS TO BE PAYED;

  B. A MINIMUM OF BY VEGETATED GROWTH HAS BEEN ESTABLISHED;

  C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP RAP HAS.

  - BEEN INSTALLED; OR

    D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.



TP #101

TP #100 LOGGED BY JAN DATE: 5/27/2014 IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE

LOGGED BY JAN DATE: 6/27/2014 IMPERVIOUS LAYER: NONE JATER ENCOUNTERED: NONE 0 10YR 3/4, W. GRAN. FRIABLE, LOAMY, MANY ROOTS 10YR 3/4, W. GRAN. FRIABLE, LOAMY, MANY ROOTS 2.5 Y 5/3, STRUCTURLESS, LOAMY FILL, TRACE HUMAN DEBRIS (PLASTIC, ASPHALT, BRICK) 10 YR 6/8, WEAK GRANULAR, FRIABLE FINE SANDY LOAM, FEW ROOTS F-1 2.5 Y 7/3, WEAK
GRANULAR, FRIABLE,
LOAMY SAND, FEW
CDARSE ROOTS, FEW
DISTINCT FE CONC.
(MOTTLES) @ 72" 25 Y 6/3, WEAK GRANULAR, FRIABLE, LOAMY SAND, FEW ROOTS TO 50" С E.S.H.W.T. 96" BOTTOM OF HOLE, NO ESHLW.T. 96* BOTTOM OF *EXCAVATION ADJACENT TO HUMAN DISTURBED AREA BASED ON SURFACE

TP #102 LOGGED BY JAN DATE: 6/27/2014 MPERVIOUS LAYER: NONE VATER ENCOUNTERED: NONE

7					
0*	0	FOREST MAT			
6*	A	10YR 3/4, W. GRAN. FRIABLE, LOAMY, MANY ROOTS			
	В	2.5Y 6/8, LOOSE. GRANULAR, FINE SANDY LOAM, FEW ROOTS			
28*					
65"	С	2.5 Y 7/4, WEAK GRANULAR, FRIABLE, LOAMY SAND, FEW DISTINGT FE CONC. (MOTTLES) ® 68°			
ESH.W.T.	i i				
86° BOTT	TOM OF				
HOLE					

**TEST PIT LOGS** 

DERRY STREET RETAIL MAP 165; LOTS 145 & 146

66 & 68 DERRY STREET HUDSON, NEW HAMPSHIRE HILLSBOROUGH COUNTY

OWNER OF RECORD: SHAWN B. HOGAN 11354 GOLF ROUND DRIVE NEW PORT RICHEY, FL 34654

APPLICANT: CLARK, GEER, LATHAM & ASSOC., INC. 3901 SPRINGHILL AVENUE MOBILE, AL 36608

KEACH-NORDSTROM ASSOCIATES, INC. Gvil Engineering Land Surveying Landscape Architecture amorres Park North, Sulle SE, Bedford, NE 03110 Phone (603) 627-2881

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THE THE PARTY OF	DATE	: JULY 7, 2	2014	SCALE: AS SHOWN				
( ) ( )	PROJ	ECT NO: 13	-0509-2	SHEET 20 OF 20				

PURSUANT TO THE SITE REVIEW REGULATIONS OF DATE OF MEETING: THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL
GRANTED HEREIN
EXPIRES ONE
YEAR FROM DATE
OF APPROVAL
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