TOWN OF HUDSON

PLANNING BOARD

PUBLIC MEETING
TOWN OF HUDSON, NH
APRIL 9, 2014

12 School Street Hudson, New Hampshire 03051 603/886-6008

The Town of Hudson Planning Board will hold a regularly scheduled meeting on Wednesday, April 9, 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
X. PUBLIC HEARINGS

XI. OLD BUSINESS/PUBLIC HEARINGS

A. Dunkin Donuts — 14 Brady Drive
SP# 01-114 — Map 105/Lot 019

Purpose of plan: To illustrate the proposed layout of a Dunkin Donuts and two commercial rental spaces with all associated site improvements. Hearing. Deferred Date Specific from the 03-12-14 Planning Board Meeting.

B. Granite State Indoor Range & Gun Shop (Change of Use) — 2-4 Hampshire Drive
Map 221/Lot 004

Purpose of plan: To show the proposed change of use of 12,700 sq. ft. of the existing industrial building at 2-4 Hampshire Drive to an indoor gun range and gun shop. Hearing. Deferred Date Specific from the 03-12-14 Planning Board Meeting.

XII. DESIGN REVIEW PHASE

XIII. CONCEPTUAL REVIEW ONLY
XIV. NEW BUSINESS/PUBLIC HEARINGS

A. Goodwill Industries of Northern N.E. — Lowell/Wason Road
SP# 03-14 — Map 222/Lot 041

Purpose of plan: To convert the existing Stop & Shop Supermarket facility into a Goodwill Retail Store and shipping/receiving center. Application Acceptance & Hearing.

B. 55 Executive Drive Parking Lot Additions SP# 05-14 — 55 Executive Drive/Friars Dr. Map 209/Lots 2 & 3

Purpose of plan: To show proposed parking lot additions with accompanying site improvements. Application Acceptance & Hearing.

C. Proposed Medical Office Bldg. Addition SP# 04-14 — 300 Derry Road Map 109/Lot 010

Purpose of plan: To show proposed 1-story, 3,663 sq. ft. medical office building addition with accompanying parking and site improvements. 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 – 03/28/14

Packet: 04/09/14

Dunkin Donuts Site Plan

STAFF REPORT
April 9, 2014

SITE: 14 Brady Drive (corner of Robinson Rd.& Derry St.) - Map 105/Lot 019 - SP# 01-14

ZONING: Industrial (I)

PURPOSE OF PLAN: to illustrate the proposed layout of a Dunkin Donuts and two commercial rental spaces with all associated site improvements. Deferred Date Specific from the Mar. 12, 2014 Meeting.

PLAN UNDER REVIEW ENTITLED: Non-Residential Site Plan Dunkin Donuts Map 105 Lot 19, 14 Brady Drive, Hudson, NH, prepared by Keach-Nordstrom Associates, Inc., dated: Jan. 24, 2014, latest revision date Apr. 1, 2014, consisting of Sheets 1 - 15 and Septic Design Plan & Detail, Sheets 1 -2 and Notes 1 – 29 on Sheet 1 of 15 (said plans are attached hereto).

ATTACHMENTS:

1) Keach-Nordstrom's Response Letter, re: CLD's Initial Comments Report, dated April 1, 2014 - "**A**".
2) GPI's Traffic Analysis Response Letter, re: CLD's Initial Traffic Comments Report, dated March 28, 2014 – "**B**".

ATTACHMENTS INCLUDED IN THE MARCH 26, 2014 MEETING PACKETS:

1) Project Narrative, Site Plan Application, Checklist and Waiver Forms, including an aerial site photo date stamped Jan. 28, 2014 – Attachment "**A**".
2) CLD's Initial Comments Report, including Application Checklist, dated Jan. 18, 2014 – "**B**".
3) CLD's Traffic Peer Review Letter, dated Feb. 27, 2014 – "**C**".
4) GPI's Traffic Impact and Access Study, dated Dec. 2013 – "**D**".
5) Comments/Memos from Zoning Administrator, Bill Oleksak, Road Agent, Kevin Burns, HFD Deputy Fire Chief, John O'Brien, , and Asst. Assessor, various date stamps – **"E".**
6) C.A.P. Fee Worksheet – "**F**".

REQUESTED WAIVERS (APPROVED AT THE MARCH 12, 2014 MEETING):

1. HTC 275-9(C) -- Noise Study
2. HTC 275-9(D) -- Fiscal Impact Study

STAFF COMMENTS/OUTSTANDING ISSUES:

1. Per the March 12th meeting, the board and CLD requested the applicant to revise the Site Plans relative to the following items:

a) Create an unobstructed travel lane around the rear of the proposed building. In this regard, the board also requested staff to have CLD critique the revised onsite travel lanes, relative to making certain they are safe and unobstructed. **STATUS:** The revised Site Plans were submitted on April 1st, which will not allow CLD sufficient time to submit their comments in time for Wednesday night's meeting. Please note, this is also the case regarding the offsite traffic issues. That is, the Applicant's traffic engineer, GPI, Inc., submitted their response letter concerning CLD's Initial Traffic Comments Report on Apr. 1st. To this effect, staff requested the applicant to consider requesting a deferral date specific to the April 23d meeting.

b) Provide a 12 ft. in-width future road widening easement along the entire front of Robinson Rd. **STATUS**: The "Master Plan", Sheet 1, shows a shaded " land dedication" area; this area, coupled with the existing unused ROW area along Robinson Rd., will provide the width necessary to add a travel land along the entire Robinson Rd. lot frontage and out to Derry St. (Rte. 102).

c) Provide town water to the site. **STATUS**: the Applicant has agreed to provide town water to the site, including the installation of a fire hydrant, as requested by the HFD. The attached revised plans include this change in water service (see Sheet 1).

d) Show distances at Robinson Rd. and the Dunkin Donuts Driveway. **STATUS**: Sight distance plans and profiles are provided in the revised plans; see Sheets 6 & 7, which indicate the 400 ft. of required unobstructed all season safe sight distance, looking south on Robinson Rd. and the extent of sight distance to the intersection of Derry St., along Robinson Rd. The same is provided for the Dunkin Donuts driveway on Brady Dr. (i.e., to the end of Brady Drive and the intersection of Robinson Rd.).

e) Provide an unobstructed travel lane at the rear of the proposed building, i.e., in addition to the queue lane. **STATUS**: the loading area has been moved from the rear of the building to the north side of the building. NOTE: it appears that the proposed loading area will provide sufficient width to allow vehicles travelling around the rear of the building to proceed to the front parking area. This is taking into account, minus the proposed queue lane width, which measures 12 ft., the combined "loading zone" and abutting travel lane width measures 20 ft. (see Sheet 1, which provides a scale of 1" = 40').

f) Provide a "Lighting Plan". **STATUS:** said plan is provide, Sheet 10, which shows the proposed exterior lighting illumination levels to stay within close proximity of the site and the proposed light structure detail indicates that the lights will be hooded and all associated lumens cast down.

g) The dumpster location is properly located, screened and includes a concrete pad. Please see Sheet 1.

h) The landscaping has been appropriately amended, relative to the redesign of the building from the March 12th meeting, together with the drainage structures.

i) Lastly, the septic system plans and profiles are also included in the revised plan set; please see Sheets 1 & 2 after Sheet 15.

RECOMMENDATION: Taking the abovementioned outstanding issues/comments into consideration, staff recommends the following action for Wednesday night's hearing:

(i) Open and conduct the public hearing;
(ii) Allow the applicant to present the project and address all of the above-cited revised issues from the March 12th meeting.
(iii) Hear any pro/con public input, and
(iv) Defer further review of this site plan, date specific to the April 23d meeting.
(v) As stated above, although the plans have been revised to reflect CLD's Initial Comments Report, as well as board concerns of the March 12th meeting, at Wednesday night's meeting the board may want to defer final action, relative to receiving CLD's 2d Comments Report. However, as with many Site Plan Review projects, in the event the board wishes to move forward at Wednesday night's meeting, with the caveat that the plans are subject to final engineering review, staff has provided below the appropriate DRAFT MOTION to approve for the board's consideration.

APPLICATION TRACKING:

- 01/28/13 - Application was submitted; initial public hearing scheduled for.
- 03/12/14 - Initial public hearing held, application accepted and deferred date specific to the 04/09/14 meeting.

DRAFT MOTIONS:

I move to defer further review of the Dunkin Donuts Site Plan application off Brady Drive, Map 105/Lot 19, date specific, to the April 23d, 2014 meeting.

Motion by: _____Second: _____Carried/Failed: _____.

MOTION to APPROVE:

I move to grant approval for the Site Plan entitled: Non-Residential Site Plan Dunkin Donuts Map 105 Lot 19, 14 Brady Drive, Hudson, NH, prepared by Keach-Nordstrom Associates, Inc., dated: Jan. 24, 2014, latest revision date Apr. 1, 2014, consisting of Sheets 1 - 15 and Septic Design Plan & Detail, Sheets 1 -2 and Notes 1 – 29 on Sheet 1 of 15, 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 all right-of-way and slope easement deeds shall be favorably reviewed and recommended on by Town Counsel.

3) All improvements shown on the Plan, including Notes 1-29, shall be completed in their entirety and at the expense of the Applicant or his assigns.

4) After the issuance of the foundation permit and prior to the issuance of the framing permit, 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) 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.

6) Onsite landscaping shall be provided for in accordance with the plant and tree species specified on Sheet 9 of 15 of the Plan.

7) 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.

8) This approval shall be subject to final engineering review.

9) A CAP Fee in the amount of $31,948.80 shall be paid prior to the Certificate of Occupancy. This fee is established in accordance with the 2014 CAP Fee Use Matrix.

Motion by: _____Second: _____Carried/Failed: _____.

KNA KEACH-NORDSTROM ASSOCIATES, INC.

"A"

April 1, 2014

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

Subject: **Dunkin Donuts – Non Residential Site Plan: Map 105, Lot 19**
Application Response Letter
KNA Project No. 13-0304-1

Dear Mr. Cashell,

On behalf of Cafua Management Group, Keach-Nordstrom Associates, Inc. respectfully submits the following application response letter, revised project plans and stormwater report in association with the March 12, 2014 Staff Report and municipal engineering review letter prepared by CLD Consulting Engineers, dated February 18, 2014.

John Cashell Staff Report – March 12, 2014: (with Keach-Nordstrom responses)

1. The GPI Study cites, in particular, that the Level of Service (LOS) at the Robinson Road intersection with Derry Road (Rte 102) is of concern. Besides the retiming of the traffic approach, GPI suggests in their study, and CLD expresses issue with in their critique:

Please refer to the attached "Traffic Impact and Access Study" (TIAS) response letter comment number 6, dated March 28, 2014 prepared by GPI.

2. The proposed driveway design poses 2 problems, relative to proper and safe onsite traffic flow.

The proposed Dunkin Donuts site improvements have been rotated and repositioned within the Map 105, Lot 19 2.18 acre property limits to promote overall "proper and safe" onsite traffic flow. Specifically, all twelve (12) drive-thru cars within the regulatory required que (275-8, B, 26, c, part 5), including a 1.0 ft separation do not block either the one-way northerly perimeter circulation pattern or the two-way westerly site access traffic movements. In addition, a "Loading Zone – No Parking" area has been established located adjacent to the drive-thru pick up window, which will accommodate a 30.0 ft box truck and not impede safe vehicular movements.

3. The applicant wishes to provide for their water needs via an onsite well. On the other hand, the Fire Department seeks to have a fire hydrant installed in close proximity to this site. Solution: other area developers have gone to great expense to extend the Town's water system in this area, which is in a reasonable distance (+/- 300 ft) for the applicant to connect to and provide, not only said hydrant, but also a more reliable and safer source of potable water, especially for the proposed heavy water dependent use.

The proposed Dunkin Donuts site improvements have been revised to include a proposed 12" CLDI water main extension. The proposed 12" CLDI water main extension will connect to the 2013 Route 102 (Derry Road) water main extension project located on the northerly side of Route 102 and extend under Route 102 (directional drill) to a proposed hydrant (termination point near the southwesterly corner of the subject Map 105, Lot 19 parcel within the Robinson Road right of way.

4. The dumpster location can, perhaps, be better placed, especially if the lot is enlarged to solve the above cited onsite traffic situation.

The subject parcel, Map 105, Lot 19 will not be enlarged from its present 2.18 acre size. Instead, the proposed development improvements have been rotated in a counter-clockwise direction to accommodate various site modifications, including the repositioning the multi-unit screened dumpster enclosure.

5. No freestanding sign(s) is proposed for this site. As explained to staff by the project engineer, the site sits high and prominent over its surroundings, and as such wall signs will suffice to advertise the proposed uses.

The proposed multi-tenant site <u>will include</u> a development identification pylon sign located on the side slope just east of the signalized intersection along Derry Road. Also, tenant specific building signs are proposed. Reasonable graphical representations of all proposed signs are included within the revised plans. In addition, specific Hudson regulatory sign notes have been added to the plans, which direct the Owner, Developer and future occupants to the municipally required sign application process.

Please note for the record both requested waivers HTC 275-9(C) and HTC 275-9(D) were introduced into record, discussed and unanimously approved during the March 12, 2014 planning board meeting. The project plan set cover has been revised to include all applicable project approval and EPA stormwater pollution prevention references.

<u>CLD Initial Review Letter – February 18, 2014: (with Keach-Nordstrom responses)</u>

1. Site Plan Review Codes
   a. Hudson Regulations (HR) 275-8.B.(17) The applicant has shown two temporary benchmarks on the plan set. Reference to a USGS benchmark was not provided.

   USGS benchmark references have been added.

b. No existing fire hydrants have been shown within 200 feet of the site.

As a result of the proposed 12" water main extension, a new fire hydrant will be added along the Robinson Road subject parcel frontage. Incidentally, it should be noted, there is an existing fire hydrant located on the southerly side of West Road, which is within 180 ft of the subject property (Map 105, Lot 19) and 400 ft from the Robinson Road and Brady Drive Intersection.

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

Comment acknowledged.

d. HR 275-9.B. See comments below.

Comment acknowledged.

e. HR 275-9.C. The applicant has noted on the plan set that a waiver from the Noise Study requirement has been requested.

The "Noise Study" waiver HTC 275-9(C) was introduced into record, discussed and unanimously approved during the March 12, 2014 planning board meeting.

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

The "Fiscal and Environmental Impact Study" waiver HTC 275-9(D) was introduced into record, discussed and unanimously approved during the March 12, 2014 planning board meeting.

g. HR 275.9.E. See comments below.

Comment acknowledged.

h. HR 275-9.F. Copies of deeds or easements were not received for review. The applicant has shown several existing easements: NHDOT drainage easement, a 25-foot slope easement, an access and utility easement, and a 30-foot wide utility easement. The plan shows that the existing riprap area starting with the slope easement area has extended well beyond the easement area outlined. The Town should discuss with the applicant and the owner of the easement the need to expand the easement. The applicant is also proposing substantial grading on the lot to the north, but has not shown any proposed easement.

A copy of the subject parcel deed (Map105, Lot 19), NHDOT, utility, access and temporary construction slope grading easements are included within the resubmission materials.

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

Comment acknowledged.

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

   a. HR 193-10.C. The applicant is proposing a driveway to the south that has a stopping platform with 10% cross slope.

The proposed Dunkin Donuts driveway is specifically located as feasibly close to the property's northerly boundary as possible in order to facilitate maximum sight distance and adequate drainage infrastructure. The proposed engineered drive apron, located as close to the height of the land as practical happens to be where Brady Drive's existing vertical grade is approximate 10.0 %. Therefore, at the intersecting pavement edge of Dunkin's drive apron and Brady Drive the 10.0 % cross slope is inevitable. The proposed design has specifically designed reasonable transitional grades from the steep Brady Drive onto the subject parcel. Please note, the onsite grade transitions within 100.0 ft from Dunkin's drive apron's from the approximate 10.0% cross slope to a site grade of less than 6.0%, which further diminishes as vehicles enter the site.

   b. HR 193-10.E. The applicant has not shown any sight distance information on the plan set for the proposed driveway.

Sight distance profiles have been added to the plan set for the Brady Drive and Robinson Road, as well as the proposed Dunkin drive apron on Brady Drive. Neither condition are significant safe sight distance concerns, due to the existing grades, distance to either stop condition, signalized intersection and dead end private road.

   c. HR 193-10.H. The proposed common access driveway (Brady Drive) is in the side yard setback. No cross easement documentation was provided.

Please refer to previous comment 1.h, as Brady Drive includes an access easement as noted on plan sheet 1 of 12.

   d. HR 275-8.B.(29) The applicant should provide additional information on the types of trucks that may make deliveries to the proposed businesses, as large trucks (WB-50) may have a hard time maneuvering the site.

The proposed multi-tenant commercial building anticipates the following trucking movements:

- ***40.0 ft Box Truck twice (2) a day during AM off peak hours (Dunkin Donuts)***
- ***WB-40 Tractor Trailer twice (2) a week during PM off peak hours (All Tenants)***

e. HR 275-8.B. (30) The applicant has proposed a loading area within the side yard setback. The loading area also doubles as a thru-traffic lane to bypass the drive-thru lane; however, if a truck is parked, site circulation will not function as designed. During the delivery time-frame, the drive-thru queue could interfere with vehicles entering the site because the 24-foot, two-way aisle width in the primary drive is partially blocked by queue vehicles. The applicant should note when deliveries will be made as to not interfere with on-site traffic. Also, "No Parking-Loading Area" sign should be provided at this location.

Please refer to the previous staff comment number 2, which describes the revised site geometry and relocated loading area, which results in an unobstructed pass through perimeter lane. Please also refer to the previous comment pertaining to anticipated trucking size and schedule.

f. HR 275-9.B. The applicant has provided a traffic study for review. CLD has only recently received authorization to begin the review; therefore, the review will be completed separately.

Please refer to the previous staff comment number 1 and attached GPI response letter.

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

a. HR 275-9.E. The applicant has not shown how the proposed wells will connect to the proposed building.

The proposed wells have been removed, in lieu of the proposed 12" municipal water main extension. A municipal water service connection with corresponding construction details/notes have been added to the project plans.

b. The applicant has shown a proposed screened utility pad; but has not provided details. Due to the proximity of the wells, additional details should be provided related to any fluids that may be part of this utility area that could adversely affect the wells.

The proposed wells and equipment pad have been removed. All proposed HVAC equipment will be roof mounted (design by others) and included within the building permit review process.

c. The applicant has proposed two wells at a close proximity to the proposed edge of pavement for the site. The applicant should comment on awareness to protect the wells from the use of deicing chemicals.

Please refer to the previous CLD comment 3a & 3b responses.

d. The applicant has shown the proposed septic system within the 25-foot slope easement on the western side of the site.

Although a small portion of the proposed specialized private septic system encroaches within the blanket 25.0 ft NHDOT Route 102 (Derry Street) slope easement, the associated Route 102 slope grading is not impacted in this area due to the proposed fill conditions.

e. A septic review was not performed as part of this review; however, we note that the plan provided indicates that the design provided is for a failed system. No existing subsurface disposal system is shown on the existing conditions plan.

The proposed specialized private septic system (design by others) plan sheet title and applicable notes have been revised to remove all reference to a failed system replacement, as the designed system is a new installation.

f. No existing fire hydrants have been shown within 200 feet of the site.

Please refer to the previous staff comment 3 and CLD comment 1b responses.

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

a. The applicant should provide copies to the Town of all pertinent communication with New Hampshire Department of Environmental Services (NHDES) with respect to the required Alteration of Terrain (AoT).

Please refer to the attached previously approve NHDES AoT approval 0192, condition number 2 and 4. This approval included both Brady Drive and Robinson Road Self Storage project permitting. The proposed Dunkin Donuts site, while disturbing less than the required threshold limits, is additional land disturbance within the original project limits and involves minor impacts to the previously approved drainage systems (Brady Drive).

b. The applicant should review the discrepancy between pre-development area and post development area within the drainage calculations. The 0.077 acres difference (approximately 3,350 sf) results in a 2.6% difference between areas. Typically, the engineering threshold is a 1% difference.

The exceptionally minor difference is attributed to the additional land disturbance on Lot 20 and existing open swale minor relocation along the common property line.

c. The applicant should provide a copy of the Site Specific soils Map referenced in Section 15 of the AoT Application.

The previously prepared Robinson Road Self Storage project's Site Specific soils map has been added to the AoT Application/drainage report.

d. The applicant should coordinate the AoT application calculations (and proposed drainage plan) with the Site Plan set. The OSI within Bio retention Basin-3 in the AoT Application is illustrated as OS2 on the plan set.

The AoT Application/drainage report and associated modeling/calculations of all proposed rain gardens/outlet structures have been correlated and revised accordingly. Specifically, OS-1 is located within Bio-Retention Area #2.

e. The applicant should coordinate the AoT application calculations (and the proposed drainage plan) with the Site Plan set for the proposed outlet elevations and detail of Bio Retention Basin Area #2.

The AoT Application/drainage report and associated modeling/calculations of all proposed rain gardens/outlet structures have been correlated and revised accordingly. Specifically, OS-2 is located within Bio-Retention Area #3

f. The applicant should provide additional orifice and outlet detail on the plan set for the outlet within Bio Retention Area #3.

A specific outlet structure detail with orifice summary has been added to the revised plans.

g. The applicant should provide riprap calculations within the AoT Application, confirming that the dimensions depicted on the plan set meet or exceed required dimensions.

Riprap calculations have been added to the AoT Application/drainage report as well as correlated with the revised plans for all proposed outlet protection aprons.

h. The applicant should show the test pit locations for the six test pits whose logs are provided in the drainage report. Also, a Test Pit #8 is shown on the plan set but no data is provided for Test Pit #8.

The applicable project test pits number #5 and #6 and are graphically depicted on the project plans and included within the AoT Application/drainage report, while all others have been removed.

5. Landscaping (HR 275-8B (31)
   - No comment at this time.

6. Erosion Control/Wetland Impacts
   a. The applicant should propose a silt fence detail from the proposed silt fence that is to be installed around the stockpile area outlined in the Stockpile Stabilization Detail.

The Stockpile Stabilization detail has been revised to include only silt soxx applications.

b. The staging stockpile and several of the erosion control measures are proposed on the owner's adjacent lot to the southeast. We note that if the abutting parcel is sold before the site work is completed a temporary construction easement may be necessary. This is important for maintenance of the erosion control measures.

The temporary staging, stockpile and construction worker parking area has been relocated on site.

c. The Town should reserve the right to require additional erosion control measures during construction if needed.

Comment acknowledged.

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

a. The applicant has noted on the plan that a NHDES AoT Permit is needed for the site and that the status is pending.

Comment acknowledged.

b. The applicant has noted on the plan that NHDES Individual Subsurface Septic Disposal System Approval is pending.

Comment acknowledged.

c. The applicant has noted on the plan that NHDES Non-Community Public Water Systems Permit is needed for the site and that the status is pending.

The proposed wells have been removed, in lieu of the proposed 12" municipal water main extension.

d. The applicant should note on the plan that a Stormwater Pollution Prevention Plan development and the filing of a Notice of Intent as part of the NPDES General Construction Permit are required.

Please refer to the additional approval and EPA reference notes added to the cover sheet.

e. Additional local permitting may be required.

Comment acknowledged.

8. Other

   a. HR 275-8.B (35) The applicant has shown four handicap parking areas and has provided corresponding details; however, the handicap van accessible sign location(s) are not shown on the plans or in the handicap striping detail. The applicant should also label Americans with Disabilities Act (ADA) compliant building entrances and provide additional spot grades and if necessary.

   The proposed Dunkin Donuts design includes two (2) van accessible handicap spaces with appropriate details on plan sheets 3 and 9 of 12. All three building entrances are ADA compliant, as indicated on both the site plans & architectural information submitted. An additional "ADA Building Entrance" plan note/leader will be added to sheet 4 of 12.

   b. The applicant has proposed a dumpster in the setback.

   Please refer to the previous staff comment number 2, which describes the revised site geometry and relocated dumpster enclosure.

   c. The applicant has shown several proposed features that do not have corresponding details. These included but are not limited to; pavement marking and striping, menu board sign, the proposed identification sign, the two signs on opposite sides of the driveway entrance, well protective radii, decorative fence detail, bollard detail, and patio detail.

   Additional construction details/notes have been added to the project plans, such as directory signs, identification pylon sign, bollard and decorative fence information.

   d. Lighting plan review was not performed as part of CLD's requested scope. We recommend that the Town confirm that the lighting approach is acceptable.

   Comment acknowledged.

This concludes Keach-Nordstrom Associates, Inc. **"Dunkin Donuts"** non-residential site plan Hudson Planning staff and municipal engineering (CLD) initial review response letter. Please refer to the attached revised plan set dated April 1, 2014. Should you have additional questions, comments or require clarifications, please contact me at (603) 627-2881.

Peter N. Julia PE
Senior Project Manager
Keach-Nordstrom Associates, Inc.

"B"

GPI **Greenman - Pedersen, Inc.**

Engineering and Construction Services

REF.: MAX-2013022

March 28, 2014

Mr. Gregory Nolan
JFJ Holdings, LLC
c/o Cafua Realty Trust
280 Merrimack Street, Suite A
Methuen, Massachusetts 01844

SUBJECT: Proposed Dunkin' Donuts and Retail Development
14 Brady Drive - Hudson, New Hampshire
Response to Traffic Peer Review Comments

Dear Mr. Nolan:

Greenman-Pedersen, Inc. (GPI) has received the CLD Consulting Engineers (CLD) comments on the Traffic Impact and Access Study (TIAS) prepared for the proposed Dunkin' Donuts and retail development to be located at 14 Brady Drive 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 1: *The GPI report defined a realistic study area limit, collected traffic data for appropriate analysis periods, and made reasonable adjustments to the base data to provide acceptable peak month traffic volume estimates for the roads and intersections in the study area under 2014 and 2024 No-Build conditions for design purposes.*

Response 1: Comment acknowledged.

Comment 2: *The vehicle speed information collected near the site could be construed as somewhat misleading, since traffic speeds being measured are either approaching a likely stop conditions at the signalized intersection with Route 102 or turning at slower speeds from Route 102 onto Robinson Road. As such, it would not be expected that traffic would be exceeding the posted 30 mph speed limit in the immediate vicinity of the site under these conditions. Nevertheless, using the posted 30 mph speed as the sight distance design criterion is appropriate.*

Response 2: Comment acknowledged.

Comment 3: *The GPI report notes that they considered the 98-unit Hickory Woods elderly housing project with two commercial lots in Londonderry as the only known planned development in the study area. However, they did not provide any backup information on the number or distribution of these specific trips to the study area roads and intersections. Rather, these trips were combined with the overall background growth in Figures 3 and 4. It would have been helpful to segregate the distribution of these trips from the background growth, even if the number of these trips appears to be small during the two analysis periods.*

Response 3: As requested, the hand-drawn networks for the elderly housing project are attached to this letter along with the trip generation and trip distribution prepared for the project.

Comment 4: *The trip generation estimates for the proposed uses on the site appear to be reasonable, include the 'pass-by' and 'diverted' trip percentages. We also agree that treating the 'pass-by' and 'diverted' trips together is appropriate and presents a conservative approach. However, the distribution of these 'pass-by' trips appears overly skewed towards Robinson Road, even though 'technically' this is where the 'pass-by' trips would be coming from. The facility would not be marketable if it was expecting that most of the 'pass-by' trips would be from Robinson Road. As such, it is fully expected that the bulk of the 'pass-by/diverted' traffic for Dunkin Donuts would come from Route 102 which has 4-5 times the traffic volume of Robinson Road. The only reason this is not being considered this way is that there is not a site driveway directly serving existing Route 102 traffic, which makes them 'diverted' trips as opposed to 'pass-by' trips.*

Our opinion is that the percentages used for the 'new' trips should be more in line with what the 'pass-by/diverted' traffic should be for the site, and that the volumes in Figure 5 and the associated Build networks and subsequent capacity analyses should be adjusted to reflect a more realistic distribution of the site-generated trips.

Response 4: When developing the Site-Generated Traffic Volume networks for the project, GPI assumed that 10 percent of the Robinson Road adjacent street traffic during the peak hours would account for pass-by trips on Robinson Road. This is consistent with general traffic engineering standards. The remaining pass-by trips were taken from Derry Road (NH Route 102). To assume less than 10 percent of all pass-by trips come from Robinson Road does not appear to be accurate in comparing the volumes that currently use the Irving Oil/Circle K/Dunkin' Donuts driveway on Robinson Road. Therefore, consistent with general traffic engineering standards, 10 percent of the adjacent street traffic was used. It should also be noted that the TIAS assumes a 49 pass-by rate for the Dunkin' Donuts portion of the site. Studies have shown

that for Dunkin' Donuts, the pass-by rates can be as high as 70 to 80 percent. According to this data, the new trips to the study area as provided within the TIAS prepared for the project is overestimated by approximately 21 to 31 percent.

Comment 5: *The drive-thru lane queuing analysis table in the Appendix for the Weekday AM peak appears incorrect. The cumulative probability column appears to be in error after the 4th vehicle, since the probabilities cannot exceed 100%. The 95th percentile queue should really be nine vehicles in the AM peak. This queue length could be accommodated on the site, even if the queue begins at the menu board. However, a queue of this length and starting point might adversely affect access to the bypass lane should vehicles queue back towards the site driveway.*

Response 5: As noted, the queuing analysis table was incorrect within the Appendix of the TIAS. The queuing analysis has been updated and is provided as an attachment to this letter.

The vehicle queuing is measured from the pick-up window. In addition to the data provided within the TIAS, vehicle queue observations were made at a free-standing Dunkin' Donuts with a drive-through window at 256 Andover Street in Peabody, Massachusetts. These observations revealed a maximum queue of 10 vehicles and an average queue of 5 vehicles during the weekday AM peak period (7:00 AM to 9:00 PM – Tuesday, October 22, 2013). During the Saturday midday peak period (11:00 AM to 2:00 PM – Saturday, October 19, 2013), the free-standing facility had a maximum queue of 8 vehicles and an average queue of 3 vehicles. Andover Street (Route 114) carries approximately 35,000 vehicles per day. NH Route 102 carries approximately 15,000 vehicles per day. Since the Dunkin' Donuts draws most of its customers from the adjacent street traffic, it is expected that the Peabody site would experience a longer queue than the proposed site in Hudson. Based on this additional vehicle queue data, it is anticipated that the vehicle queue for the drive-through window can be accommodated on site without disrupting on-site circulation. It is also expected that the retail uses may not be open for business during the weekday AM peak hour when the Dunkin' Donuts trips are the highest.

Comment 6: *The GPI study recommends signal timing and signing improvements to mitigate their impact at the Route 102/Robinson Road intersection. This is done by reallocating green time to the Robinson Road approach that primarily serves the proposed site at the expense of the other approaches, notably Route 102 eastbound and West Road southbound. There are a couple of concerns with this suggestion:*

- *The intersection analyses should be recalculated given the suggested redistribution of the 'pass-by/diverted' trips noted in Comment 4, above, to confirm that the proposed retiming is still appropriate.*

- *The accident history indicates that failure to yield from the side streets (West and Robinson) has already contributed to the crash history at this location. Shortening the green time for West Road may further encourage drivers to force their way into the intersection for fear of being caught with the short phase. Adding 'Left Turn Yield on Green' signs for these lefts may not be as effective under such scenario.*
- *Since the West and Robinson Road phases are still intended to go concurrently and not split phased (where each one goes separately), reducing the minimum green time on West does not really change operations because Robinson Road traffic will continue to be the critical controlling movement of the two side streets.*
- *The applicant should provide some guidance to the Town as to whether they feel the additional R10-12 signs can be handled by the mast arms and foundations for increased wind and ice loadings.*
- *While the signal retiming may be an interim solution, the long-term answer to improve capacity at this intersection is to provide exclusive left turn lanes and protected phasing for the two side street approaches, particularly on Robinson Road where the projected left turn exiting volume is approaching 200 vehicles during peak hours. Since this applicant is in control of the roadway frontage along Robinson Road, it is suggested that, at a minimum, right-of-way be reserved from this parcel for 'future highway purposes' so that this third lane could be added at some point in the future.*

Response 6:

Consistent with Response 4, GPI assumed that 10 percent of the Robinson Road adjacent street traffic during the peak hours would account for pass-by trips on Robinson Road. This is consistent with general engineering practice. Accordingly, the Build traffic volumes have not been updated.

The crash history indicates two crashes occurred due to 'failure to yield' between the three-year study period (2010 through 2012). The data is not specific as to the exact location of the crashes, and the signs are recommended merely as a precaution due to the concurrent phasing and not necessarily a result of an existing issue. Split phasing for the Robinson Road and West Road approaches was investigated at this location and the analysis results and capacity analysis worksheets are attached to this letter. Under the split-phased condition with optimized signal timings, all movements are expected to operate at level-of-service (LOS) D or better with volume-to-capacity ratios all below 1.00. As a result of the split phasing, however, delays increase and LOS drops on most movements at this location. Although the R10-12 signs would not be required, additional signal heads would need to be installed on the signal poles for the protected left-turn movements and right-turn overlap movements. The signal timings and phasing at this location will need to be approved by the New Hampshire Department of Transportation (NHDOT).

The TIAS incorrectly noted that the minimum green time on West Road was being reduced. As part of the proposed signal timing improvements and as provided in the capacity analysis worksheets in the Appendix of the TIAS, the proposed signal timing modifications include providing 10 additional seconds of green time to the Robinson Road and West Road approaches. These 10 seconds were accommodated by reducing green time on the NH Route 102 eastbound and westbound movements. In particular, the westbound left turn green time was reduced by 4 seconds, the eastbound shared through/right-turn green time was reduced by 6 seconds, and the eastbound left turn green time was reduced by 10 seconds.

We have located the shop drawings from the NHDOT Bureau of Traffic to determine if the existing mast arms can withstand the additional loading of the R10-12 signs. In an effort to reduce the wind load on the mast arms, a hinged connection is proposed and the sign mounting hardware options are attached. To account for the hinged connection rather than the rigid connection, half of the sign area was used in the calculation. Based on these calculations, the mast arms for the West Road and Robinson Road approaches will be able to accommodate the proposed signs. The calculations are attached to this letter for your information and will also be provided to NHDOT.

A 12-foot wide land easement, as shown on the updated Site Plan prepared by Keach-Nordstrom Associates, Inc., will be granted along Robinson Road site frontage for future potential improvements along Robinson Road, including widening.

Comment 7: *It should be noted that the average and peak queues on the Robinson Road approach to the signal are between 6-10 vehicles during the AM peak hour, even with the suggested retiming. Since there is only about 250 feet from the stop bar to the driveway, this queue length will hinder the traffic exiting the Irving site from adding to the back of the queue, as well as impair visibility of this traffic from traffic entering Robinson Road. Therefore, their ability to accept smaller than normal gaps to exit the site may be limited.*

Response 7: Comment acknowledged. As noted, there is about 250 feet from the stop bar to the Irving Oil site driveway. With the suggested traffic signal re-timing, the longest queues occur during the weekday AM peak hour with an average queue length of 148 feet (6 vehicles) and a 95th percentile queue length of 245 feet (10 vehicles). With a cycle length of 78 seconds, the 95th percentile queue is expected to occur 2 to 3 times per hour. It should be noted that these queue lengths are based on analyses performed for the 2024 design year for the peak hour of the peak monthly average peak-hour conditions and the expected 10 vehicle queue is anticipated to occur 2 to 3 times during this peak hour and all other times it is expected to be less.

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

ATTACHMENTS

CLD COMMENT LETTER
HICKORY WOODS BACKGROUND DEVELOPMENT DATA
UPDATED QUEUING ANALYSIS AM PEAK HOUR
LOS AND QUEUE ANALYSIS SUMMARY TABLES FOR SPLIT PHASING
CAPACITY AND QUEUE ANALYSIS WORKSHEETS FOR SPLIT PHASING
SIGN MOUNTING HARDWARE
MAST ARM CALCULATIONS

February 27, 2014

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

Re: Town of Hudson Planning Board Reviews
14 Brady Drive Site Plan
Tax Map 105, Lot 19
CLD Reference No. 03-0249.1312

Dear Mr. Cashell:

CLD has reviewed the Traffic Impact and Access Study prepared by Greenman-Pedersen, Inc. (GPI), dated December 17, 2013, for the above-referenced project. We received the report on February 5, 2014, and received authorization to proceed with our review on February 12, 2014.

The proposed project consists of the construction of a 5,640-square-foot multi-tenant retail building, one of which will be for a 2210 sf Dunkin Donuts restaurant with a drive-thru window, and the other two 1,625 sf spaces are for small retail uses, yet to be determined. Access and egress to the site is proposed via a single driveway on Brady Drive and not from NH Route 102. We offer the following comments on the GPI study and its conclusions.

1. The GPI report defined a realistic study area limit, collected traffic data for appropriate analysis periods, and made reasonable adjustments to the base data to provide acceptable peak month traffic volume estimates for the roads and intersections in the study area under 2014 and 2024 No-Build conditions for design purposes.

2. The vehicle speed information collected near the site could be construed as somewhat misleading, since traffic speeds being measured are either approaching a likely stop condition at the signalized intersection with Route 102 or turning at slower speeds from Route 102 onto Robinson Road. As such, it would not be expected that traffic would be exceeding the posted 30 mph speed limit in the immediate vicinity of the site under these conditions. Nevertheless, using the posted 30 mph speed as the sight distance design criterion is appropriate.

3. The GPI report notes that they considered the 98-unit Hickory Woods elderly housing project with two commercial lots in Londonderry as the only known planned development in the study area. However, they did not provide any backup information on the number or distribution of these specific trips to the study area roads and intersections. Rather, these trips were combined with the overall background growth in Figures 3 and 4. It would have been helpful to segregate the distribution of these trips from the background growth, even if the number of these trips appears to be small during the two analysis periods.

4. The trip generation estimates for the proposed uses on the site appear to be reasonable, including the 'pass-by' and 'diverted' trip percentages. We also agree that treating the 'pass-by' and 'diverted' trips together is appropriate and presents a conservative approach. However, the distribution of these 'pass-by' trips appears overly skewed towards Robinson Road, even though 'technically' this is where the 'pass-by' trips would be coming from. The facility would not be marketable if it was expecting that most of the 'pass-by' trips would be from Robinson Road. As such, it is fully expected that the bulk of the 'pass-by/diverted' traffic for Dunkin Donuts would come from Route 102 which has 4-5 times the traffic volume of Robinson Road. The only reason this is not being considered this way is that there is not a site driveway directly serving existing Route 102 traffic, which makes them 'diverted' trips as opposed to 'pass-by' trips.

   Our opinion is that the percentages used for the 'new' trips should be more in line with what the 'pass-by/diverted' traffic should be for this site, and that the volumes in Figure 5 and the associated Build networks and subsequent capacity analyses should be adjusted to reflect a more realistic distribution of site-generated trips.

5. The drive-thru lane queuing analysis table in the Appendix for the Weekday AM peak appears incorrect. The cumulative probability column appears to be in error after the 4th vehicle, since the probabilities cannot exceed 100%. The 95th percentile queue should really be nine vehicles in the AM peak. This queue length could be accommodated on the site, even if the queue begins at the menu board. However, a queue of this length and starting point might adversely affect access to the bypass lane should vehicles queue back towards the site driveway.

6. The GPI study recommends signal timing and signing improvements to mitigate their impact at the Route 102/Robinson Road intersection. This is done by reallocating green time to the Robinson Road approach that primarily serves the proposed site at the expense of other approaches, notably Route 102 eastbound and West Road southbound. There are a couple of concerns with this suggestion:

   - The intersection analyses should be recalculated given the suggested redistribution of the 'pass-by/diverted' trips noted in Comment 4, above, to confirm that the proposed retiming is still appropriate.
   - The accident history indicates that failure to yield from the side streets (West and Robinson) has already contributed to the crash history at this location. Shortening the green time for West Road may further encourage drivers to force their way into the intersection for fear of being caught with the short phase. Adding 'Left Turn Yield on Green' signs for these lefts may not be as effective under such a scenario.
   - Since the West and Robinson Road phases are still intended to go concurrently and not split phased (where each one goes separately), reducing the minimum green time on West does not really change operations because Robinson Road traffic will continue to be the critical controlling movement of the two side streets.

- The applicant should provide some guidance to the Town as to whether they feel the additional R10-12 signs can be handled by the mast arms and foundations for increased wind and ice loadings.
- While the signal retiming may be an interim solution, the long-term answer to improve capacity at this intersection is to provide exclusive left turn lanes and protected phasing for the two side street approaches, particularly on Robinson Road where the projected left turn exiting volume is approaching 200 vehicles during peak hours. Since this applicant is in control of the roadway frontage along Robinson Road, it is suggested that, at a minimum, right-of-way be reserved from this parcel for 'future highway purposes' so that this third lane could be added at some point in the future.

7. It should be noted that the average and peak queues on the Robinson Road approach to the signal are between 6-10 vehicles during the AM peak hour, even with the suggested retiming. Since there is only about 250 feet from the stop bar to the driveway, this queue length will hinder the traffic exiting the Irving site from adding to the back of the queue, as well as impair visibility of this traffic from traffic entering Robinson Road. Therefore, their ability to accept smaller than normal gaps to exit the site may be limited.

In summary, the GPI study accurately depicts the relative impacts of the additional traffic from the proposed Dunkin Donuts restaurant use on the adjacent street network. However, the recommended signal retiming to add green time to the Robinson Road approach is only an interim solution to deal with an intersection that is increasingly capacity constrained due to the cumulative effects of increased development in this immediate area. A more long-term approach would be for the Town to consider the reservation of right-of-way along the site's frontage on Robinson Road for additional lane capacity that will be needed in the not-too-distant future.

Please feel free to call if you have any questions.

Very truly yours,

Paul Konieczka

Paul Konieczka, AICP
Senior Vice President

PK:mjt

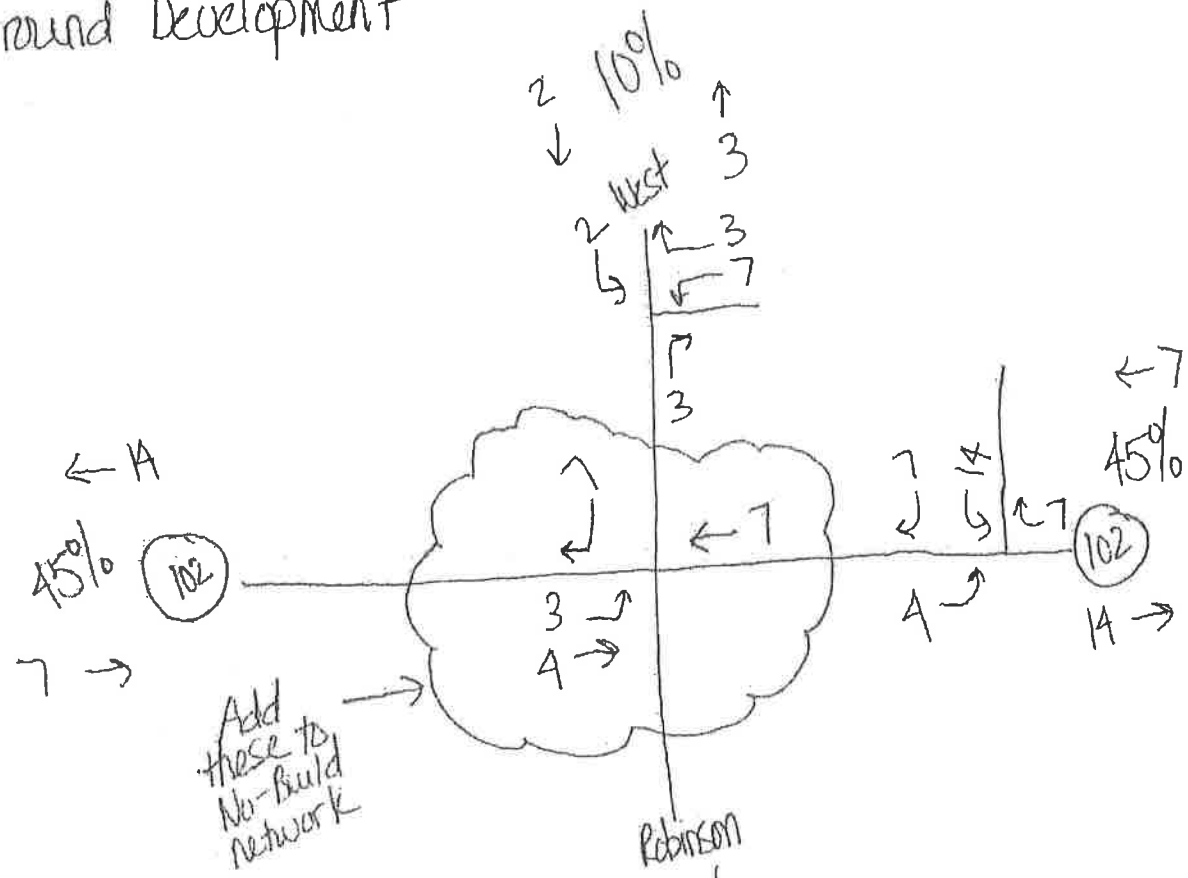
cc: Town of Hudson Engineering Division – File
Keach-Nordstrom Associates, Inc.
10 Commerce Park North
Bedford, NH 03110
Fax (603) 627-2915

Hickory Woods

#13022 Background Development

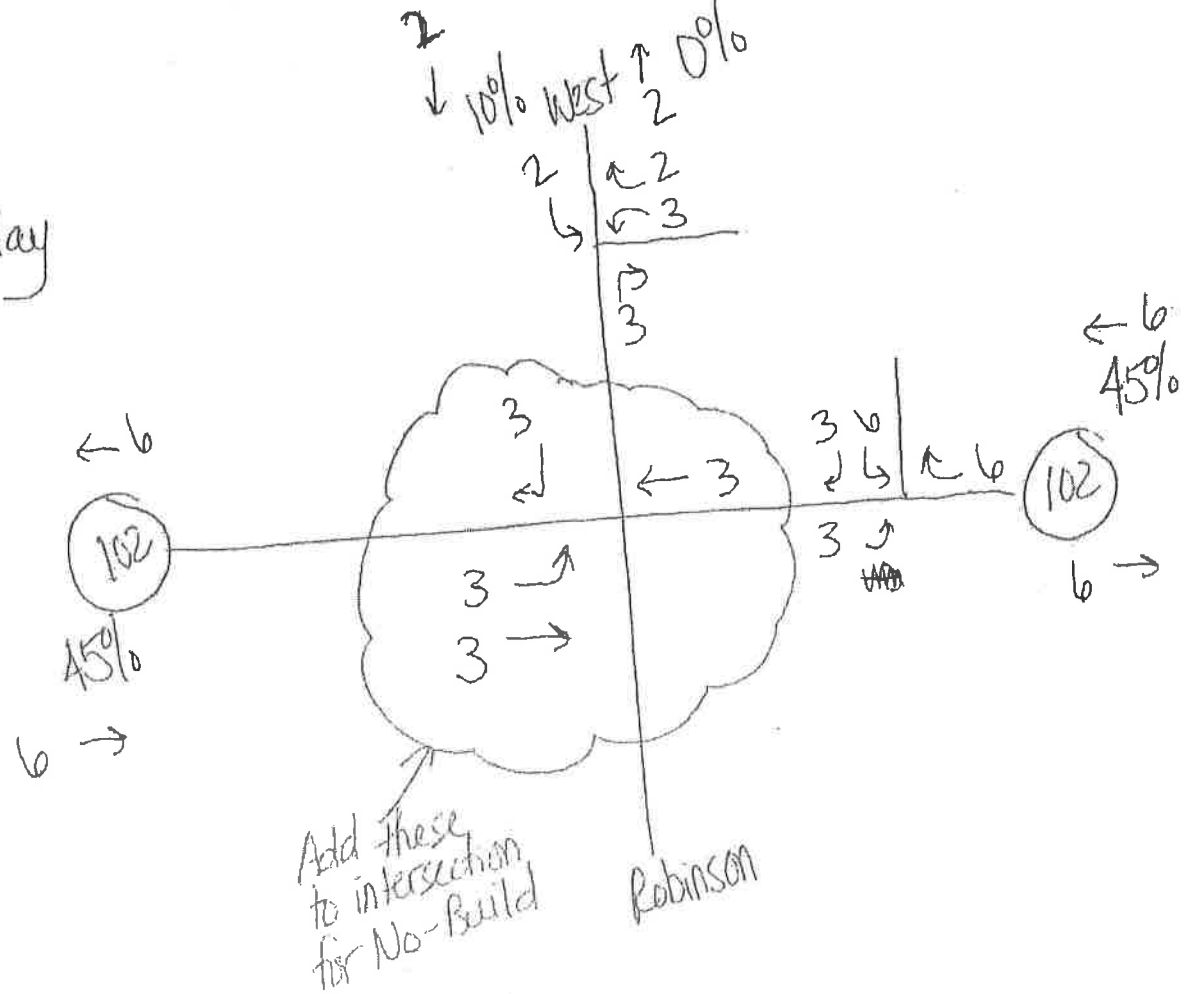
Weekday AM

In	16
Out	31
Total	47



Saturday Midday

In	14
Out	14
Total	28



TEPP LLC TRANSPORTATION ENGINEERING, PLANNING AND POLICY

93 Stiles Road, Suite 201, Salem, New Hampshire 03079 USA
800 Turnpike Street, Suite 300, North Andover, Massachusetts 01845 USA
Phone (603) 212-9133 and Fax (603) 226-4108
Email tepp@teppllc.com and Web www.teppllc.com

MEMORANDUM

Ref: 1178
Subject: Traffic Assessment
Proposed Hickory Woods Development
Londonderry, New Hampshire
From: Kim Eric Hazarvartian, Ph.D., P.E., PTOE
Principal
Date: January 8, 2013

INTRODUCTION

Hickory Woods, LLC has retained TEPP LLC to prepare this traffic-assessment memorandum (TAM) regarding the proposed Hickory Woods senior-residential development in the Town of Londonderry, New Hampshire.

The development:

- has frontage along the north side of Nashua Road (New Hampshire Route 102 or NH 102) and the east side of West Road and is otherwise surrounded by wooded land, residential development and commercial development
- will provide 98 senior-adult-detached dwelling units with a clubhouse
- will have one road to the north side of Nashua Road opposite Avery Road and one road to the east side of West Road about 3,400 feet (ft) north of Nashua Road

This TAM presents:

- existing traffic volumes
- roads and intersections
- assessment of relevant sight distances for the two proposed road intersections
- calculated trip generation
- trip distribution and network assignment
- turn-treatment assessment for the Nashua Road/Avery Road/proposed road intersection

This TAM concludes:

SIGHT DISTANCES

TEPP LLC assessed sight distances considering American Association of State Highways and Transportation Officials (AASHTO) stopping sight distance (SSD). AASHTO describes SSD, as applied to unsignalized intersections.[2]

TEPP LLC notes that:

- SSD provides for safety and is fundamental to intersection operation
- SSD enables a driver, on the major road, to perceive and react accordingly to a vehicle entering the major road from a minor road
- SSD is conservative because it encompasses a wide range of brake-reaction times and deceleration rates

TEPP LLC assessed sight distances for the following intersections:

- Nashua Road/Avery Road/proposed road
- West Road/proposed road

For Nashua Road/Avery Road/proposed road intersection, available sight distances exceed 700 ft. This provides SSD for Nashua Road speeds over 60 mph, compared to the posted speed limit of 55 mph.

For the West Road/proposed road intersection, available sight distances with roadside grading and clearing will be approximately 365 ft. This provides SSD for West Road speeds of 45 mph, compared to the posted speed limit of 35 mph and the northbound posted advisory speed of 25 mph.

TRIP GENERATION

The Institute of Transportation Engineers (ITE) publishes trip-generation information in the authoritative reference *Trip Generation*. This information is based on empirical data for a variety of land uses including detached senior-adult-detached housing, land use 252, based on dwelling units.[3]

Table 2 presents calculated weekday vehicle-trips:

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[2] AASHTO, *A Policy on Geometric Design of Highways and Streets*, Fifth Edition (Washington, DC, 2004), page 651.

[3] ITE, *Trip Generation*, 9th Edition (Washington DC, 2012), pages 478 to 487.

Table 2. Calculated weekday trip generation.

Time and Direction	Vehicle-Trips[a]		
	Total[a]	In[b]	Out[c]
Daily	368	184	184
AM-Street-Peak Hour	47	16	31
PM-Street-Peak Hour	44	27	17

[a] Based on ITE, *Trip Generation*, senior-adult-detached housing, land use 252, 98 dwelling units.

- daily, 368 (total of in and out)
- AM-street-peak hour, 47 (16 in and 31 out)
- PM-street-peak hour, 41 (27 in and 17 out)

TRIP DISTRIBUTION AND NETWORK ASSIGMENT

Trip distribution and network assignment of vehicle trips to and from a site involves such factors as existing travel patterns, population and regional land development. Trips to/from the Nashua Road will predominate, estimated as follows:

- Nashua Road to/from the east, 45 percent
- Nashua Road to/from the west, 45 percent
- West Road to/from the north, 10 percent

TURN-TREATMENT ASSESSMENT

TEPP LLC conducted a turn-treatment assessment of the Nashua Road/Avery Road/proposed road intersection. The assessment used the guidelines of the Transportation Research Board (TRB),[4] per NHDOT practice. The assessment considered traffic volumes for the weekday AM and PM street-peak hours, with a 55-mph speed on Nashua Road.[5]

Three potential treatments were considered for left turns on the Nashua Road eastbound approach:

[4] TRB, *National Cooperative Highway Research Program Report 457, Evaluating Intersection Improvements: An Engineering Study Guide* (Washington, DC, 2001), pages 21 to 23.

[5] Typically, speeds are lower during peak hours with heavier traffic volumes and delays.

QUEUING ANALYSIS

SERVICE RATE = 30 SECONDS

S	TOTAL ELAPED TIME (SEC)	3600
F	SIDE STREET ARRIVALS	89
C	SIDE STREET CAPACITY	120
λ	ARRIVAL RATE	0.0246
μ	SERVICE RATE	0.0333
ρ	TRAFFIC INTENSITY FACTOR	0.738
	AVERAGE QUEUE LENGTH	2.816794
	AVERAGE WATING TIME	84.503817
	AVERAGE TIME IN SYSTEM	114.503817

			CUMULATIVE PROBABILITY
0	PROBABILITY OF 0 VEHICLES IN QUEUE	26.20%	26.20%
1	PROBABILITY OF 1 VEHICLES IN QUEUE	19.34%	45.54%
2	PROBABILITY OF 2 VEHICLES IN QUEUE	14.27%	59.81%
3	PROBABILITY OF 3 VEHICLES IN QUEUE	10.53%	70.34%
4	PROBABILITY OF 4 VEHICLES IN QUEUE	7.77%	78.11%
5	PROBABILITY OF 5 VEHICLES IN QUEUE	5.74%	83.84%
6	PROBABILITY OF 6 VEHICLES IN QUEUE	4.23%	88.08%
7	PROBABILITY OF 7 VEHICLES IN QUEUE	3.12%	91.20%
8	PROBABILITY OF 8 VEHICLES IN QUEUE	2.31%	93.51%
9	PROBABILITY OF 9 VEHICLES IN QUEUE	1.70%	95.21%
10	PROBABILITY OF 10 VEHICLES IN QUEUE	1.26%	96.46%
11	PROBABILITY OF 11 VEHICLES IN QUEUE	0.93%	97.39%
12	PROBABILITY OF1 2 VEHICLES IN QUEUE	0.68%	98.07%
13	PROBABILITY OF 13 VEHICLES IN QUEUE	0.50%	98.58%

Table A1
LEVEL-OF-SERVICE AND QUEUE ANALYSIS SUMMARY – 2014 CONDITIONS WITH IMPROVEMENTS

Intersection/Peak Hour/Lane Group	2014 No-Build				2014 Build with Improvements (Phasing in TIAS)				2014 Build with Improvements (Split Phasing)			
	V/C [a]	Del. [b]	LOS [c]	Queue [d]	V/C	Del.	LOS	Queue	V/C	Del.	LOS	Queue
NH Route 102 at												
Robinson Road and West Road												
Weekday AM:												
NH Route 102 EB left-turns	0.28	30.4	C	12/39	0.36	34.5	D	17/45	0.36	43.1	D	20/50
NH Route EB through/right-turns	0.44	15.4	B	83/134	0.21	16.9	B	32/60	0.25	25.1	C	41/74
NH Route WB left-turns	0.32	25.6	C	28/70	0.53	31.1	C	59/110	0.50	36.5	D	71/125
NH Route WB through	0.66	16.4	B	102/301	0.72	21.6	C	207/312	0.82	34.7	C	269/426
NH Route WB right-turns	0.03	9.7	A	0/14	0.03	12.3	B	0/15	0.03	18.0	B	0/18
Robinson Rd. NB left-turns/through	0.79	37.0	D	82/205	0.77	30.5	C	129/211	0.80	43.8	D	163/224
Robinson Rd. NB right-turns	0.18	18.6	B	11/48	0.22	16.2	B	19/51	0.19	17.9	B	20/48
West Rd. SB left-turns/through	0.52	23.4	C	46/114	0.40	18.2	B	57/101	0.65	42.5	D	86/144
West Rd. SB right-turns	0.06	17.7	B	0/28	0.06	14.9	B	0/24	0.06	26.5	C	0/16
Overall Intersection	**0.68**	**20.1**	**C**	--/--	**0.74**	**22.0**	**C**	--/--	**0.77**	**33.2**	**C**	--/--
Saturday Midday:												
NH Route 102 EB left-turns	0.31	29.0	C	23/55	0.56	42.2	D	27/63	0.56	50.2	D	32/72
NH Route EB through/right-turns	0.40	15.3	B	82/130	0.47	18.5	B	106/154	0.58	28.4	C	138/193
NH Route WB left-turns	0.40	26.7	C	46/84	0.64	35.5	D	73/122	0.59	39.6	D	86/139
NH Route WB through	0.71	19.0	B	199/302	0.71	20.5	C	219/302	0.81	33.3	C	284/394
NH Route WB right-turns	0.05	11.0	B	0/19	0.05	12.0	B	0/20	0.05	17.8	B	0/23
Robinson Rd. NB left-turns/through	0.72	32.7	C	90/189	0.71	27.5	C	109/175	0.70	38.2	D	137/200
Robinson Rd. NB right-turns	0.13	19.1	B	8/44	0.17	16.5	B	12/45	0.15	18.2	B	12/42
West Rd. SB left-turns/through	0.61	26.9	C	75/136	0.48	20.1	C	71/109	0.69	43.7	D	104/149
West Rd. SB right-turns	0.05	18.4	B	0/24	0.05	15.6	B	0/20	0.05	26.7	C	0/14
Overall Intersection	**0.68**	**20.6**	**C**	--/--	**0.68**	**21.7**	**C**	--/--	**0.75**	**32.4**	**C**	--/--

[a] Volume-to-capacity ratio.
[b] Average control delay in seconds per vehicle.
[c] Level of service.
[d] Maximum queue length in feet per lane during an average/95th percentile cycle (assuming 25 feet per vehicle).

Table A2
LEVEL-OF-SERVICE AND QUEUE ANALYSIS SUMMARY – 2024 CONDITIONS WITH IMPROVEMENTS

	2024 No-Build				2024 Build with Improvements (Phasing in TIAS)				2024 Build with Improvements (Split Phasing)			
Intersection/Peak Hour/Lane Group	V/C [a]	Del. [b]	LOS [c]	Queue [d]	V/C	Del.	LOS	Queue	V/C	Del.	LOS	Queue
NH Route 102 at Robinson Road and West Road												
Weekday AM:												
NH Route 102 EB left-turns	0.24	28.8	C	16/43	0.41	38.9	D	19/48	0.40	45.7	D	22/54
NH Route EB through/right-turns	0.46	15.5	B	96/151	0.57	20.9	C	127/181	0.69	31.6	C	166/228
NH Route WB left-turns	0.35	26.7	C	38/76	0.59	35.7	D	64/117	0.54	39.1	D	76/133
NH Route WB through	0.75	20.3	C	214/347	0.78	25.0	C	240/376	0.89	41.4	D	312/497
NH Route WB right-turns	0.03	10.5	B	0/15	0.03	12.8	B	0/16	0.03	18.1	B	0/19
Robinson Rd. NB left-turns/through	0.95	66.2	E	135/244	0.86	40.7	D	148/245	0.86	51.5	D	179/264
Robinson Rd. NB right-turns	0.23	20.1	C	20/56	0.25	17.4	B	23/58	0.21	18.9	B	25/54
West Rd. SB left-turns/through	0.68	31.9	C	67/156	0.47	20.3	C	65/114	0.72	48.5	D	95/168
West Rd. SB right-turns	0.06	18.8	B	0/30	0.06	15.7	B	0/24	0.06	27.7	C	0/17
Overall Intersection	**0.77**	**25.9**	**C**	--/--	**0.77**	**25.4**	**C**	--/--	**0.83**	**37.5**	**D**	--/--
Saturday Midday:												
NH Route 102 EB left-turns	0.34	29.6	C	26/58	0.52	40.8	D	30/68	0.60	53.4	D	35/83
NH Route EB through/right-turns	0.43	15.5	B	94/144	0.53	21.0	C	121/171	0.64	29.9	C	156/215
NH Route WB left-turns	0.43	27.4	C	51/92	0.58	33.2	C	79/130	0.64	41.8	D	93/148
NH Route WB through	0.77	21.2	C	232/348	0.78	24.0	C	254/348	0.90	42.7	D	330/480
NH Route WB right-turns	0.06	10.9	B	0/20	0.05	12.6	B	0/21	0.05	18.1	B	0/24
Robinson Rd. NB left-turns/through	0.86	49.3	D	104/222	0.83	39.5	D	125/223	0.75	41.2	D	152/218
Robinson Rd. NB right-turns	0.17	19.9	B	13/51	0.20	18.3	B	17/52	0.17	18.5	B	17/48
West Rd. SB left-turns/through	0.76	36.9	D	86/168	0.60	24.9	C	82/125	0.75	48.7	D	115/172
West Rd. SB right-turns	0.06	19.0	B	0/25	0.06	17.1	B	0/21	0.06	27.1	C	0/14
Overall Intersection	**0.76**	**24.2**	**C**	--/--	**0.79**	**25.2**	**C**	--/--	**0.82**	**36.4**	**D**	--/--

[a] Volume-to-capacity ratio.
[b] Average control delay in seconds per vehicle.
[c] Level of service.
[d] Maximum queue length in feet per lane during an average/95th percentile cycle (assuming 25 feet per vehicle).

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	36	279	135	526	32	303	198	159	82
v/c Ratio	0.29	0.33	0.49	0.81	0.07	0.78	0.29	0.64	0.19
Control Delay	45.6	17.4	41.2	37.4	7.5	47.6	6.9	48.8	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.6	17.4	41.2	37.4	7.5	47.6	6.9	48.8	4.7
Queue Length 50th (ft)	20	41	71	269	0	163	20	86	0
Queue Length 95th (ft)	50	74	125	#426	18	#224	48	#144	16
Internal Link Dist (ft)		370		884		424		1608	
Turn Bay Length (ft)	440		500		500		50		295
Base Capacity (vph)	125	971	292	675	491	409	700	256	422
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.29	0.46	0.78	0.07	0.74	0.28	0.62	0.19

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	177	96	119	463	28	199	43	158	61	72	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	12	12	12
Grade (%)		3%			3%			2%			2%	
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	0.95		1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00		0.98	1.00
Satd. Flow (prot)	1507	3048		1760	1782	1243		1644	1392		1540	1480
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.96	1.00		0.98	1.00
Satd. Flow (perm)	1507	3048		1760	1782	1243		1644	1392		1540	1480
Peak-hour factor, PHF	0.98	0.98	0.98	0.88	0.88	0.88	0.80	0.80	0.80	0.84	0.84	0.84
Adj. Flow (vph)	36	181	98	135	526	32	249	54	198	73	86	82
RTOR Reduction (vph)	0	71	0	0	0	21	0	0	85	0	0	64
Lane Group Flow (vph)	36	208	0	135	526	11	0	303	113	0	159	18
Heavy Vehicles (%)	18%	7%	17%	1%	5%	28%	5%	12%	11%	27%	13%	8%
Turn Type	Prot			Prot		Perm	Split		pm+ov	Split		pm+ov
Protected Phases	5	2		1	6		8	8	1	4	4	5
Permitted Phases						6			8			4
Actuated Green, G (s)	3.8	21.5		11.4	29.1	29.1		18.1	29.5		11.7	15.5
Effective Green, g (s)	5.8	23.5		13.4	31.1	31.1		20.1	33.5		13.7	19.5
Actuated g/C Ratio	0.07	0.27		0.15	0.36	0.36		0.23	0.39		0.16	0.22
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0		6.0	6.0		6.0	6.0
Vehicle Extension (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0		5.0	5.0
Lane Grp Cap (vph)	101	826		272	639	446		381	602		243	333
v/s Ratio Prot	0.02	0.07		c0.08	c0.30			c0.18	0.03		c0.10	0.00
v/s Ratio Perm						0.01			0.05			0.01
v/c Ratio	0.36	0.25		0.50	0.82	0.03		0.80	0.19		0.65	0.06
Uniform Delay, d1	38.7	24.7		33.6	25.3	18.0		31.4	17.6		34.3	26.4
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	4.5	0.3		3.0	9.4	0.0		12.4	0.3		8.3	0.1
Delay (s)	43.1	25.1		36.5	34.7	18.0		43.8	17.9		42.5	26.5
Level of Service	D	C		D	C	B		D	B		D	C
Approach Delay (s)		27.1			34.3			33.6			37.1	
Approach LOS		C			C			C			D	

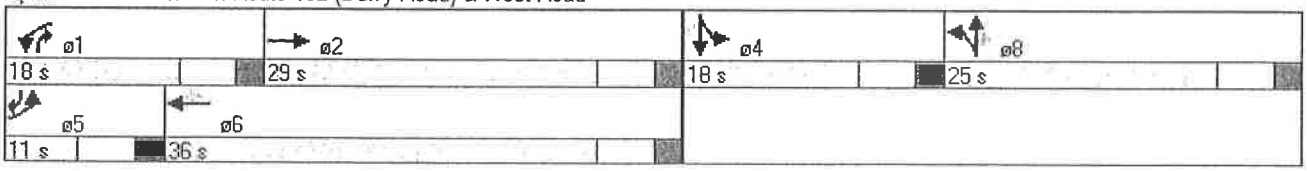
Intersection Summary				
HCM Average Control Delay	33.2	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.77			
Actuated Cycle Length (s)	86.7	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	58.5%	ICU Level of Service	B	
Analysis Period (min)	15			

c Critical Lane Group

Phase Number	1	2	4	5	6	8
Movement	WBL	EBT	SBTL	EBL	WBT	NBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize						
Recall Mode	None	Min	None	None	Min	None
Maximum Split (s)	18	29	18	11	36	25
Maximum Split (%)	20.0%	32.2%	20.0%	12.2%	40.0%	27.8%
Minimum Split (s)	11	16	11	11	16	11
Yellow Time (s)	4	4	4	4	4	4
All-Red Time (s)	2	2	2	2	2	2
Minimum Initial (s)	5	10	5	5	10	5
Vehicle Extension (s)	5	5	5	5	5	5
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)						
Flash Dont Walk (s)						
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	18	47	0	11	65
End Time (s)	18	47	65	11	47	0
Yield/Force Off (s)	12	41	59	5	41	84
Yield/Force Off 170(s)	12	41	59	5	41	84
Local Start Time (s)	72	0	29	72	83	47
Local Yield (s)	84	23	41	77	23	66
Local Yield 170(s)	84	23	41	77	23	66

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	75

Splits and Phases: 1: Route 102 (Derry Road) & West Road



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	58	567	161	551	70	265	183	191	81
v/c Ratio	0.45	0.61	0.58	0.80	0.12	0.69	0.25	0.68	0.18
Control Delay	51.5	29.6	44.2	36.2	5.8	41.5	5.5	49.3	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.5	29.6	44.2	36.2	5.8	41.5	5.5	49.3	4.6
Queue Length 50th (ft)	32	138	86	284	0	137	12	104	0
Queue Length 95th (ft)	#72	193	139	#394	23	200	42	149	14
Internal Link Dist (ft)		370		884		424		1608	
Turn Bay Length (ft)	440		500		500		50		295
Base Capacity (vph)	129	1002	288	688	576	419	731	285	438
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.57	0.56	0.80	0.12	0.63	0.25	0.67	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	53	431	91	135	463	59	164	56	152	80	69	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	12	12	12
Grade (%)		3%			3%			2%			2%	
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00		0.97	1.00
Satd. Flow (prot)	1573	3360		1760	1835	1420		1706	1486		1744	1552
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.96	1.00		0.97	1.00
Satd. Flow (perm)	1573	3360		1760	1835	1420		1706	1486		1744	1552
Peak-hour factor, PHF	0.92	0.92	0.92	0.84	0.84	0.84	0.83	0.83	0.83	0.78	0.78	0.78
Adj. Flow (vph)	58	468	99	161	551	70	198	67	183	103	88	81
RTOR Reduction (vph)	0	20	0	0	0	44	0	0	91	0	0	63
Lane Group Flow (vph)	58	547	0	161	551	26	0	265	92	0	191	18
Heavy Vehicles (%)	13%	2%	8%	1%	2%	12%	3%	2%	4%	5%	5%	3%
Turn Type	Prot			Prot		Perm	Split		pm+ov	Split		pm+ov
Protected Phases	5	2		1	6		8	8	1	4	4	5
Permitted Phases						6			8			4
Actuated Green, G (s)	3.8	22.6		11.5	30.3	30.3		17.5	29.0		11.9	15.7
Effective Green, g (s)	5.8	24.6		13.5	32.3	32.3		19.5	33.0		13.9	19.7
Actuated g/C Ratio	0.07	0.28		0.15	0.37	0.37		0.22	0.38		0.16	0.23
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0		6.0	6.0		6.0	6.0
Vehicle Extension (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0		5.0	5.0
Lane Grp Cap (vph)	104	945		272	677	524		380	628		277	349
v/s Ratio Prot	0.04	0.16		c0.09	c0.30			c0.16	0.02		c0.11	0.00
v/s Ratio Perm						0.02			0.04			0.01
v/c Ratio	0.56	0.58		0.59	0.81	0.05		0.70	0.15		0.69	0.05
Uniform Delay, d1	39.6	27.0		34.4	24.9	17.7		31.3	18.0		34.8	26.6
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	10.6	1.4		5.1	8.4	0.1		6.9	0.2		8.9	0.1
Delay (s)	50.2	28.4		39.6	33.3	17.8		38.2	18.2		43.7	26.7
Level of Service	D	C		D	C	B		D	B		D	C
Approach Delay (s)		30.4			33.2			30.0			38.6	
Approach LOS		C			C			C			D	

Intersection Summary

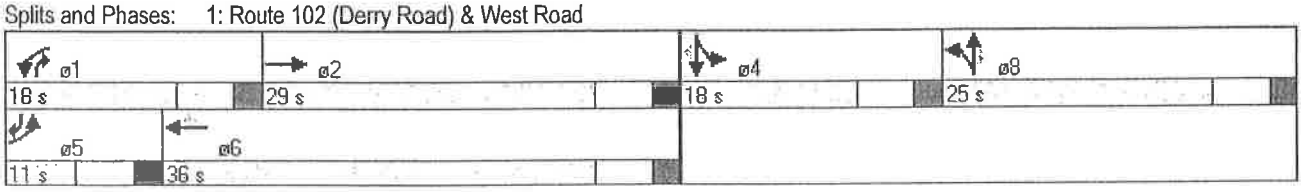
HCM Average Control Delay	32.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	87.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Phase Number	1	2	4	5	6	8
Movement	WBL	EBT	SBTL	EBL	WBT	NBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize						
Recall Mode	None	Min	None	None	Min	None
Maximum Split (s)	18	29	18	11	36	25
Maximum Split (%)	20.0%	32.2%	20.0%	12.2%	40.0%	27.8%
Minimum Split (s)	11	16	11	11	16	11
Yellow Time (s)	4	4	4	4	4	4
All-Red Time (s)	2	2	2	2	2	2
Minimum Initial (s)	5	10	5	5	10	5
Vehicle Extension (s)	5	5	5	5	5	5
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)						
Flash Dont Walk (s)						
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	18	47	0	11	65
End Time (s)	18	47	65	11	47	0
Yield/Force Off (s)	12	41	59	5	41	84
Yield/Force Off 170(s)	12	41	59	5	41	84
Local Start Time (s)	72	0	29	72	83	47
Local Yield (s)	84	23	41	77	23	66
Local Yield 170(s)	84	23	41	77	23	66

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	70

Splits and Phases: 1: Route 102 (Derry Road) & West Road



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	40	642	144	582	35	328	212	173	89
v/c Ratio	0.33	0.72	0.54	0.88	0.07	0.85	0.31	0.71	0.21
Control Delay	47.4	33.4	43.0	43.3	7.3	54.3	7.7	54.0	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.4	33.4	43.0	43.3	7.3	54.3	7.7	54.0	4.6
Queue Length 50th (ft)	22	166	76	312	0	179	25	95	0
Queue Length 95th (ft)	54	228	133	#497	19	#264	54	#168	17
Internal Link Dist (ft)		370		884		424		1608	
Turn Bay Length (ft)	440		500		500		50		295
Base Capacity (vph)	120	925	280	665	486	392	689	244	419
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.69	0.51	0.88	0.07	0.84	0.31	0.71	0.21

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	528	101	127	512	31	215	47	170	67	78	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	12	12	12
Grade (%)		3%			3%			2%			2%	
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00		0.98	1.00
Satd. Flow (prot)	1507	3195		1760	1782	1243		1644	1392		1539	1480
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.96	1.00		0.98	1.00
Satd. Flow (perm)	1507	3195		1760	1782	1243		1644	1392		1539	1480
Peak-hour factor, PHF	0.98	0.98	0.98	0.88	0.88	0.88	0.80	0.80	0.80	0.84	0.84	0.84
Adj. Flow (vph)	40	539	103	144	582	35	269	59	212	80	93	89
RTOR Reduction (vph)	0	17	0	0	0	22	0	0	84	0	0	69
Lane Group Flow (vph)	40	625	0	144	582	13	0	328	128	0	173	20
Heavy Vehicles (%)	18%	7%	17%	1%	5%	28%	5%	12%	11%	27%	13%	8%
Turn Type	Prot			Prot		Perm	Split		pm+ov	Split		pm+ov
Protected Phases	5	2		1	6		8	8	1	4	4	5
Permitted Phases						6			8			4
Actuated Green, G (s)	3.9	23.3		11.5	30.9	30.9		18.8	30.3		11.9	15.8
Effective Green, g (s)	5.9	25.3		13.5	32.9	32.9		20.8	34.3		13.9	19.8
Actuated g/C Ratio	0.07	0.28		0.15	0.37	0.37		0.23	0.38		0.16	0.22
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0		6.0	6.0		6.0	6.0
Vehicle Extension (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0		5.0	5.0
Lane Grp Cap (vph)	99	903		265	655	457		382	596		239	327
v/s Ratio Prot	0.03	0.20		c0.08	c0.33			c0.20	0.03		c0.11	0.00
v/s Ratio Perm						0.01			0.06			0.01
v/c Ratio	0.40	0.69		0.54	0.89	0.03		0.86	0.21		0.72	0.06
Uniform Delay, d1	40.1	28.6		35.1	26.6	18.1		32.9	18.5		36.0	27.5
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	5.6	2.9		4.0	14.8	0.1		18.6	0.4		12.6	0.2
Delay (s)	45.7	31.6		39.1	41.4	18.1		51.5	18.9		48.5	27.7
Level of Service	D	C		D	D	B		D	B		D	C
Approach Delay (s)		32.4			39.9			38.7			41.4	
Approach LOS		C			D			D			D	

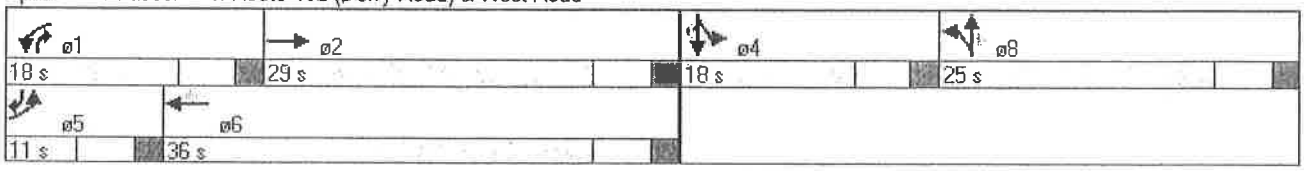
Intersection Summary			
HCM Average Control Delay	37.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	89.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Phase Number	1	2	4	5	6	8
Movement	WBL	EBT	SBTL	EBL	WBT	NBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize						
Recall Mode	None	Min	None	None	Min	None
Maximum Split (s)	18	29	18	11	36	25
Maximum Split (%)	20.0%	32.2%	20.0%	12.2%	40.0%	27.8%
Minimum Split (s)	11	16	11	11	16	11
Yellow Time (s)	4	4	4	4	4	4
All-Red Time (s)	2	2	2	2	2	2
Minimum Initial (s)	5	10	5	5	10	5
Vehicle Extension (s)	5	5	5	5	5	5
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)						
Flash Dont Walk (s)						
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	18	47	0	11	65
End Time (s)	18	47	65	11	47	0
Yield/Force Off (s)	12	41	59	5	41	84
Yield/Force Off 170(s)	12	41	59	5	41	84
Local Start Time (s)	72	0	29	72	83	47
Local Yield (s)	84	23	41	77	23	66
Local Yield 170(s)	84	23	41	77	23	66

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	90

Splits and Phases: 1: Route 102 (Derry Road) & West Road



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	63	622	173	610	77	288	198	209	88
v/c Ratio	0.50	0.67	0.63	0.89	0.13	0.74	0.27	0.74	0.20
Control Delay	54.3	31.5	46.5	44.4	5.6	44.4	6.2	53.8	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.3	31.5	46.5	44.4	5.6	44.4	6.2	53.8	4.5
Queue Length 50th (ft)	35	156	93	330	0	152	17	115	0
Queue Length 95th (ft)	#83	215	148	#480	24	218	48	#172	14
Internal Link Dist (ft)		370		884		424		1608	
Turn Bay Length (ft)	440		500		500		50		295
Base Capacity (vph)	126	987	284	686	580	412	731	281	442
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.63	0.61	0.89	0.13	0.70	0.27	0.74	0.20

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	58	477	96	145	512	65	177	62	164	88	75	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	12	12	12
Grade (%)		3%			3%			2%			2%	
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00		0.97	1.00
Satd. Flow (prot)	1573	3366		1760	1835	1420		1707	1486		1744	1552
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.96	1.00		0.97	1.00
Satd. Flow (perm)	1573	3366		1760	1835	1420		1707	1486		1744	1552
Peak-hour factor, PHF	0.92	0.92	0.92	0.84	0.84	0.84	0.83	0.83	0.83	0.78	0.78	0.78
Adj. Flow (vph)	63	518	104	173	610	77	213	75	198	113	96	88
RTOR Reduction (vph)	0	19	0	0	0	49	0	0	91	0	0	68
Lane Group Flow (vph)	63	603	0	173	610	28	0	288	107	0	209	20
Heavy Vehicles (%)	13%	2%	8%	1%	2%	12%	3%	2%	4%	5%	5%	3%
Turn Type	Prot			Prot		Perm	Split		pm+ov	Split		pm+ov
Protected Phases	5	2		1	6		8	8	1	4	4	5
Permitted Phases						6			8			4
Actuated Green, G (s)	3.9	22.9		11.7	30.7	30.7		18.0	29.7		12.1	16.0
Effective Green, g (s)	5.9	24.9		13.7	32.7	32.7		20.0	33.7		14.1	20.0
Actuated g/C Ratio	0.07	0.28		0.15	0.37	0.37		0.23	0.38		0.16	0.23
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0		6.0	6.0		6.0	6.0
Vehicle Extension (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0		5.0	5.0
Lane Grp Cap (vph)	105	945		272	676	523		385	632		277	350
v/s Ratio Prot	0.04	0.18		c0.10	c0.33			c0.17	0.03		c0.12	0.00
v/s Ratio Perm						0.02			0.05			0.01
v/c Ratio	0.60	0.64		0.64	0.90	0.05		0.75	0.17		0.75	0.06
Uniform Delay, d1	40.3	28.0		35.2	26.5	18.0		32.0	18.2		35.6	26.9
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	13.2	2.0		6.6	16.2	0.1		9.2	0.3		13.0	0.1
Delay (s)	53.4	29.9		41.8	42.7	18.1		41.2	18.5		48.7	27.1
Level of Service	D	C		D	D	B		D	B		D	C
Approach Delay (s)		32.1			40.3			32.0			42.3	
Approach LOS		C			D			C			D	

Intersection Summary

HCM Average Control Delay	36.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	88.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		

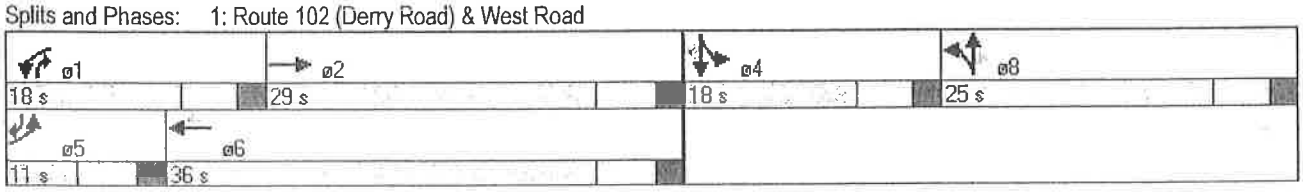
c Critical Lane Group

Phase Number	1	2	4	5	6	8
Movement	WBL	EBT	SBTL	EBL	WBT	NBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize						
Recall Mode	None	Min	None	None	Min	None
Maximum Split (s)	18	29	18	11	36	25
Maximum Split (%)	20.0%	32.2%	20.0%	12.2%	40.0%	27.8%
Minimum Split (s)	11	16	11	11	16	11
Yellow Time (s)	4	4	4	4	4	4
All-Red Time (s)	2	2	2	2	2	2
Minimum Initial (s)	5	10	5	5	10	5
Vehicle Extension (s)	5	5	5	5	5	5
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)						
Flash Dont Walk (s)						
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	18	47	0	11	65
End Time (s)	18	47	65	11	47	0
Yield/Force Off (s)	12	41	59	5	41	84
Yield/Force Off 170(s)	12	41	59	5	41	84
Local Start Time (s)	72	0	29	72	83	47
Local Yield (s)	84	23	41	77	23	66
Local Yield 170(s)	84	23	41	77	23	66

Intersection Summary

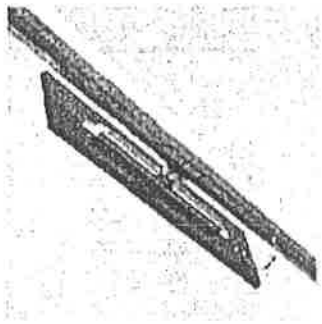
Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	80

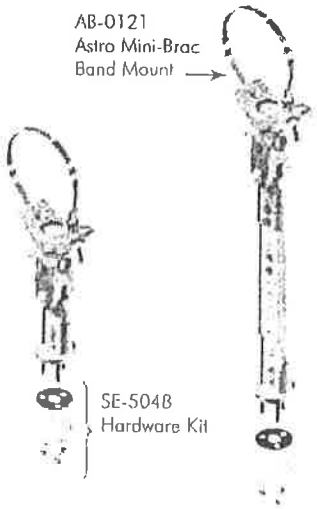
Splits and Phases: 1: Route 102 (Derry Road) & West Road



Mast Arm Sign Bracket

Pelco manufactures a variety of sign brackets in rigid and free-swinging mounts for both flat and internally illuminated signs.





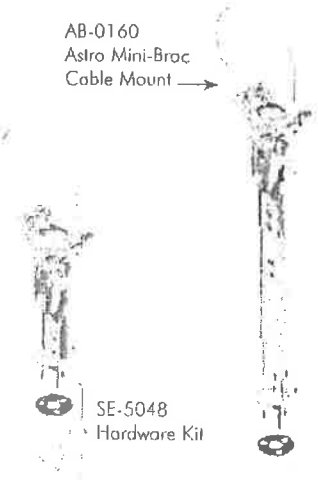
Sign Hanger Assy, Free-Swinging w/ Band Mini-Brac

SE-5015 - [Band Length] - [Coating]

Band Length:
29=29" Band
36=36" Band
42=42" Band
48=48" Band
56=56" Band

Coating:
PNC=Process No Color
P__=Paint

Note:
All assemblies supplied with stainless bushings and fasteners.
Specify stainless upgrade by including -SS in the part number, i.e., SE-5015-29-SS-PNC.



Sign Hanger Assy, Free-Swinging w/ Cable Mini-Brac

SE-5146 - [Cable Length] - [Coating]

Cable Length:
45=45" Cable
62=62" Cable
84=84" Cable

Coating:
PNC=Process No Color
P__=Paint

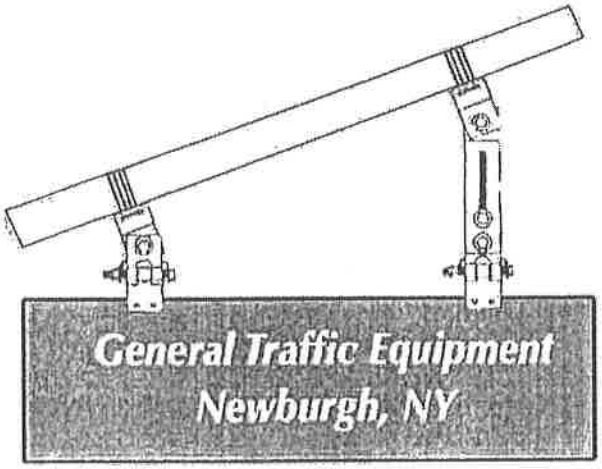
Note:
All assemblies supplied with stainless bushing and fasteners.
Specify stainless upgrade by including -SS in the part number, i.e., SE-5146-45-SS-PNC.

Note: 1. All assemblies are supplied standard with stainless fasteners and galvanized hardware on span wire clamp. Stainless upgrade to include stainless steel hardware on span wire clamps or stainless steel clamp screw on mini-brac.
2. See Reference Section for available paint colors.

Adjustable Sign Bracket
SMA - 1000

MADE WITH PRIDE IN THE USA

- *ADJUSTABLE*
- *VERSATILE*
- *SAFE*
- *MAINTENANCE FREE*



Lucy Says:

"Lets hang the dog from that thing"

The Adjustable Sign Bracket allows level mounting of traffic and street signs on Traffic Pole Mast Arms. Optional extension bars are available to accommodate large rises or signs.

Bands to any arm shape or diameter. Hangs single or double sided signs. Can be used in sets, as a single bracket or in groups of three or more depending on the sign size.

Swing design and lightweight aluminum decreases loads on arms and poles. Stainless steel springs dampen excess sign swing and keep signs from blowing out of view. Locking nuts resist loosening caused by vibration.

Aluminum alloy components, stainless steel hardware and oil impregnating bronze bearings insure long life with no additional maintenance.

General Traffic Equipment Corporation

SINCE 1978

259 Broadway, Newburgh, NY 12550

(845) 569-9000

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(800) 222-2828

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(845) 569-1800

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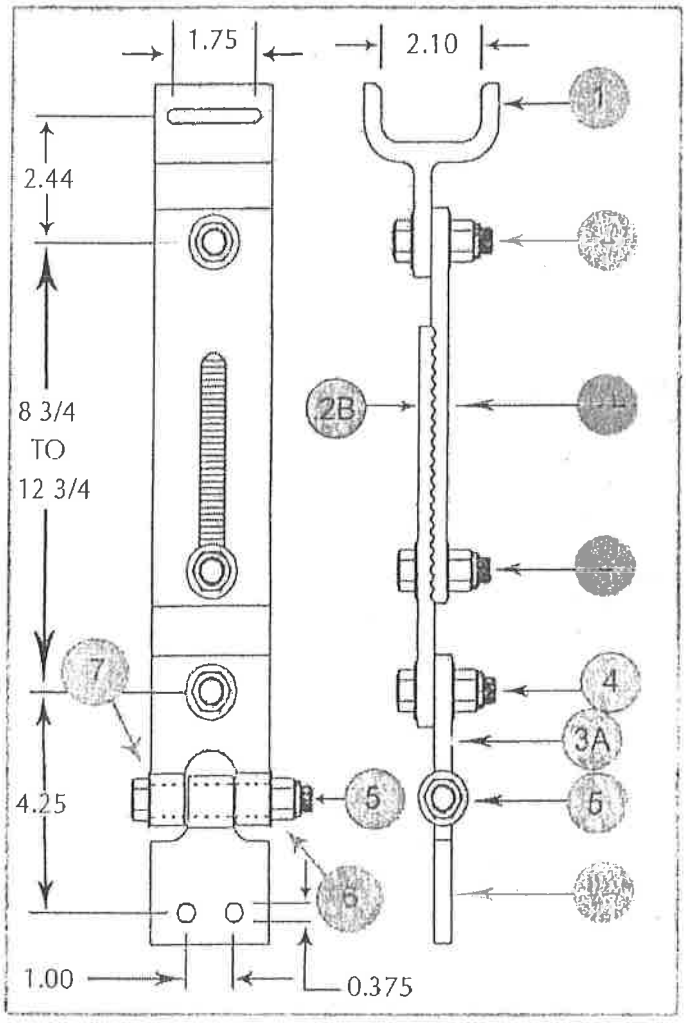
SPECIFICATIONS



1. TOP BRACKET, 6061-T6 ALUMINUM ALLOY
2A. ADJUSTABLE BAR, FIXED, 6061-T6 ALUMINUM ALLOY
2B. ADJUSTABLE BAR, SLOTTED, 6061-T6 ALUMINUM ALLOY
3A. FEMALE HINGE, 6061-T6 ALUMINUM ALLOY
4. CONNECTING HARDWARE:
   1/2-13 X 1 3/4" LENGTH HEX HEAD BOLT, 300 SERIES ST. STEEL
   1/2-13 NYLON INSERT LOCK NUT, 300 SERIES ST. STEEL
   1/2" FLAT WASHER, 300 SERIES ST. STEEL
5. HINGE PIVOT ASSEMBLY:
   1/2-13 X 4.25" LENGTH HEX HEAD BOLT, 300 SERIES ST. STEEL
   1/2-13 NYLON INSERT LOCK NUT, 300 SERIES ST. STEEL
   1/2" FLAT WASHER, 300 SERIES ST. STEEL
   OILITE BUSHING, 5/8" O.D. X 1/2" I.D. X 1/16" SHOULDER X 1/2" LENGTH
6. RIGHT-HAND TORSION SPRING, 300 SERIES ST. STEEL
7. LEFT-HAND TORSION SPRING, 300 SERIES ST. STEEL

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ANALYSIS OF STEEL MAST ARM TRAFFIC SIGNAL SUPPORT

PROJECT: Route 122 (Derry Rd)			CITY/TOWN: Hudson, NH		(Note: prop R10-12 sign-free swing)		ENGINEER	: T. Nguy
SPOLE,ft	OFFSET,ft	DPMAX,in	DPMIN,in	TPOLE,in	SARM,ft	DAMAX,in	DAMIN,in	TARM,in	WIND,mph
21.00	1.00	9.00	6.06	0.1793	20.00	6.00	3.20	0.1793	90

LOAD DATA	Signal #1	Signal #2	Signal #3	Signal #4	ANCHOR BOLT DATA		BASE PLATE DATA		B.P. Shape Factors
Sig.Wt.,lb	74	20	2	74	NBOLTS	4	T(plate)in	1.25	
Dist., ft.	20.00	16.00	18.00	0.00	DBOLT,in	1.25	Wplate,in	12.38	1 = Square
Awind, ft2	8.67	3.75	0.50	8.67	DBC,in	12.50	Dedge, in	1.77	2 = Round
Aice, ft2	23.98	7.50	1.00	23.98	Fy(bolt)	55000	Fy(plate)	36000	
Note: Distance = Distance from vertical pole					Shape Fac.	1	Dhole, in	1.50	
							Tplate on		
FILLET WELDSS	Arm :	0.1793 inches		Pole :	0.1793 inches		Mast Arm	1.25	

DESIGN ALLOWABLE STRESSES (Ref: AASHTO, 1985, Section 1.4.1, Pages 23-24)

1. POLE	Fyield =	55000 psi					
a. Bending	(FY/E)R/T =	0.047	COMPACT	BASIC BENDING ALLOW.	=	36300	psi
b. Shear	(FY/E)(R/T)1.5 =	0.231	COMPACT	BASIC SHEAR ALLOW	=	18150	psi
c. Axial (Tension)				BASIC AXIAL ALLOW	=	33000	psi
d. Axial (Compr.)	KL/r =	194.0		BASIC COMPR ALLOW	=	3956	psi
2. MAST ARM	Fyield =	55000 psi					
a. Bending	(FY/E)R/T =	0.031	COMPACT	BASIC BENDING ALLOW	=	36300	psi
b. Shear	(FY/E)(R/T)1.5 =	0.124	COMPACT	BASIC SHEAR ALLOW	=	18150	psi

SUMMARY OF ALLOWABLE STRESSES

	Group I			Group II&III		
	Bending psi	Shear psi	Axial psi	Bending psi	Shear psi	Axial psi
Pole	36300	18150	3956	50820	25410	5539
Mast Arm	36300	18150		50820	25410	

ANALYSIS OF MAST ARM

(P,W,I = forces due to dead load, wind, & ice)

(MP,MW,MI = moments due to dead load,wind, & ice)

1. FORCES AND MOMENTS AT MAST ARM BASE							
a. Dead Load (Gravity direction)							
Arm weight	Parm =	170 lb		MParm =	1525 ft lb		
Signal wt.	Psig =	170 lb		MPsig =	1836 ft lb		
b. Wind Load on Arm (Horiz)	Wind Pressure		=	42.1 psf (on signals)		& 29.2	psf(Seg. 1)
Seg. 1 (Near Pole) e)	Wseg1 =	129 lb		MWseg1 =	617 ft lb		38.5 psf(Seg. 2)
Seg. 2 (Free End))	Wseg2 =	125 lb		MWseg2 =	1778 ft lb	Cd(Seg.1) =	0.833
On Signals	Wsig =	908 lb		MWsig =	10194 ft lb	Cd(Seg.2) =	1.100
c. Ice Load (Gravity direction)							
On Arm	Iarm =	72 lb		MIarm =	649 ft lb		
On Signals	Isig =	169 lb		MIsig =	1853 ft lb		

2. LOADS AT MASTARM BASE	Fx,lb	Fy,lb	Fres	Mx,ft lb	My,ft lb	Mres,ft lb
Group 1(DL)	0	340	340 lb	3361	0	3361
Group 2(DL+Wind)	1162	340	1211 lb	3361	12588	13029
Group 3(DL+.5W+I)	581	581	822 lb	5863	6294	8602

3. BENDING AND SHEAR STRESSES AT MAST ARM BASE

Smast = 4.77 in3 Amast = 3.28 in2

	fb=M/S,psi	Fb,psi	fv=2F/As,psi	Fv,psi	CSR	
Group 1(DL)	8454	36300	207	18150	0.233	O.K.
Group 2(DL+Wind)	32770	50820	739	25410	0.646	O.K.
Group 3(DL+.5W+I)	21635	50820	501	25410	0.426	O.K.

ANALYSIS OF STEEL MAST ARM TRAFFIC SIGNAL SUPPORT

ANALYSIS OF POLE

Pole Geometry for Calculating Wind Loads

HT,ft	Dtop,in	Dbase,in	D14,in	D29,in	Darm,in	Thk,in	R14avg,in	R29avg,in	RBavg,in
21.00	6.06	9.00	7.04	6.06	6.20	0.1793	3.43	2.94	4.41

Wind Loads Acting on Pole Segments

Elevation	Area,ft2	Centroid	Cd	Ch	Pressure	Force,lb Group 2	Force,lb Group 3	Mpole,ft.lb. Group 2	Mpole,ft.lb. Group 3
0-14ft	9.4	6.7	0.49	0.80	13.6	127.6	117.0	857	785
14-29ft	3.8	17.4	0.63	1.00	22.2	84.7	47.8	1476	832
>29ft	0.0	0.0	0.00	0.00	0.0	0.0	0.0	0	0

1. FORCES, MOMENTS AND TORSION AT POLE BASE

a. Dead Load (Gravity direction)								
Arm wt	Parm =	170 lb	MParm =	1525 ft lb				1
Signal wt	Psig =	170 lb	MPsig =	1836 ft lb				1
Pole wt	Ppole =	296 lb	MPpole =	0 ft lb				
b. Wind load								
On arm	Warm =	254 lb	MWarm =	5086 ft lb		TWarm =	2395 ft lb	
On signals	Wsig =	908 lb	MWsig =	18158 ft lb		TWsig =	10194 ft lb	
On pole	Wpole =	212 lb	MWpole =	2332 ft lb				
c. Ice load								
On arm	Iarm =	72 lb	MIarm =	649 ft lb				
On signals	Isig =	169 lb	MIsig =	1853 ft lb				
On pole	Ipole =	124 lb	MIpole =	0 ft lb				

2. COMBINED LOADS AT POLE BASE

	Fx,lb	Fy,lb	Fz,lb	Mx,ft lb	Ty,ft lb	ft lb	Fres,lb srss Fx,Fz	Mres,ft lb srss Mx,Mz
Group 1(DL)	0	636	0	3361	0	0	0	3361
Group 2(DL+Wind)	1375	636	275	8476	12588	25576	1402	26944
Group 3(DL+.5W+I)	746	1002	149	8511	6294	13239	761	15739

3. BENDING, SHEAR AND TORSIONAL STRESSES AT POLE BASE

Spole 10.96 in3 | Jpole 96.64 in4 | Apole 4.97 in2 | Amplification Factor 0.9780

	fax=Fy/A psi	Faxial psi	fb=Mres/S psi	Fb psi	fv=2Fres/A +Ty/J,psi	Fv psi	CSR	
Group 1(DL)	128	3956	3681	36300	0	18150	**0.137**	O.K.
Group 2(DL+Wind)	128	5539	29510	50820	7316	25410	**0.700**	O.K.
Group 3(DL+.5W+I)	202	5539	17237	50820	3670	25410	**0.409**	O.K.

4. FORCES, MOMENTS AND TORSION IN POLE AT ARM

a. Dead Load (Gravity direction)							
Arm wt	Parm =	170 lb	MParm =	1525 ft lb			
Signal wt	Psig =	170 lb	MPsig =	1836 ft lb			
b. Wind load							
On arm	Warm =	254 lb	TWarm =	2395 ft lb			
On signals	Wsig =	908 lb	TWsig =	10194 ft lb			
c. Ice load							
On arm	Iarm =	72 lb	MIarm =	649 ft lb			
On signals	Isig =	169 lb	MIsig =	1853 ft lb			

5. COMBINED LOADS IN POLE AT ARM

	Fx,lb	Fy,lb	Fz,lb	Mx,ft lb	Ty,ft lb	ft lb	Fres,lb srss Fx,Fz	Mres,ft lb srss Mx,Mz
Group 1(DL)	0	340	0	3361	0	0	0	3361
Group 2(DL+Wind)	1162	340	232	3361	12588	0	1185	3361
Group 3(DL+.5W+I)	581	581	116	5863	6294	0	593	5863

ANALYSIS OF STEEL MAST ARM TRAFFIC SIGNAL SUPPORT

6. BENDING, SHEAR AND TORSIONAL STRESSES IN POLE AT ARM

	Spole	Jpole	Apole
	5.10 in3	30.73 in4	3.39 in2

	fax=Fy/A psi	Faxial psi	fb=Mres/S psi	Fb psi	fv=2Fres/A +Ty/J/psi	Fv psi	CSR	
Group 1(DL)	100	33000	7901	36300	0	18150	**0.221**	**O.K.**
Group 2(DL+Wind)	100	46200	7901	50820	15586	25410	**0.534**	**O.K.**
Group 3(DL+.5W+I)	171	46200	13783	50820	7793	25410	**0.369**	**O.K.**

7. ANCHOR BOLT ANALYSIS — Abolt = 0.969 sq.in.

Loads at Base of Pole: Fx = 1375 lb Fy = 636 lb Fz = 275 lb
Mx = 8476 ft lb Ty = 12588 ft lb Mz = 25576 ft lb

Maximum Bolt Loading: Axial : 22957 lb. Shear : 6337 lb Base Plate is square.
Calculated Bolt Stresses: Axial : 23688 psi Shear : 6539 psi
Allowable Bolt Stresses: Axial : 38500 psi Shear : 23100 psi

Min. Bolt Embedment = 25.00 inches [Ref. AASHTO, Section 1.3.4 (E)(3)]
Combined Stress Ratio: CSR=srss(fv,.6ft)/Fv = **0.62** **BOLTS O.K.** Ref:AASHTO,1985, Secton 1.3.4(C)

8 BASE PLATE ANALYSIS Fty 36000 = psi Allowable Stress = 33264 psi

Eccentricity (e) = 0.8 in Equivalent Section Width = 3.5 in
Pbolt=Load on One Anchor Bolt = 22957 lb
Plate Bending Moment = 17311.7 in.lb.

Required Plate Thickness = 0.9 inches <=Tplate = 1.3 in. **PLATE IS O.K.**

9. WELD ANALYSES Allowable Stress in Welds = 21000.0 psi (Ref: AASHTO 1.4.2-D(2))

AT BASE OF MAST ARM w(actual) = 0.1793 inches					AT BASE OF POLE w(actual) = 0.1793 inches				
Iw,in4	Sw,in3	Jw,in4	c, in	Jw/c	Iw,in4	Sw,in3	Jw,in4	c, in	Jw/c
173.3	57.5	346.7	3.0	114.9	578.1	128.2	1156.2	4.5	256.3
Fw(moment) lb/in	Fw(axial) lb/in	Fw(tors) lb/in	w(req'd) in	Acceptable ?	Fw(moment) lb/in	Fw(axial) lb/in	Fw(tors) lb/in	w(req'd) in	Acceptable ?
2720.8	0.0	0.0	0.098	**YES**	2523.0	22.5	589.4	0.094	**YES**

10. DEAD LOAD DEFLECTION AT END OF MAST ARM

	Weight,lb.	Dist., ft.	Ieff, in4	Defl., in.
Mast Arm	169.7	8.99	6.08	1.663
Signal 1	74.0	20.00	6.08	1.933
Signal 2	20.0	16.00	7.31	0.306
Signal 3	2.0	18.00	53.43	0.005
Signal 4	74.0	0.00	111.09	0.000

Ipole = 27.97 in4
Mpole = 3361 ft.lb.
Horiz. Pole Defl. = 1.432 in.
Arm Deflection due to Pole Displacement = 1.432 in.

Total Deflection at End of Arm = 5.34 inches = 0.44 feet

ANALYSIS OF STEEL MAST ARM TRAFFIC SIGNAL SUPPORT

PROJECT: Route 122 (Derry Rd)				CITY/TOWN: Hudson, NH			(Note: prop R10-12 sign-free swing)		ENGINEER : T. Nguy
SPOLE,ft	OFFSET,ft	DPMAX,in	DPMIN,in	TPOLE,in	SARM,ft	DAMAX,in	DAMIN,in	TARM,in	WIND,mph
21.00	1.00	12.50	9.56	0.2092	45.00	10.00	3.70	0.1793	90

LOAD DATA	Signal #1	Signal #2	Signal #3	Signal #4	ANCHOR BOLT DATA		BASE PLATE DATA		B.P. Shape Factors
Sig.Wt.,lb	74	7	20	74	NBOLTS	4	T(plate)in	1.50	1 = Square
Dist., ft.	45.00	43.00	40.00	33.00	DBOLT,in	1.50	Wplate,in	17.50	2 = Round
Awind, ft2	8.67	1.50	3.75	8.67	DBC,in	16.50	Dedge, in	2.92	
Aice, ft2	23.98	2.00	7.50	23.98	Fy(bolt)	55000	Fy(plate)	36000	
Note: Distance = Distance from vertical pole					Shape Fac.	1	Dhole, in	1.75	
							Tplate on Mast Arm	1.75	

FILLET WELDS S Arm : 0.1793 inches Pole : 0.2092 inches

DESIGN ALLOWABLE STRESSES (Ref: AASHTO, 1985, Section 1.4.1, Pages 23-24)

1. POLE	Fyield =	55000 psi					
a. Bending	(FY/E)R/T =	0.056	COMPACT	BASIC BENDING ALLOW. =	36300	psi	
b. Shear	(FY/E)(R/T)1.5 =	0.302	COMPACT	BASIC SHEAR ALLOW =	18150	psi	
c. Axial (Tension)				BASIC AXIAL ALLOW =	33000	psi	
d. Axial (Compr.)	KL/r =	131.8		BASIC COMPR ALLOW =	8573	psi	
2. MAST ARM	Fyield =	55000 psi					
a. Bending	(FY/E)R/T =	0.052	COMPACT	BASIC BENDING ALLOW =	36300	psi	
b. Shear	(FY/E)(R/T)1.5 =	0.272	COMPACT	BASIC SHEAR ALLOW =	18150	psi	

SUMMARY OF ALLOWABLE STRESSES

	Group I			Group II&III		
	Bending psi	Shear psi	Axial psi	Bending psi	Shear psi	Axial psi
Pole	36300	18150	8573	50820	25410	12002
Mast Arm	36300	18150		50820	25410	

ANALYSIS OF MAST ARM
(P,W,I = forces due to dead load, wind, & ice)
(MP,MW,MI = moments due to dead load,wind, & ice)

1. FORCES AND MOMENTS AT MAST ARM BASE

a. Dead Load (Gravity direction)								
Arm weight	Parm =	576 lb		MParm =	10978 ft lb			
Signal wt.	Psig =	175 lb		MPsig =	6873 ft lb			
b. Wind Load on Arm (Horiz)	Wind Pressure		=	42.1 psf (on signals)		&	16.0	psf(Seg. 1)
Seg. 1 (Near Pole) e)	Wseg1 =	253 lb		MWseg1 =	2664 ft lb		29.4	psf(Seg. 2)
Seg. 2 (Free End))	Wseg2 =	291 lb		MWseg2 =	9183 ft lb	Cd(Seg.1) =	0.456	
On Signals	Wsig =	950 lb		MWsig =	37459 ft lb	Cd(Seg.2) =	0.839	
c. Ice Load (Gravity direction)								
On Arm	Iarm =	242 lb		MIarm =	4612 ft lb			
On Signals	Isig =	172 lb		MIsig =	6769 ft lb			

2. LOADS AT MASTARM BASE	Fx,lb	Fy,lb	Fres	Mx,ft lb	My,ft lb	Mres,ft lb
Group 1(DL)	0	751	751 lb	17851	0	17851
Group 2(DL+Wind)	1493	751	1672 lb	17851	49306	52438
Group 3(DL+.5W+I)	900	1166	1473 lb	29233	25404	38729

3. BENDING AND SHEAR STRESSES AT MAST ARM BASE

Smast = 13.58 in3 Amast = 5.53 in2

	fb=M/S,psi	Fb,psi	fv=2F/As,psi	Fv,psi	CSR	
Group 1(DL)	15772	36300	272	18150	0.435	O.K.
Group 2(DL+Wind)	46331	50820	604	25410	0.912	O.K.
Group 3(DL+.5W+I)	34218	50820	532	25410	0.674	O.K.

ANALYSIS OF STEEL MAST ARM TRAFFIC SIGNAL SUPPORT

ANALYSIS OF POLE

Pole Geometry for Calculating Wind Loads

HT,ft	Dtop,in	Dbase,in	D14,in	D29,in	Darm,in	Thk,in	R14avg,in	R29avg,in	RBavg,in
21.00	9.56	12.50	10.54	9.56	9.70	0.2092	5.17	4.68	6.15

Wind Loads Acting on Pole Segments

Elevation	Area,ft2	Centroid	Cd	Ch	Pressure	Force,lb		Mpole,ft.lb.	
						Group 2	Group 3	Group 2	Group 3
0-14ft	13.4	6.8	0.45	0.80	12.6	169.6	168.0	1153	1143
14-29ft	5.9	17.4	0.45	1.00	15.8	92.5	73.3	1613	1278
>29ft	0.0	0.0	0.00	0.00	0.0	0.0	0.0	0	0

1. FORCES, MOMENTS AND TORSION AT POLE BASE

a. Dead Load (Gravity direction)									
Arm wt	Parm =	576	lb	MParm =	10978	ft lb			0
Signal wt	Psig =	175	lb	MPsig =	6873	ft lb			0
Pole wt	Ppole =	509	lb	MPpole =	0	ft lb			
b. Wind load									
On arm	Warm =	543	lb	MWarm =	10864	ft lb	TWarm =	11847	ft lb
On signals	Wsig =	950	lb	MWsig =	18999	ft lb	TWsig =	37459	ft lb
On pole	Wpole =	262	lb	MWpole =	2766	ft lb			
c. Ice load									
On arm	Iarm =	242	lb	MIarm =	4612	ft lb			
On signals	Isig =	172	lb	MIsig =	6769	ft lb			
On pole	Ipole =	182	lb	MIpole =	0	ft lb			

2. COMBINED LOADS AT POLE BASE

	Fx,lb	Fy,lb	Fz,lb	Mx,ft lb	Ty,ft lb ft lb		Fres,lb srss Fx,Fz	Mres,ft lb srss Mx,Mz
Group 1(DL)	0	1260	0	17851	0	0	0	17851
Group 2(DL+Wind)	1755	1260	351	24377	49306	32629	1790	40730
Group 3(DL+.5W+I)	1141	1857	228	33316	27992	20415	1164	39073

3. BENDING, SHEAR AND TORSIONAL STRESSES AT POLE BASE

Spole	Jpole	Apole	Amplification Factor
24.82 in3	305.06 in4	8.08 in2	0.9867

	fax=Fy/A psi	Faxial psi	fb=Mres/S psi	Fb psi	fv=2Fres/A +Ty/J,psi	Fv psi	CSR	
Group 1(DL)	156	8573	8631	36300	0	18150	**0.260**	**O.K.**
Group 2(DL+Wind)	156	12002	19692	50820	12343	25410	**0.642**	**O.K.**
Group 3(DL+.5W+I)	230	12002	18891	50820	7026	25410	**0.475**	**O.K.**

4. FORCES, MOMENTS AND TORSION IN POLE AT ARM

a. Dead Load (Gravity direction)									
Arm wt	Parm =	576	lb	MParm =	10978	ft lb			
Signal wt	Psig =	175	lb	MPsig =	6873	ft lb			
b. Wind load									
On arm	Warm =	543	lb	TWarm =	11847	ft lb			
On signals	Wsig =	950	lb	TWsig =	37459	ft lb			
c. Ice load									
On arm	Iarm =	242	lb	MIarm =	4612	ft lb			
On signals	Isig =	172	lb	MIsig =	6769	ft lb			

5. COMBINED LOADS IN POLE AT ARM

	Fx,lb	Fy,lb	Fz,lb	Mx,ft lb	Ty,ft lb ft lb		Fres,lb srss Fx,Fz	Mres,ft lb srss Mx,Mz
Group 1(DL)	0	751	0	17851	0	0	0	17851
Group 2(DL+Wind)	1493	751	299	17851	49306	0	1523	17851
Group 3(DL+.5W+I)	900	1166	180	29233	27992	0	918	29233

ANALYSIS OF STEEL MAST ARM TRAFFIC SIGNAL SUPPORT

6. BENDING, SHEAR AND TORSIONAL STRESSES IN POLE AT ARM

Spole = 14.80 in3 | Jpole = 140.46 in4 | Apole = 6.24 in2

	fax=Fy/A psi	Faxial psi	fb=Mres/S psi	Fb psi	fv=2Fres/A +Ty/J/psi	Fv psi	CSR	
Group 1(DL)	120	33000	14474	36300	0	18150	0.402	O.K.
Group 2(DL+Wind)	120	46200	14474	50820	20674	25410	0.949	O.K.
Group 3(DL+.5W+I)	187	46200	23703	50820	11745	25410	0.684	O.K.

7. ANCHOR BOLT ANALYSIS

Abolt = 1.405 sq.in.

Loads at Base of Pole: Fx = 1755 lb Fy = 1260 lb Fz = 351 lb
Mx = 24377 ft lb Ty = 49306 ft lb Mz = 32629 ft lb

Maximum Bolt Loading: Axial : 29001 lb. Shear : 18303 lb
Calculated Bolt Stresses es: Axial : 20638 psi Shear : 13025 psi
Allowable Bolt Stresses: s: Axial : 38500 psi Shear : 23100 psi

Base Plate is square.

Min. Bolt Embedment = 30.00 inches [Ref. AASHTO, Section 1.3.4 (E)(3)]
Combined Stress Ratio: CSR=srss(fv,.6ft)/Fv = 0.61 **BOLTS O.K.** Ref:AASHTO,1985, Secton 1.3.4(C)

8 BASE PLATE ANALYSIS

Fty = 36000 psi Allowable Stress = 33264 psi

Eccentricity (e) = 0.9 in Equivalent Section Width = 6.5 in
Pbolt=Load on One Anchor Bolt = 29001 lb
Plate Bending Moment = 25495.1 in.lb.

Required Plate Thickness = 0.8 inches <=Tplate = 1.5 in. **PLATE IS O.K.**

9. WELD ANALYSES

Allowable Stress in Welds = 21000.0 psi (Ref: AASHTO 1.4.2-D(2))

AT BASE OF MAST ARM w(actual) = 0.1793 inches

Iw,in4	Sw,in3	Jw,in4	c, in	Jw/c
797.4	158.9	1594.8	5.0	317.8

Fw(moment) lb/in	Fw(axial) lb/in	Fw(tors) lb/in	w(req'd) in	Acceptable ?
3960.6	0.0	0.0	0.143	**YES**

AT BASE OF POLE w(actual) = 0.2092 inches

Iw,in4	Sw,in3	Jw,in4	c, in	Jw/c
1545.0	246.8	3090.1	6.3	493.5

Fw(moment) lb/in	Fw(axial) lb/in	Fw(tors) lb/in	w(req'd) in	Acceptable ?
1980.7	32.1	1198.9	0.085	**YES**

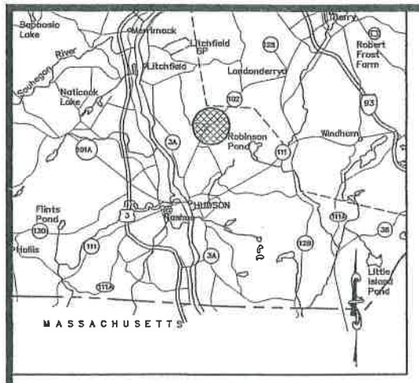
10. DEAD LOAD DEFLECTION AT END OF MAST ARM

	Weight,lb.	Dist., ft.	Ieff, in4	Defl., in.
Mast Arm	576.3	19.05	24.06	16.256
Signal 1	74.0	45.00	20.90	6.408
Signal 2	7.0	43.00	22.24	0.532
Signal 3	20.0	40.00	194.93	0.155
Signal 4	74.0	33.00	238.66	0.342

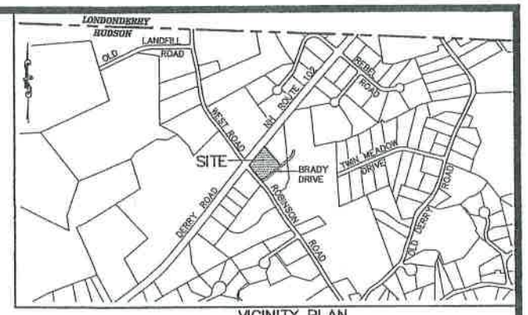
Ipole = 104.09 in4
Mpole = 17851 ft.lb.
Horiz. Pole Defl. = 2.044 in.
Arm Deflection due to Pole Displacement = 4.599 in.

Total Deflection at End of Arm = 28.29 inches = 2.36 feet

PACKET 4/9/14



VICINITY PLAN
NOT TO SCALE



VICINITY PLAN
SCALE: 1" = 1,000'

NON-RESIDENTIAL SITE PLAN
DUNKIN DONUTS
MAP 105; LOT 19
14 BRADY DRIVE
HUDSON, NEW HAMPSHIRE

HUDSON
APR 01 2014
COMMUNITY DEVELOPMENT

OWNER OF MAP 105; LOT 19
SIGNATURE:
DATE:

OWNER:
NOURY INVESTMENTS, LLC.
17 ELNATHANS WAY
HOLLIS, NEW HAMPSHIRE 03049

APPLICANT:
CAFUA MANAGEMENT GROUP
ATTN: GREGORY NOLAN
280 MERRIMACK STREET, SUITE A
METHUEN, MASSACHUSETTS 01844

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

IN ASSOCIATION WITH:
ADVANCED ONSITE SOLUTIONS, LLC.
GARY R. SPAULDING
PO BOX 248
CANTERBURY, NEW HAMPSHIRE 03224
(603) 783-8042

SHEET TITLE	SHEET No.
MASTER PLAN	1
EXISTING CONDITIONS PLAN	2
NON-RESIDENTIAL SITE LAYOUT PLAN	3
GRADING AND DRAINAGE PLAN	4
DRAINAGE PROFILES	5
SIGHT DISTANCE PLAN & PROFILES	6 – 7
EROSION CONTROL PLAN	8
LANDSCAPE PLAN	9
LIGHTING PLAN	10
CONSTRUCTION DETAILS	11 – 15
SEPTIC DESIGN PLAN & DETAILS (BY ADVANCED ONSITE SOLUTIONS, LLC.)	1 – 2

STATE OF NEW HAMPSHIRE — ANTHONY M. BASSO — No. 9123 — LICENSED LAND SURVEYOR
4/1/14

DIG SAFE — DIGSAFE 1-888-344-7233 — UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM

STATE OF NEW HAMPSHIRE — JULIA PETER — No. 10435 — LICENSED PROFESSIONAL ENGINEER
4/1/14

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

REVISED APRIL 1, 2014
PROJECT NO. 13-0304-1

REQUIRED PERMITS/APPROVALS	PERMIT No.	APPROVAL DATE	EXPIRATION DATE
HUDSON SITE PLAN	---	(Pending)	---
HUDSON (WAIVERS; HTC 275-9 C & D)	---	03-12-14	03-12-15
NHDES ALTERATION OF TERRAIN	---	(Pending)	---

PERMIT NOTIFICATION NOTES:
1. THE CONTRACTOR IS REQUIRED TO FILE NHDES INTENT TO START/COMPLETION NOTIFICATIONS.
2. THE OWNER, OPERATOR and CONTRACTOR ARE REQUIRED TO FILE EPA NOI and NOT NOTIFICATIONS.

THE OWNER, IN CONJUNCTION WITH THE CONTRACTOR (OPERATORS), MUST COMPLY WITH THE EPA NPDES CONSTRUCTION GENERAL PERMIT (CGP) FOR CONSTRUCTION ACTIVITIES GREATER THAN ONE (1.0) ACRE, AS PART OF THE CGP. A NOTICE OF INTENT (NOI) IS REQUIRED, AT LEAST 14 DAYS PRIOR TO COMMENCING LAND DISTURBING CONSTRUCTION.

THE CGP OUTLINES A SET OF PROVISIONS MANDATING THE OWNER AND CONTRACTOR TO COMPLY WITH THE REQUIREMENTS OF THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) STORM WATER REGULATIONS, INCLUDING, BUT NOT LIMITED TO, STORM WATER POLLUTION PREVENTION PLANS (SWPPP'S) FOR THE IMPLEMENTATION OF EROSION AND SEDIMENTATION CONTROLS, EQUIPMENT MAINTENANCE GUIDELINES, ETC.

ALL SWPPP INSPECTION REPORTS MUST BE DELIVERED TO THE TOWN OF HUDSON PDF EMAIL WITHIN THREE (3) DAYS OF EACH REQUIRED INSPECTION.

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

LEGEND

⊡	STONE BOUND FOUND
⊙	IRON PIN FOUND
	ABUTTER LINE
	PROPERTY LINE
	CHAIN LINK FENCE
	GUARDRAIL
	TREELINE
	EDGE OF PAVEMENT
	STONEWALL
	BUILDING SETBACK
	EXISTING EASEMENT
	PROP. EDGE OF PAVEMENT
	PROP. BITUMINOUS CURB
	PROPOSED EASEMENT
	ZONE LINE
	PROPOSED GUARDRAIL

VICINITY PLAN
SCALE: 1" = 1,000'

REFERENCE PLAN:

1. "NILLC SUBDIVISION, DERRY ROAD–RTE. 102 & ROBINSON ROAD," HUDSON, NH, PREPARED FOR NOURY INVESTMENTS, LLC., PREPARED BY MAYNARD & PAQUETTE ENGINEERING ASSOCIATES, LLC., DATED JANUARY 10, 2003.
2. "NON-RESIDENTIAL SITE PLAN, ROBINSON ROAD SELF STORAGE, MAP 105; LOT 17, ROBINSON ROAD & DERRY ROAD (NH ROUTE 102), HUDSON, NEW HAMPSHIRE," DATED: AUGUST 2010, WITH REVISIONS THROUGH 01/03/11, PREPARED BY: KEACH-NORDSTROM ASSOCIATES, INC. (22 SHEETS).

PROJECT NOTES:

1. THE PURPOSE OF THIS PLAN IS TO ILLUSTRATE THE PROPOSED LAYOUT OF A DUNKIN DONUTS AND UNSPECIFIED RETAIL SPACE WITH ASSOCIATED SITE APPURTENANCES ON MAP 105; LOT 19.
2. LOT NUMBERS REFER TO THE TOWN OF HUDSON ASSESSORS MAP 105; LOT 19.
3. TOTAL SITE AREA IS 94,981 SF, OR 2.180 ACRES.
4. PRESENT ZONING: GENERAL ONE (G-1)
   MINIMUM LOT REQUIREMENTS:
   - LOT AREA 87,120 SF
   - LOT FRONTAGE 200 FT
   MINIMUM BUILDING SETBACK REQUIREMENTS:
   - FRONT 50 FT
   - SIDE 15 FT
   - REAR 15 FT
5. BOUNDARY AND TOPOGRAPHIC INFORMATION IS FROM AN ON THE GROUND FIELD SURVEY PERFORMED BY THIS OFFICE BETWEEN MARCH 2010 AND MAY 2013.
6. PRESENT OWNER OF RECORD:
   NOURY INVESTMENTS, LLC.
   17 ELNATHANS WAY
   HOLLIS, NH 03049
   BK. 8369, PG. 2857
7. SITE WILL BE SERVICED BY ON-SITE WELL AND SEPTIC.
8. THE SUBJECT PREMISES IS NOT LOCATED WITHIN A DESIGNATED FLOOD ZONE, AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP (FIRM) MAP NUMBER 33011C0508D, PANEL 508 OF 701 WITH AN EFFECTIVE DATE OF SEPTEMBER 25, 2009. THE SUBJECT PARCEL IS LOCATED IN ZONE 'X'.
9. THE CONTRACTOR SHALL ONLY USE BENCHMARKS AS PROVIDED BY THE ENGINEER OF RECORD (KEACH-NORDSTROM ASSOCIATES INC.).
10. THE LOCATION OF ANY UNDERGROUND UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. KEACH-NORDSTROM ASSOCIATES, INC. MAKES NO CLAIM TO THE ACCURACY OR COMPLETENESS OF UTILITIES SHOWN. LOCATIONS SHOWN WERE TAKEN FROM FIELD SURVEY AND REFERENCE PLANS. PRIOR TO ANY EXCAVATION ON SITE THE CONTRACTOR SHALL CONTACT DIG SAFE AT 1-888-344-7233.
11. BUILDING AREA:

TENANT A (DUNKIN DONUTS)	= 2,210 SF
TENANT B (UNSPECIFIED)	= 1,625 SF
TENANT C (UNSPECIFIED)	= 1,625 SF
TOTAL BUILDING AREA	= 5,460 SF

12. PARKING:
   REQUIRED:
   DRIVE THROUGH RESTAURANT: 12 STACKING SPACES (HTC 275-8, B, 26-C-5)
   RETAIL: 1 SPACE/200 SF = 3,250 SF/200 = 16 SPACES
   RESTAURANT WITH NO BAR: 1 SPACE/100 SF = 2,210 SF/100 = 22 SPACES
   TOTAL SPACES REQUIRED = 38 SPACES + 12 STACKING SPACES
   PROPOSED: 42 SPACES PROVIDED (INCLUDES 2 HANDICAP SPACES) + 12 STACKING SPACES
13. LOADING:
   REQUIRED: 1 SPACE/FIRST 5,000 SF + 1 SPACE/10,000 SF
   TOTAL SPACES REQUIRED = 1 SPACE
   PROPOSED: 1 SPACE PROVIDED
14. OPEN SPACE:
   REQUIRED = 35.0%
   PROVIDED = 56.2%
15. SITE LIGHTING SHALL BE AS SHOWN ON THE PLAN, DIRECTED ONTO SITE, AND SHALL CONFORM WITH ALL APPLICABLE TOWN OF HUDSON ZONING REGULATIONS.
16. PROPOSED IDENTIFICATION SIGNAGE SHALL BE LOCATED AS SHOWN AND SHALL BE IN COMPLIANCE WITH ARTICLE 12 OF THE HUDSON ZONING ORDINANCE WITH REGARD TO DIMENSIONS AND LIGHTING. SIGNAGE DESIGN, DETAILS, AND NOTES TO BE PROVIDED BY OWNER/CONTRACTOR DURING THE BUILDING APPLICATION PROCESS. ALL SIGNS ARE SUBJECT TO APPROVAL BY THE HUDSON PLANNING BOARD PRIOR TO INSTALLATION THERE OF.
17. SITE IMPROVEMENTS DEPICTED ON THE PLAN SHALL CONFORM WITH TITLE III OF THE AMERICANS WITH DISABILITIES ACT WITH REGARD TO DIMENSION AND GRADE.
18. IT SHALL BE UNLAWFUL TO MODIFY, CHANGE, OR ALTER ANY STRUCTURE OR USE SHOWN ON THIS SITE PLAN IN ANYWAY WHATSOEVER, OR CONVERT OR ALTER ANY STRUCTURE OR USE SHOWN ON THIS SITE PLAN, OR CHANGE THE ABOVE USE INDICATED ON THE PLAN WITHOUT RECEIVING APPROVAL FROM THE TOWN OF HUDSON PLANNING BOARD
19. TRASH PICK-UP SHALL NOT OCCUR EARLIER THEN 7:00 AM NOR LATER THAN 7:00 PM, MONDAY THROUGH FRIDAY ONLY.
20. CONSTRUCTION ACTIVITIES ON THE SITE SHALL BE LIMITED TO BETWEEN 7:00 AM AND 7:00 PM MONDAY THROUGH SATURDAY. NO CONSTRUCTION ACTIVITIES SHALL OCCUR ON SUNDAYS.
21. IF LOT DEVELOPMENT INVOLVES BLASTING AND/OR RAMMING OF BEDROCK MATERIALS, SAID ACTIVITIES SHALL BE LIMITED TO THE HOURS BETWEEN 7:00 AM AND 5:00 PM MONDAY THROUGH SATURDAY ONLY. SAID BLASTING/RAMMING ACTIVITIES SHALL BE PROHIBITED ON SUNDAYS AND NATIONAL HOLIDAYS.

NOTES (CONTINUED):

22. REQUIRED STATE PERMITS FOR CONSTRUCTION:

	STATUS
NHDES INDIVIDUAL SUBSURFACE SEPTIC DISPOSAL SYSTEM APPROVAL	PENDING
NHDES ALTERATION OF TERRAIN PERMIT	PENDING

23. WAIVERS REQUESTED:
   HTC 275-9(C) – NOISE STUDY
   HTC 275-9(D) – FISCAL/ENVIRONMENTAL IMPACT STUDY
24. PRIOR TO THE ISSUANCE OF A FINAL CERTIFICATE OF OCCUPANCY, AN 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 SITE PLAN.
25. PLOWED SNOW FROM THE FACILITIES, DRIVEWAY, PARKING LOTS AND SIDEWALK SHALL BE STORED IN THE DESIGNATED AREAS SHOWN IN THIS PLAN SET. WHEN THE SNOW STORAGE AREAS ARE AT CAPACITY, SUBSEQUENT SNOW SHALL BE HAULED OFF-SITE AND DISPOSED OF IN AN ENVIRONMENTALLY SOUND FASHION IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
26. THE ONSITE DRAINAGE SYSTEM SHALL BE CONSTRUCTED AND MAINTAINED IN COMPLIANCE WITH NHDES REQUIREMENTS FOR SUCH SYSTEMS.
27. THIS PLAN SHALL BE SUBJECT TO FINAL ENGINEERING REVIEW AND APPROVAL, INCLUDING APPROVAL OF THE SWPPP.
28. THE APPLICANT'S ENGINEER AND/OR CONTRACTOR SHALL CONTACT THE TOWN OF HUDSON TO SCHEDULE A PRECONSTRUCTION MEETING, WHICH WILL BE HELD WITH STAFF PRIOR TO STARTING CONSTRUCTION.
29. ALL IMPROVEMENTS SHOWN ON THE SITE PLAN OF RECORD, INCLUDING NOTES 1-29 ON THIS SHEET, SHALL BE COMPLETED IN THEIR ENTIRETY AT THE EXPENSE OF THE APPLICANT OR THEIR ASSIGNS.

MASTER SITE PLAN

DUNKIN DONUTS

MAP 105; LOT 19
14 BRADY DRIVE
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:	APPLICANT:
NOURY INVESTMENTS, LLC. 17 ELNATHANS WAY HOLLIS, NH 03049 BK. 8369, PG. 2857	CAFUA MANAGEMENT GROUP ATTN: GREGORY NOLAN 280 MERRIMACK STREET, SUITE A METHUEN, MA 01844

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

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

THIS PLAN AND THE SURVEY UPON WHICH IT IS BASED WAS MADE ON THE GROUND UNDER MY DIRECTION AND SUPERVISION BETWEEN MARCH 2010 AND MAY 2013 IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE STATE OF NEW HAMPSHIRE AND THE CITY/TOWN WITHIN WHICH IT IS LOCATED WITH A TRAVERSE ERROR OF CLOSURE BETTER THAN 1 PART IN 10,000. THE SURVEY PERFORMED IS CLASSIFIED AS AN URBAN STANDARD SURVEY, (CATEGORY 1, CONDITION 1) AS DEFINED IN THE NEW HAMPSHIRE LAND SURVEYORS ASSOCIATION ETHICS AND STANDARDS.

4/1/14
DATE

ANTHONY M. BASSO

REVISIONS

No.	DATE	DESCRIPTION	BY
1	04-01-14	REVISED LOT LAYOUT, ADDED EASEMENTS	PNJ
2			

DATE: JANUARY 24, 2014	SCALE: 1" = 40'
PROJECT NO: 13-0304-1	SHEET 1 OF 15

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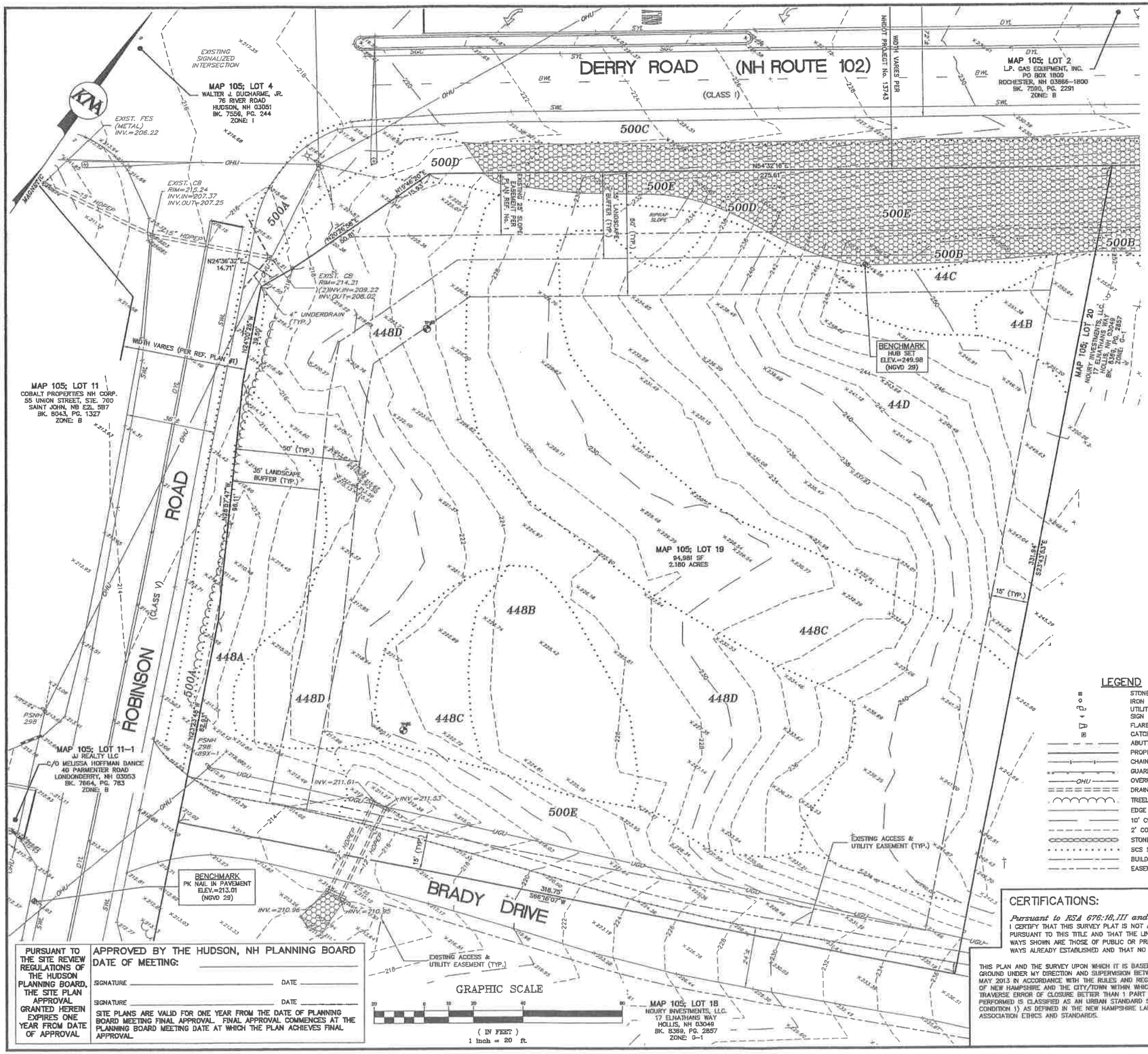
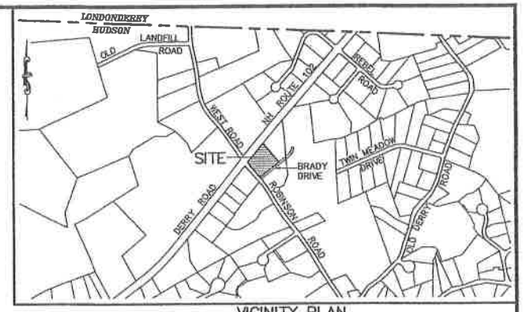
P4000draft.pc3





VICINITY PLAN
SCALE: 1" = 1,000'

REFERENCE PLAN:

1. "NILLC SUBDIVISION, DERRY ROAD–RTE. 102 & ROBINSON ROAD," HUDSON, NH, PREPARED FOR NOURY INVESTMENTS, LLC., PREPARED BY MAYNARD & PAQUETTE ENGINEERING ASSOCIATES, LLC., DATED JANUARY 10, 2003.
2. "NON–RESIDENTIAL SITE PLAN, ROBINSON ROAD SELF STORAGE, MAP 105; LOT 17, ROBINSON ROAD & DERRY ROAD (NH ROUTE 102), HUDSON, NEW HAMPSHIRE," DATED: AUGUST 2010, WITH REVISIONS THROUGH 01/03/11, PREPARED BY: KEACH–NORDSTROM ASSOCIATES, INC. (22 SHEETS).

NOTES:

1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE EXISTING FEATURES ON MAP 105; LOT 19.
2. LOT NUMBERS REFER TO THE TOWN OF HUDSON ASSESSORS MAP 105; LOT 19.
3. TOTAL SITE AREA IS 94,981 SF, OR 2.180 ACRES.
4. PRESENT ZONING: GENERAL ONE (G–1)
   MINIMUM LOT REQUIREMENTS:
   – LOT AREA 87,120 SF
   – LOT FRONTAGE 200 FT
   MINIMUM BUILDING SETBACK REQUIREMENTS:
   – FRONT 50 FT (ARTERIAL & COLLECTOR ROADWAYS)
   – SIDE 15 FT
   – REAR 15 FT
5. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED UPON AN ACTUAL FIELD SURVEY PERFORMED BY THIS OFFICE BETWEEN MARCH 2010 AND MAY 2013.
6. SEE REFERENCE PLAN #2 FOR WETLAND DELINEATION AND SITE SPECIFIC SOILS INFORMATION.
7. PRESENT OWNER OF RECORD:
   NOURY INVESTMENTS, LLC.
   17 ELNATHANS WAY
   HOLLIS, NH 03049
   BK. 8369, PG. 2857
8. EXAMINATION OF FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) MAP NUMBER 33011C0508D, PANEL 508 OF 701, EFFECTIVE DATE SEPTEMBER 25, 2009 INDICATES THE SUBJECT PREMISES IS NOT LOCATED WITHIN A DESIGNATED FLOOD HAZARD AREA.
9. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY THE ACCURACY OF THE EXISTING TOPOGRAPHY PRIOR TO EARTHWORK OPERATIONS. NO CLAIM FOR EXTRA WORK DUE TO TOPOGRAPHIC INACCURACY SHALL BE CONSIDERED AFTER EARTHWORK HAS COMMENCED.
10. THE CONTRACTOR SHALL ONLY USE BENCHMARKS AS PROVIDED BY THE ENGINEER OF RECORD, KEACH–NORDSTROM ASSOCIATES, INC.
11. THE LOCATION OF ANY UNDERGROUND UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. KEACH–NORDSTROM ASSOCIATES, INC. TAKES NO RESPONSIBILITY FOR THE ACCURACY OF UNDERGROUND UTILITIES DEPICTED. LOCATIONS SHOWN WERE TAKEN FROM FIELD SURVEY AND REFERENCE PLANS. CONTRACTOR TO VERIFY UNDERGROUND UTILITY LOCATIONS AND NOTIFY ENGINEER OF ANY CONFLICTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING "DIG SAFE" AT 1–888–344–7233 AT LEAST 72 HOURS BEFORE DIGGING.
12. THE SUBJECT PREMISES IS ENCUMBERED BY THE FOLLOWING EASEMENTS:
   – DECLARATION OF COMMON DRIVEWAY, DRAINAGE, UTILITY EASEMENTS AND MAINTENANCE AGREEMENT (BK.8544 PG.2695).
   – 15 FOOT WIDE UTILITY EASEMENT CENTERED UPON AS–BUILT LOCATION OF UNDERGROUND UTILITIES. (BK.8369 PG.2857).
   – SITE DEVELOPMENT AGREEMENT (5329, PG. 1249).
   – DECLARATION OF COMMON DRIVEWAY, DRAINAGE AND UTILITY EASEMENTS AND MAINTENANCE AGREEMENT (BK. 8544 PG. 2695)

DIG SAFE
1–888–344–7233
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM

SOILS LEGEND

SOIL TYPE	SOIL TAXONOMIC NAME	SLOPE
44B	MONTAUK	3 TO 8%
44C	MONTAUK	8 TO 15%
44D	MONTAUK	15 TO 25%
448A	SCITUATE	0 TO 3%
448B	SCITUATE	3 TO 8%
448C	SCITUATE	8 TO 15%
448D	SCITUATE	15 TO 25%
448E	SCITUATE	25 TO 50%
500A	UDORTHENTS, LOAMY	0 TO 3%
500B	UDORTHENTS, LOAMY	3 TO 8%
500C	UDORTHENTS, LOAMY	8 TO 15%
500D	UDORTHENTS, LOAMY	15 TO 25%
500E	UDORTHENTS, LOAMY	25% TO 50%

LEGEND

- STONE BOUND FOUND
- IRON PIN FOUND
- UTILITY POLE
- SIGN
- FLARED END SECTION
- CATCH BASIN
- ABUTTER LINE
- PROPERTY LINE
- CHAIN LINK FENCE
- GUARDRAIL
- OHU — OVERHEAD UTILITIES
- DRAINAGE LINE
- TREELINE
- EDGE OF PAVEMENT
- 10' CONTOUR
- 2' CONTOUR
- STONEWALL
- SCS SOIL LINE
- BUILDING SETBACK
- EASEMENT

EXISTING CONDITIONS PLAN
LAND OF
NOURY INVESTMENT, LLC
PREPARED FOR
DUNKIN DONUTS
MAP 105; LOT 19
14 BRADY DRIVE
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:
NOURY INVESTMENTS, LLC.
17 ELNATHANS WAY
HOLLIS, NH 03049
BK. 8369, PG. 2857

APPLICANT:
CAFUA MANAGEMENT GROUP
ATTN: GREGORY NOLAN
280 MERRIMACK STREET, SUITE A
METHUEN, MA 01844

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

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____

SIGNATURE _____ DATE _____

SIGNATURE _____ DATE _____

SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN ACHIEVES FINAL APPROVAL.

CERTIFICATIONS:

Pursuant to RSA 676:18,III and RSA 672:14
I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN.

THIS PLAN AND THE SURVEY UPON WHICH IT IS BASED WAS MADE ON THE GROUND UNDER MY DIRECTION AND SUPERVISION BETWEEN MARCH 2010 AND MAY 2013 IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE STATE OF NEW HAMPSHIRE AND THE CITY/TOWN WITHIN WHICH IT IS LOCATED WITH A TRAVERSE ERROR OF CLOSURE BETTER THAN 1 PART IN 10,000. THE SURVEY PERFORMED IS CLASSIFIED AS AN URBAN STANDARD SURVEY, (CATEGORY 1, CONDITION 1) AS DEFINED IN THE NEW HAMPSHIRE LAND SURVEYORS ASSOCIATION ETHICS AND STANDARDS.

4/1/14
DATE

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

LICENSED PROFESSIONAL LAND SURVEYOR
ANTHONY M. BASSO
No. 10,231
STATE OF NEW HAMPSHIRE

REVISIONS

No.	DATE	DESCRIPTION	BY

DATE: JANUARY 24, 2014 | SCALE: 1" = 20'
PROJECT NO: 13–0304–1 | SHEET 2 OF 15

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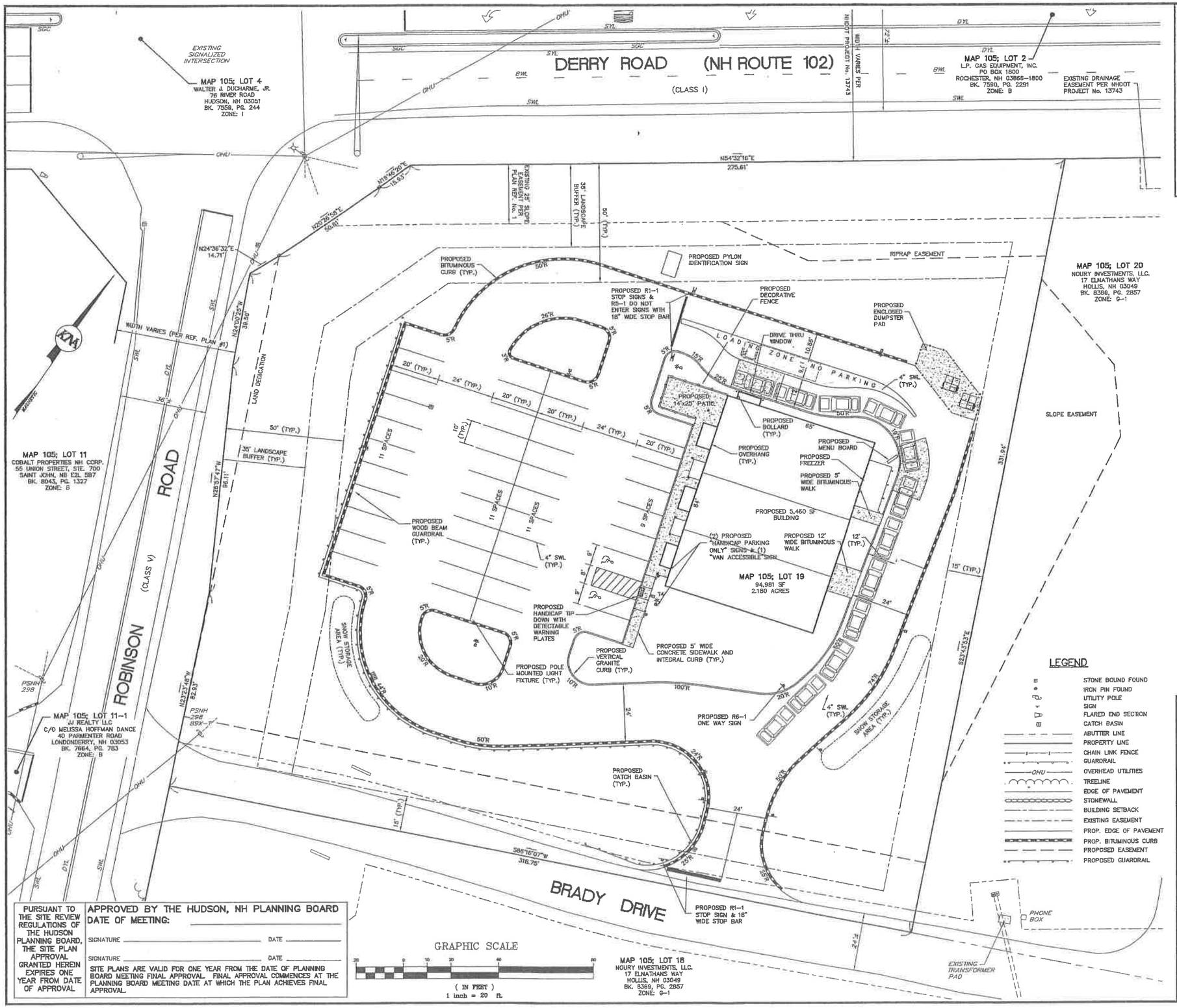

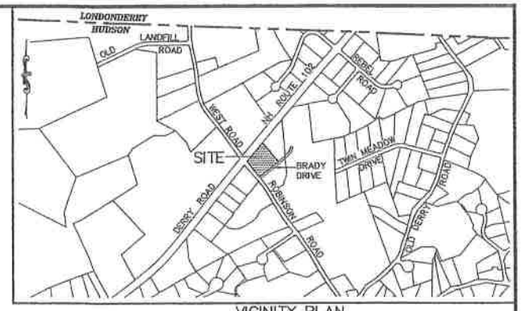

VICINITY PLAN
SCALE: 1" = 1,000'

PROPOSED RIP-RAP EASEMENT AMENDMENT DESCRIPTION

TAX MAP 105; LOT 19

A CERTAIN RIP-RAP EASEMENT AMENDMENT LOCATED IN THE TOWN OF HUDSON, COUNTY OF HILLSBOROUGH, STATE OF NEW HAMPSHIRE SHOWN ON A PLAN ENTITLED: "NON-RESIDENTIAL SITE LAYOUT PLAN, DUNKIN DONUTS, MAP 105; LOT 19, 14 BRADY DRIVE, HUDSON, NEW HAMPSHIRE, HILLSBOROUGH COUNTY," BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT AT THE INTERSECTION OF THE SOUTHERLY SIDELINE OF DERRY ROAD (NH ROUTE 102) ON THE NORTH AND THE DIVISION LINE BETWEEN LAND NOW OR FORMERLY OF NOURY INVESTMENTS, LLC (TAX MAP 105, LOT 19) ON THE WEST AND OTHER LAND NOW OR FORMERLY OF NOURY INVESTMENTS, LLC (TAX MAP 105, LOT 20) ON THE EAST, SAID POINT BEING S23°43'53"E A DISTANCE OF 51.47 FEET ALONG SAID DIVISION LINE TO THE ACTUAL POINT OF BEGINNING OF THE PARCEL DESCRIBED HEREIN; THENCE

SAID RIP-RAP EASEMENT AMENDMENT CONTAINS 1,973 SQUARE FEET OR 0.045 ACRES, BEING THE SAME, MORE OR LESS.

IT IS THE INTENT OF THIS EASEMENT TO BE CONTIGUOUS WITH AND DIRECTLY ADJACENT TO AN EXISTING 25 FOOT WIDE SLOPE EASEMENT SHOWN ON HILLSBOROUGH COUNTY REGISTRY OF DEEDS PLAN NO. 33056. THE PURPOSE OF THE PROPOSED EASEMENT AMENDMENT IS TO ACCOUNT FOR RIP-RAP EXTENDING BEYOND THE SLOPE EASEMENT REFERENCED ABOVE.

TEMPORARY SLOPE EASEMENT DESCRIPTION

TAX MAP 105; LOT 20

A CERTAIN SLOPE EASEMENT LOCATED IN THE TOWN OF HUDSON, COUNTY OF HILLSBOROUGH, STATE OF NEW HAMPSHIRE SHOWN ON A PLAN ENTITLED: "NON-RESIDENTIAL SITE LAYOUT PLAN, DUNKIN DONUTS, MAP 105; LOT 19, 14 BRADY DRIVE, HUDSON, NEW HAMPSHIRE, HILLSBOROUGH COUNTY," BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT AT THE INTERSECTION OF THE SOUTHERLY SIDELINE OF DERRY ROAD (NH ROUTE 102) ON THE NORTH AND THE DIVISION LINE BETWEEN LAND NOW OR FORMERLY OF NOURY INVESTMENTS, LLC (TAX MAP 105, LOT 19) ON THE WEST AND OTHER LAND NOW OR FORMERLY OF NOURY INVESTMENTS, LLC (TAX MAP 105, LOT 20) ON THE EAST, SAID POINT BEING S23°43'53"E A DISTANCE OF 25.53 FEET ALONG SAID DIVISION LINE TO THE ACTUAL POINT OF BEGINNING OF THE PARCEL DESCRIBED HEREIN; THENCE

S74°47'42"E A DISTANCE OF 47.31 FEET TO A POINT; THENCE

S40°01'40"E A DISTANCE OF 30.46 FEET TO A POINT; THENCE

S07°40'13"E A DISTANCE OF 163.90 FEET TO A POINT ON SAID DIVISION LINE; THENCE

N23°43'53"W A DISTANCE OF 216.47 FEET ALONG SAID DIVISION LINE TO THE POINT OR PLACE OF BEGINNING.

SAID SLOPE EASEMENT CONTAINS 5,318 SQUARE FEET OR 0.122 ACRES, BEING THE SAME, MORE OR LESS.

SEE SHEET 1 FOR PROJECT NOTES

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

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____

SIGNATURE _____ DATE _____

SIGNATURE _____ DATE _____

SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN ACHIEVES FINAL APPROVAL.

NON-RESIDENTIAL SITE LAYOUT PLAN

DUNKIN DONUTS

MAP 105; LOT 19
14 BRADY DRIVE
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:	APPLICANT:
NOURY INVESTMENTS, LLC. 17 ELNATHANS WAY HOLLIS, NH 03049 BK. 8369, PG. 2857	CAFUA MANAGEMENT GROUP ATTN: GREGORY NOLAN 280 MERRIMACK STREET, SUITE A METHUEN, MA 01844

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

STATE OF NEW HAMPSHIRE
PAUL N. JULIA
NO. 10435
LICENSED
PROFESSIONAL ENGINEER
4/1/14

REVISIONS

No.	DATE	DESCRIPTION	BY
1	04-01-14	REVISED LOT LAYOUT, REMOVED WELLS	PNJ

DATE: JANUARY 24, 2014 | SCALE: 1" = 20'
PROJECT NO: 13-0304-1 | SHEET 3 OF 15

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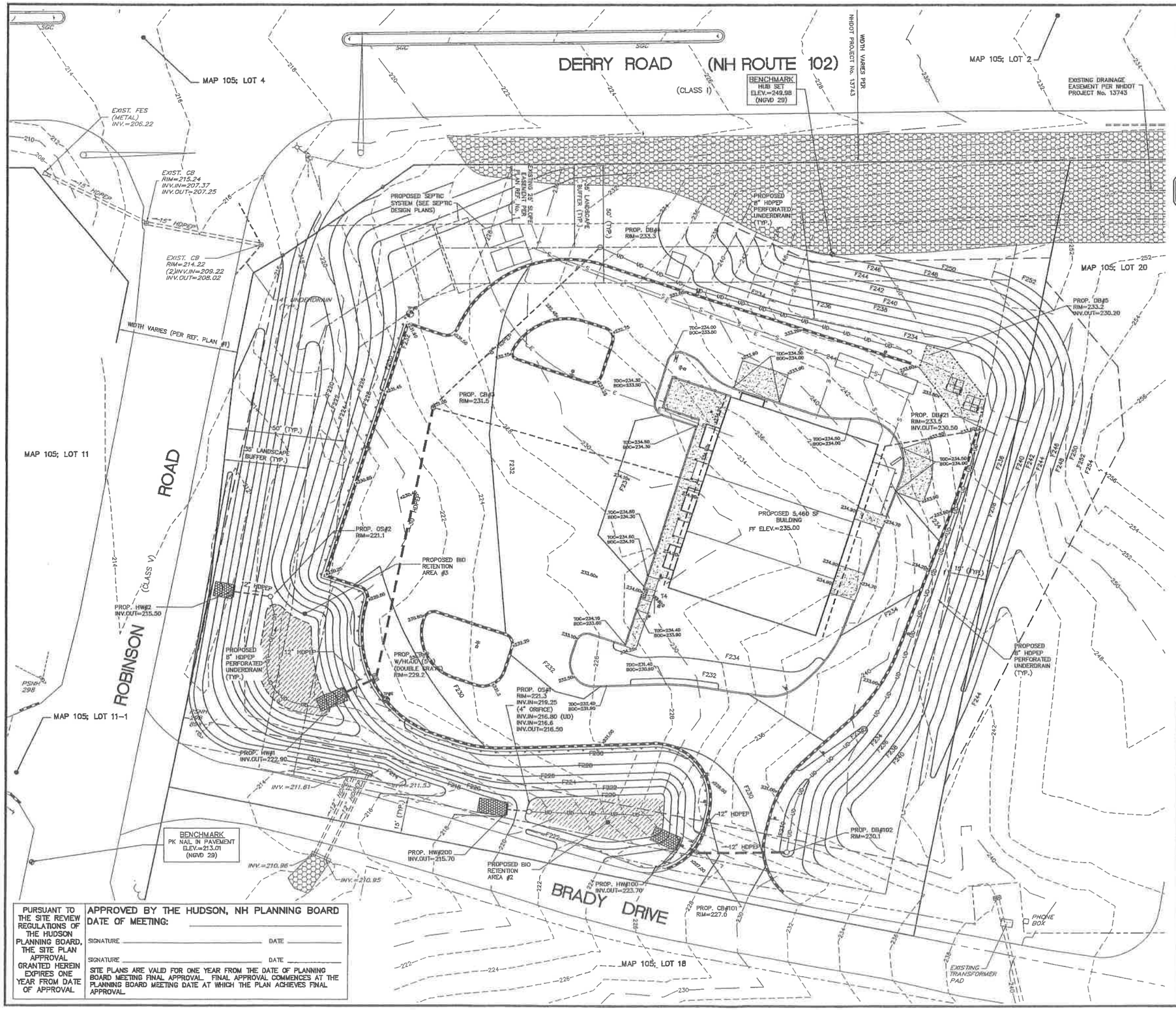

BENCHMARK
PK NAIL IN PAVEMENT
ELEV.=213.01
(NGVD 29)

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

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____

SIGNATURE _____ DATE _____

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SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN ACHIEVES FINAL APPROVAL.

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 ROAD AND BRIDGE CONSTRUCTION, STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION, APPROVED AND ADOPTED 2010 ARE HEREBY INCORPORATED BY REFERENCE.
2. SITE CONSTRUCTION SHALL CONFORM TO THE APPROVED PLANS AND SHALL MEET THE REQUIREMENTS AND SPECIFICATIONS FOR ROAD CONSTRUCTION, PUBLIC WORKS DEPARTMENT, HUDSON, NEW HAMPSHIRE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION. THE ENGINEER OF RECORD 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 CONTACTING "DIG SAFE" AT 1-888-344-7233 AT LEAST 72 HOURS BEFORE DIGGING.
3. ALL DRAINAGE PIPE SHALL BE INSTALLED FOLLOWING MANUFACTURER'S INSTALLATION INSTRUCTIONS.
4. ALL DRAINAGE PIPES SHOWN SHALL BE HDPEP.
5. CATCH BASINS SHALL BE TYPE B, AND HAVE 3' SUMPS UNLESS OTHERWISE NOTED.
6. SEE DRAINAGE PROFILES AND CONSTRUCTION DETAILS FOR SPECIFIC CONSTRUCTION INFORMATION.
7. CONTRACTOR TO COORDINATE UTILITY WORK WITH LOCAL PROVIDER.

LOAM & SEED ALL DISTURBED AREAS (TYP.)

SEE AOS PLANS FOR SEPTIC DESIGN, LAYOUT, DIMENSION, AND NOTES

MAGNETIC

LEGEND

- STONE BOUND FOUND
- IRON PIN FOUND
- UTILITY POLE
- SIGN
- FLARED END SECTION
- CATCH BASIN
- ABUTTER LINE
- PROPERTY LINE
- CHAIN LINK FENCE
- GUARDRAIL
- OHU — OVERHEAD UTILITIES
- DRAINAGE LINE
- TREELINE
- EDGE OF PAVEMENT
- 10' CONTOUR
- 2' CONTOUR
- STONEWALL
- BUILDING SETBACK
- EXISTING EASEMENT
- PROP. BITUMINOUS CURB
- PROPOSED EASEMENT
- PROPOSED 2' CONTOUR
- PROPOSED GUARDRAIL

DIG SAFE
1-888-344-7233
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM

GRAPHIC SCALE
30 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

GRADING AND DRAINAGE PLAN

DUNKIN DONUTS

MAP 105; LOT 19
14 BRADY DRIVE
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:	APPLICANT:
NOURY INVESTMENTS, LLC. 17 ELNATHANS WAY HOLLIS, NH 03049 BK. 8369, PG. 2857	CAFUA MANAGEMENT GROUP ATTN: GREGORY NOLAN 280 MERRIMACK STREET, SUITE A METHUEN, MA 01844

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

STATE OF NEW HAMPSHIRE — JEFFREY R. LIVELY — No. 10435 — LICENSED PROFESSIONAL ENGINEER — 4/1/14

REVISIONS

No.	DATE	DESCRIPTION	BY

DATE: JANUARY 24, 2014 | SCALE: 1" = 20'
PROJECT NO: 13-0304-1 | SHEET 4 OF 15

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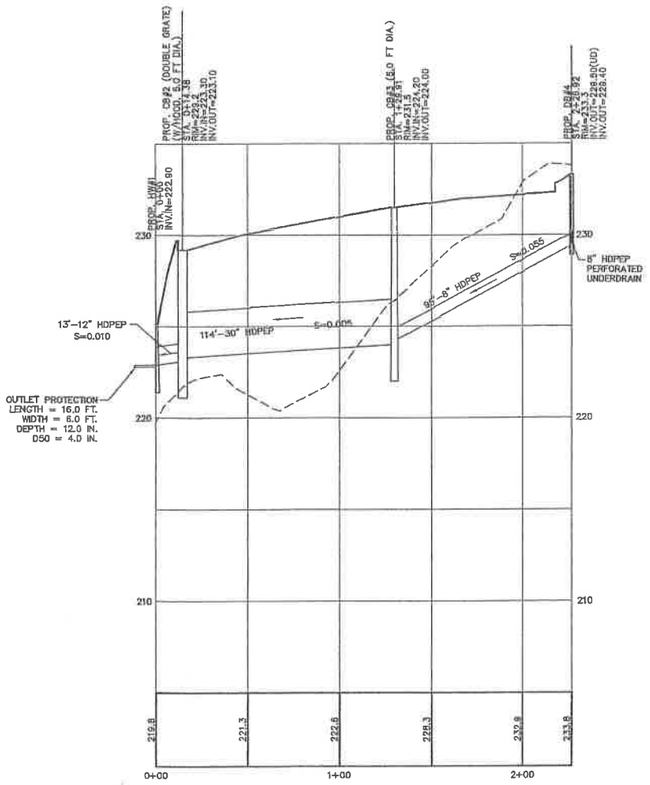
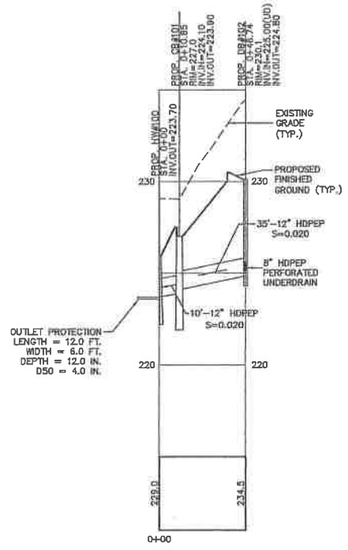


DRAINAGE PROFILE (PROP. HW#1 TO PROP. DB#4)
SCALE: 1" = 40' (HORIZ.)
1" = 4' (VERT.)



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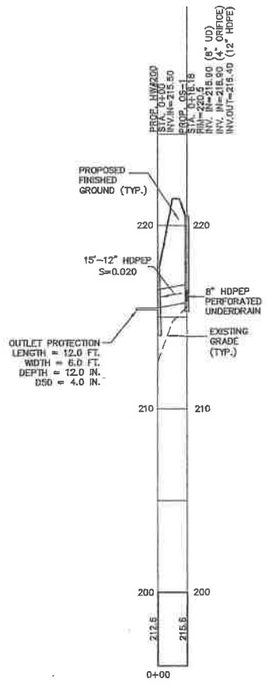
1" = 4' (VERT.)



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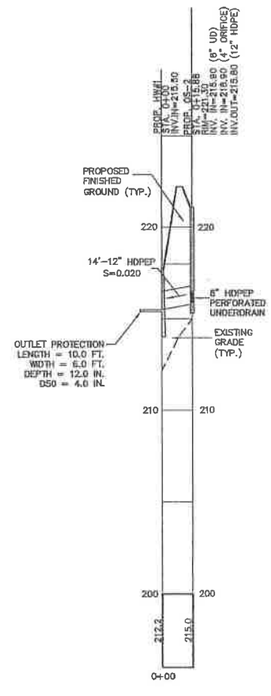

DRAINAGE PROFILE (PROP. HW#2 TO PROP. OS–2)
SCALE: 1" = 40' (HORIZ.)
1" = 4' (VERT.)

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

DIG SAFE
888-344-7233
UTILITIES MARKED TO PLANT DAMAGE PREVENTION ACT RSA 374:48

DRAINAGE PROFILES

DUNKIN DONUTS

MAP 105; LOT 19
14 BRADY DRIVE
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:
NOURY INVESTMENTS, LLC.
17 ELNATHANS WAY
HOLLIS, NH 03049
BK. 8369, PG. 2857

APPLICANT:
CAFUA MANAGEMENT GROUP
ATTN: GREGORY NOLAN
280 MERRIMACK STREET, SUITE A
METHUEN, MA 01844

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

STATE OF NEW HAMPSHIRE – PROFESSIONAL ENGINEER – JULIA No. 10435 LICENSED – 2/11/14

REVISIONS

No.	DATE	DESCRIPTION	BY
1	04–01–2013	ADDED PROFILE	PNJ

DATE: JANUARY 24, 2014 | SCALE: AS SHOWN
PROJECT NO: 13–0304–1 | SHEET 5 OF 15

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GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

SIGHT DISTANCE PLAN

DUNKIN DONUTS

MAP 105; LOT 19
14 BRADY DRIVE
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:	**APPLICANT:**
NOURY INVESTMENTS, LLC. 17 ELNATHANS WAY HOLLIS, NH 03049 BK. 8369, PG. 2857	CAFUA MANAGEMENT GROUP ATTN: GREGORY NOLAN 280 MERRIMACK STREET, SUITE A METHUEN, MA 01844

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

STATE OF NEW HAMPSHIRE PETER N. ZOHIA No. 10435 LICENSED PROFESSIONAL ENGINEER 4/1/14

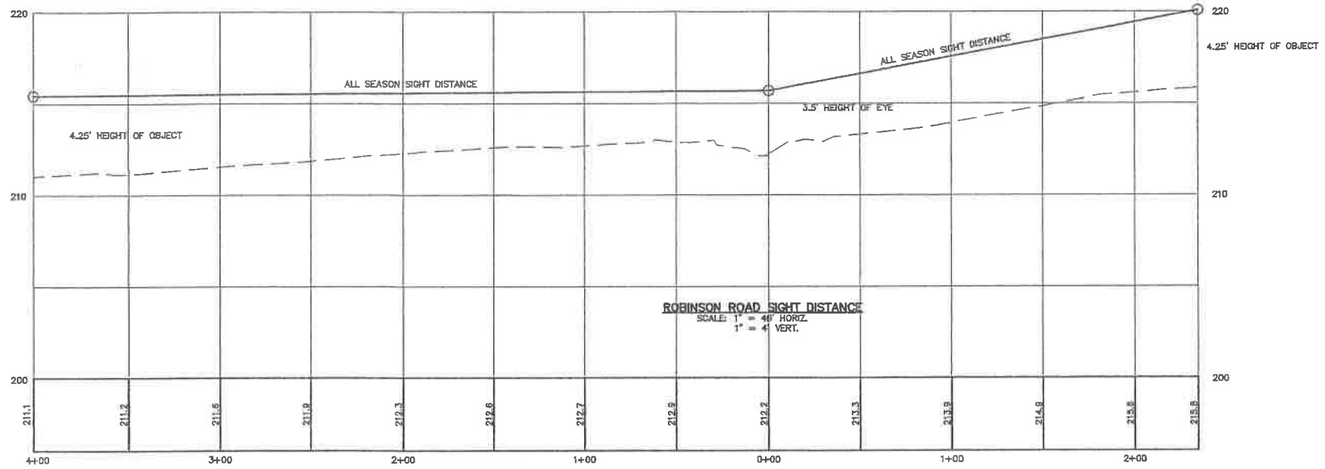
REVISIONS

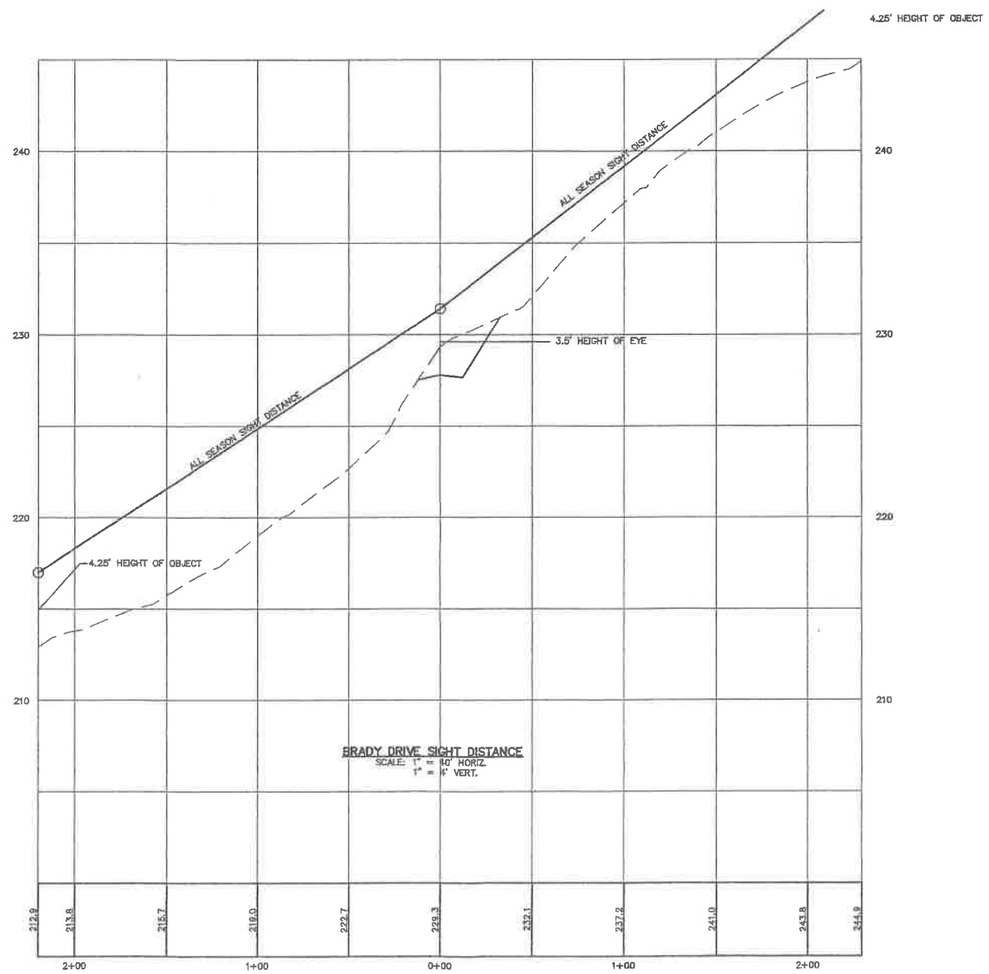
No.	DATE	DESCRIPTION	BY

DATE: JANUARY 24, 2014	SCALE: 1" = 20'
PROJECT NO: 13-0304-1	SHEET 6 OF 15

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

\ project\1303041\1303041\dwg\1303041-SITEPLAN REV1.dwg, SIGHT DISTANCE PLAN, 4/1/2014 11:28:38 AM





GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

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

SIGHT DISTANCE PLAN

DUNKIN DONUTS

MAP 105; LOT 19
14 BRADY DRIVE
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:	APPLICANT:
NOURY INVESTMENTS, LLC. 17 ELNATHANS WAY HOLLIS, NH 03049 BK. 8369, PG. 2857	CAFUA MANAGEMENT GROUP ATTN: GREGORY NOLAN 280 MERRIMACK STREET, SUITE A METHUEN, MA 01844

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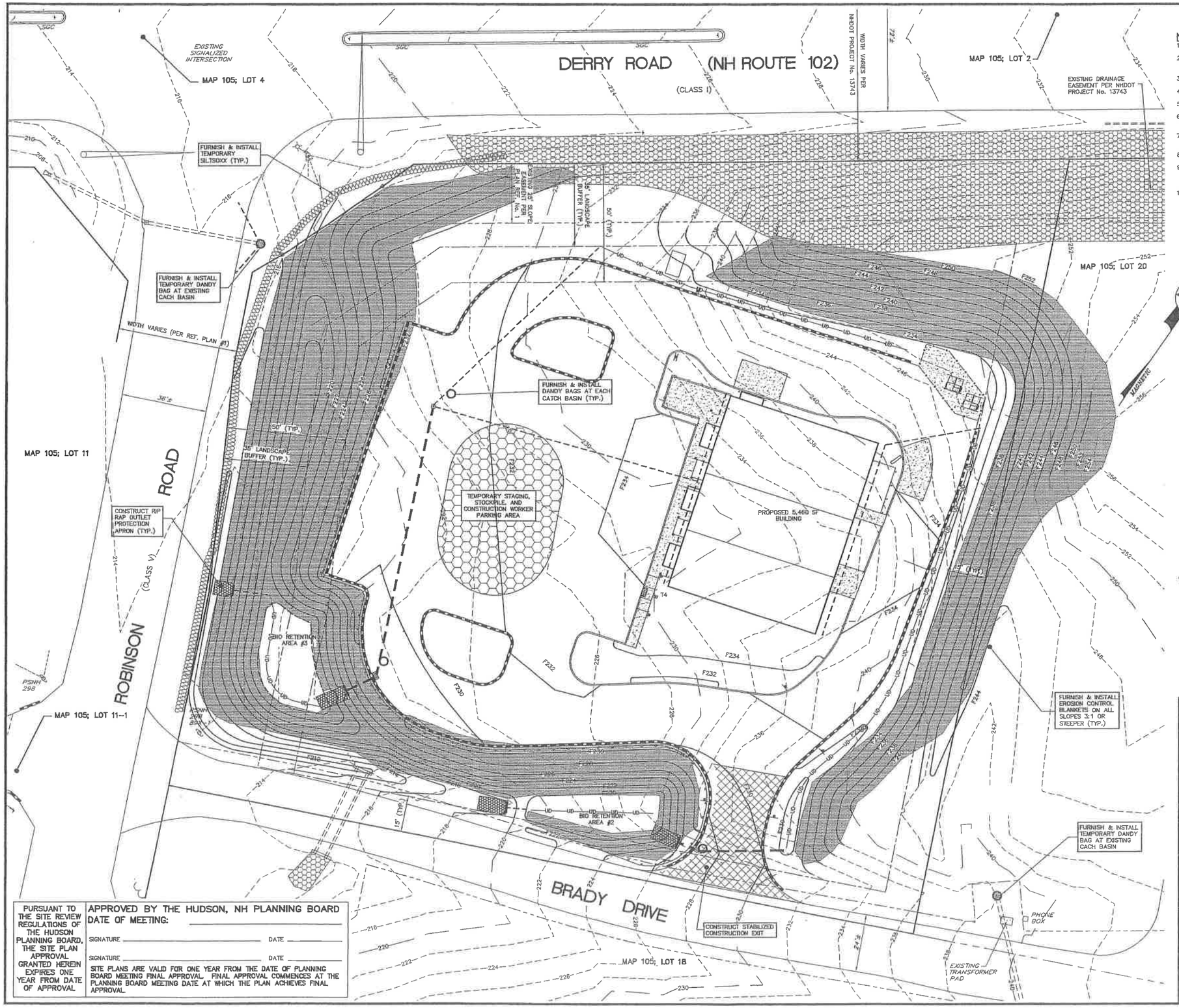
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

STATE OF NEW HAMPSHIRE
PETER M. DIAZ
No. 10435
LICENSED
PROFESSIONAL ENG.
4/1/14

REVISIONS

No.	DATE	DESCRIPTION	BY

DATE: JANUARY 24, 2014 | SCALE: 1" = 20'
PROJECT NO: 13–0304–1 | SHEET 7 OF 15



NOTES:

1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE REQUIRED ONSITE TEMPORARY CONSTRUCTION EROSION CONTROL MEASURES AS WELL AS THE PERMANENT EROSION CONTROL MEASURES.
2. ALL MEASURES IN THE PLAN SHALL MEET AS A MINIMUM THE BEST MANAGEMENT PRACTICES SET FORTH IN VOLUME 3 OF THE NEW HAMPSHIRE STORMWATER MANUEL TITLED "EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION," DATED DECEMBER 2008, AS AMENDED FROM TIME TO TIME.
3. WHENEVER PRACTICAL, NATURAL VEGETATION SHALL BE RETAINED, PROTECTED OR SUPPLEMENTED. THE STRIPPING OF VEGETATION SHALL BE DONE IN A MANNER THAT MINIMIZES SOIL EROSION.
4. APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO LAND DISTURBANCE.
5. THE AREA OF DISTURBANCE SHALL BE KEPT TO A MINIMUM. DISTURBED AREAS REMAINING IDLE FOR MORE THAN 30 DAYS SHALL BE STABILIZED.
6. MEASURES SHALL BE TAKEN TO CONTROL EROSION WITHIN THE PROJECT AREA. SEDIMENT IN RUNOFF WATER SHALL BE TRAPPED AND RETAINED WITHIN THE PROJECT AREA USING APPROVED MEASURES. WETLAND AREAS AND SURFACE WATERS SHALL BE PROTECTED FROM SEDIMENT.
7. OFFSITE SURFACE WATER AND RUNOFF FROM UNDISTURBED AREAS SHALL BE DIVERTED AWAY FROM DISTURBED AREAS WHERE FEASIBLE OR CARRIED NON-EROSIVELY THROUGH THE PROJECT AREA. INTEGRITY OF DOWNSTREAM DRAINAGE SYSTEMS SHALL BE MAINTAINED.
8. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN FUNCTIONING CONDITION UNTIL FINAL SITE STABILIZATION IS ACCOMPLISHED.
9. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED AFTER FINAL SITE STABILIZATION. TRAPPED SEDIMENT AND OTHER DISTURBED SOIL AREAS RESULTING FROM THE REMOVAL OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED WITHIN 30 DAYS UNLESS CONDITIONS DICTATE OTHERWISE.
10. THE TOWN OF HUDSON SHALL RESERVE THE RIGHT TO REQUIRE FURTHER EROSION CONTROL PRACTICES DURING CONSTRUCTION SHOULD THEY FIND IT NECESSARY.

EROSION & SEDIMENT CONTROL LEGEND

- PERMANENT OUTLET PROTECTION APRON (RIP RAP)
- DANDY BAGS AT ALL CATCH BASINS
- TEMPORARY SILTSOXX
- STABILIZED CONSTRUCTION EXIT
- STAGING AND STOCKPILE AREA
- EROSION CONTROL BLANKETS

DIG SAFE
1-888-344-7233
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

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

EROSION CONTROL PLAN

DUNKIN DONUTS

MAP 105; LOT 19
14 BRADY DRIVE
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:
NOURY INVESTMENTS, LLC.
17 ELNATHANS WAY
HOLLIS, NH 03049
BK. 8369, PG. 2857

APPLICANT:
CAFUA MANAGEMENT GROUP
ATTN: GREGORY NOLAN
280 MERRIMACK STREET, SUITE A
METHUEN, MA 01844

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

STATE OF NEW HAMPSHIRE — PETER W. JULIA No. 10405 — LICENSED PROFESSIONAL ENGINEER — 4/11/14

REVISIONS

No.	DATE	DESCRIPTION	BY

DATE: JANUARY 24, 2014 SCALE: 1" = 20'
PROJECT NO: 13-0304-1 SHEET 8 OF 15

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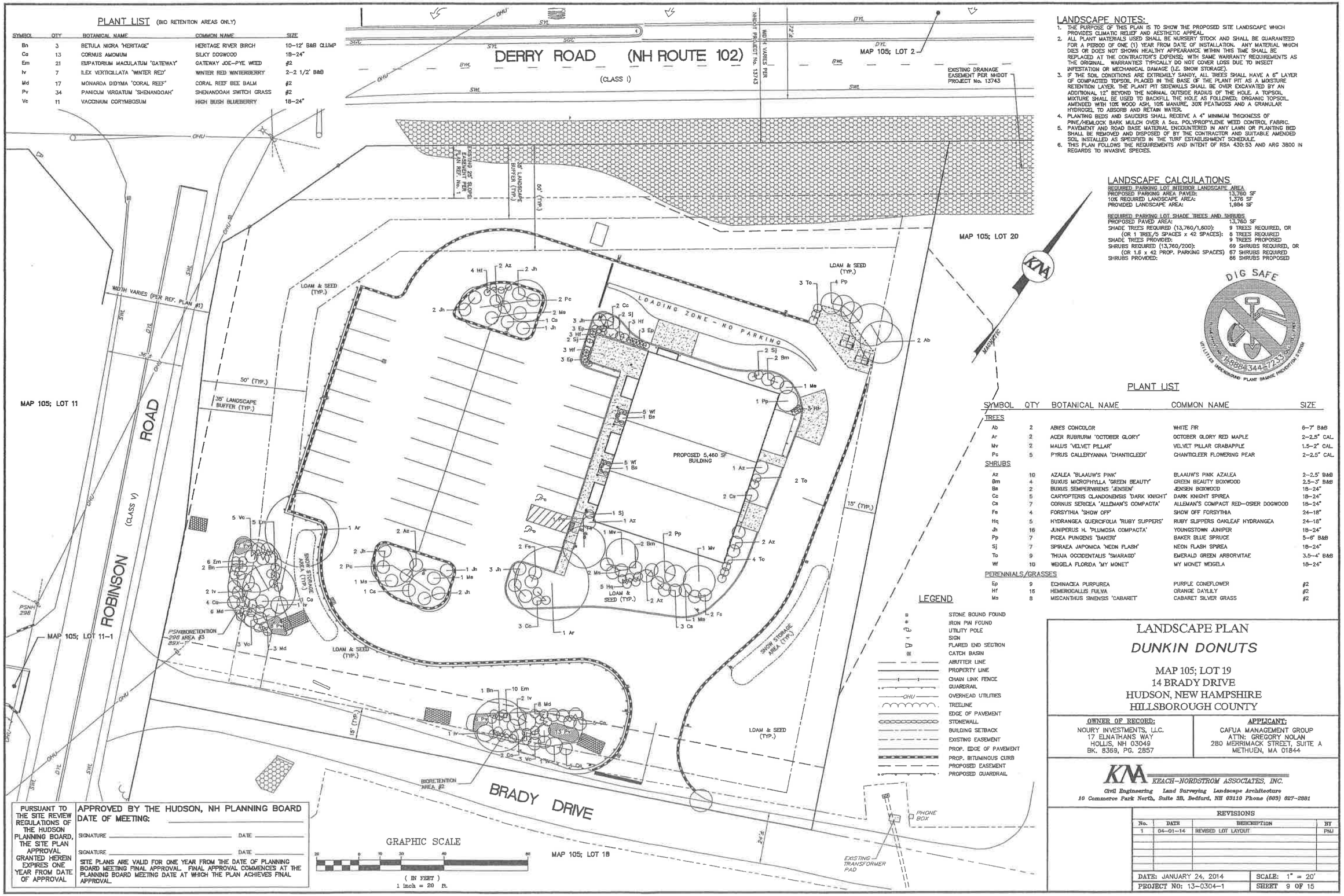
PLANT LIST (BIO RETENTION AREAS ONLY)

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE
Bn	3	BETULA NIGRA 'HERITAGE'	HERITAGE RIVER BIRCH	10–12' B&B CLUMP
Co	13	CORNUS AMOMUM	SILKY DOGWOOD	18–24"
Em	21	EUPATORIUM MACULATUM 'GATEWAY'	GATEWAY JOE–PYE WEED	#2
Iv	7	ILEX VERTICILLATA 'WINTER RED'	WINTER RED WINTERBERRY	2–2 1/2' B&B
Md	17	MONARDA DIDYMA 'CORAL REEF'	CORAL REEF BEE BALM	#2
Pv	34	PANICUM VIRGATUM 'SHENANDOAH'	SHENANDOAH SWITCH GRASS	#2
Vc	11	VACCINIUM CORYMBOSUM	HIGH BUSH BLUEBERRY	18–24"



LANDSCAPE NOTES:

1. THE PURPOSE OF THIS PLAN IS TO SHOW THE PROPOSED SITE LANDSCAPE WHICH PROVIDES CLIMATIC RELIEF AND AESTHETIC APPEAL.
2. ALL PLANT MATERIALS USED SHALL BE NURSERY STOCK AND SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM DATE OF INSTALLATION. ANY MATERIAL WHICH DIES OR DOES NOT SHOWN HEALTHY APPEARANCE WITHIN THIS TIME SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE; WITH SAME WARRANTY REQUIREMENTS AS THE ORIGINAL. WARRANTIES TYPICALLY DO NOT COVER LOSS DUE TO INSECT INFESTATION OR MECHANICAL DAMAGE (I.E. SNOW STORAGE).
3. IF THE SOIL CONDITIONS ARE EXTREMELY SANDY, ALL TREES SHALL HAVE A 6" LAYER OF COMPACTED TOPSOIL PLACED IN THE BASE OF THE PLANT PIT AS A MOISTURE RETENTION LAYER. THE PLANT PIT SIDEWALLS SHALL BE OVER EXCAVATED BY AN ADDITIONAL 12" BEYOND THE NORMAL OUTSIDE RADIUS OF THE HOLE. A TOPSOIL MIXTURE SHALL BE USED TO BACKFILL THE HOLE AS FOLLOWED; ORGANIC TOPSOIL AMENDED WITH 10% WOOD ASH, 10% MANURE, 30% PEATMOSS AND A GRANULAR HYDROGEL TO ABSORB AND RETAIN WATER.
4. PLANTING BEDS AND SAUCERS SHALL RECEIVE A 4" MINIMUM THICKNESS OF PINE/HEMLOCK BARK MULCH OVER A 5oz. POLYPROPYLENE WEED CONTROL FABRIC.
5. PAVEMENT AND ROAD BASE MATERIAL ENCOUNTERED IN ANY LAWN OR PLANTING BED SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SUITABLE AMENDED SOIL INSTALLED AS SPECIFIED IN THE TURF ESTABLISHMENT SCHEDULE.
6. THIS PLAN FOLLOWS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND ARG 3800 IN REGARDS TO INVASIVE SPECIES.

LANDSCAPE CALCULATIONS

REQUIRED PARKING LOT INTERIOR LANDSCAPE AREA

PROPOSED PARKING AREA PAVED:	13,760 SF
10% REQUIRED LANDSCAPE AREA:	1,376 SF
PROVIDED LANDSCAPE AREA:	1,984 SF

REQUIRED PARKING LOT SHADE TREES AND SHRUBS

PROPOSED PAVED AREA:	13,760 SF
SHADE TREES REQUIRED (13,760/1,600):	9 TREES REQUIRED, OR
(OR 1 TREE/5 SPACES x 42 SPACES):	8 TREES REQUIRED
SHADE TREES PROVIDED:	9 TREES PROPOSED
SHRUBS REQUIRED (13,760/200):	69 SHRUBS REQUIRED, OR
(OR 1.6 x 42 PROP. PARKING SPACES)	67 SHRUBS REQUIRED
SHRUBS PROVIDED:	86 SHRUBS PROPOSED

DIG SAFE — 1-888-344-7233 — UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM

PLANT LIST

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE
TREES				
Ab	2	ABIES CONCOLOR	WHITE FIR	6–7' B&B
Ar	2	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2–2.5" CAL.
Mv	2	MALUS 'VELVET PILLAR'	VELVET PILLAR CRABAPPLE	1.5–2" CAL.
Pc	5	PYRUS CALLERYANNA 'CHANTICLEER'	CHANTICLEER FLOWERING PEAR	2–2.5" CAL.
SHRUBS				
Az	10	AZALEA 'BLAAUW'S PINK'	BLAAUW'S PINK AZALEA	2–2.5' B&B
Bm	4	BUXUS MICROPHYLLA 'GREEN BEAUTY'	GREEN BEAUTY BOXWOOD	2.5–3' B&B
Bs	2	BUXUS SEMPERVIRENS 'JENSEN'	JENSEN BOXWOOD	18–24"
Cc	5	CARYOPTERIS CLANDONENSIS 'DARK KNIGHT'	DARK KNIGHT SPIREA	18–24"
Cs	7	CORNUS SERICEA 'ALLEMAN'S COMPACTA'	ALLEMAN'S COMPACT RED–OSIER DOGWOOD	18–24"
Fs	4	FORSYTHIA 'SHOW OFF'	SHOW OFF FORSYTHIA	24–18"
Hq	5	HYDRANGEA QUERCIFOLIA 'RUBY SLIPPERS'	RUBY SLIPPERS OAKLEAF HYDRANGEA	24–18"
Jh	16	JUNIPERUS H. 'PLUMOSA COMPACTA'	YOUNGSTOWN JUNIPER	18–24"
Pp	7	PICEA PUNGENS 'BAKERI'	BAKER BLUE SPRUCE	5–6' B&B
Sj	7	SPIRAEA JAPONICA 'NEON FLASH'	NEON FLASH SPIREA	18–24"
To	9	THUJA OCCIDENTALIS 'SMARAGD'	EMERALD GREEN ARBORVITAE	3.5–4' B&B
Wf	10	WEIGELA FLORIDA 'MY MONET'	MY MONET WEIGELA	18–24"
PERENNIALS/GRASSES				
Ep	9	ECHINACEA PURPUREA	PURPLE CONEFLOWER	#2
Hf	15	HEMEROCALLIS FULVA	ORANGE DAYLILY	#2
Ms	8	MISCANTHUS SINENSIS 'CABARET'	CABARET SILVER GRASS	#2

LEGEND

- STONE BOUND FOUND
- IRON PIN FOUND
- UTILITY POLE
- SIGN
- FLARED END SECTION
- CATCH BASIN
- ABUTTER LINE
- PROPERTY LINE
- CHAIN LINK FENCE
- GUARDRAIL
- OHU — OVERHEAD UTILITIES
- TREELINE
- EDGE OF PAVEMENT
- STONEWALL
- BUILDING SETBACK
- EXISTING EASEMENT
- PROP. EDGE OF PAVEMENT
- PROP. BITUMINOUS CURB
- PROPOSED EASEMENT
- PROPOSED GUARDRAIL

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

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____

SIGNATURE _____ DATE _____

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LANDSCAPE PLAN

DUNKIN DONUTS

MAP 105; LOT 19
14 BRADY DRIVE
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:
NOURY INVESTMENTS, LLC.
17 ELNATHANS WAY
HOLLIS, NH 03049
BK. 8369, PG. 2857

APPLICANT:
CAFUA MANAGEMENT GROUP
ATTN: GREGORY NOLAN
280 MERRIMACK STREET, SUITE A
METHUEN, MA 01844

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

REVISIONS

No.	DATE	DESCRIPTION	BY
1	04–01–14	REVISED LOT LAYOUT	PMJ

DATE: JANUARY 24, 2014 | SCALE: 1" = 20'
PROJECT NO: 13–0304–1 | SHEET 9 OF 15

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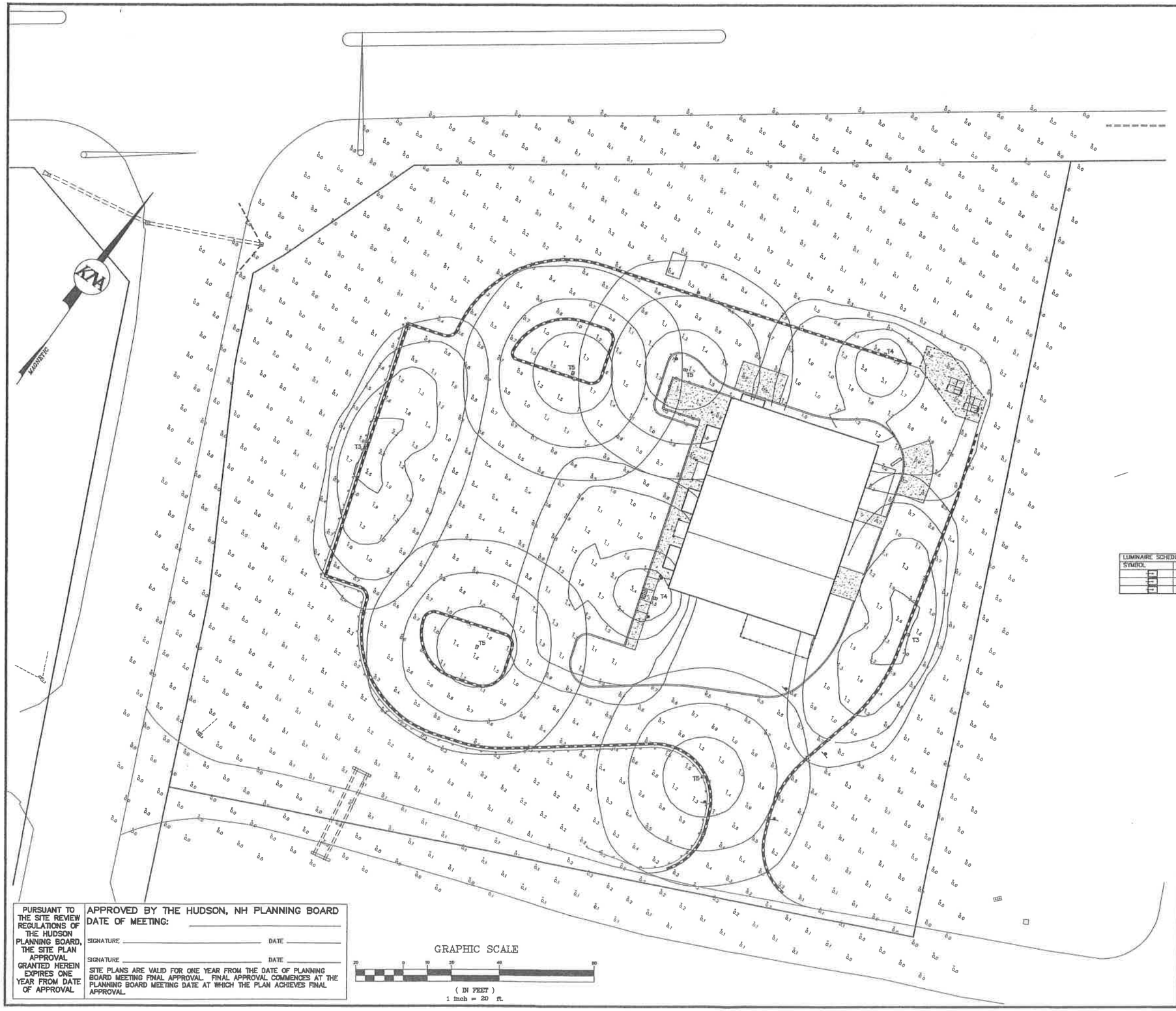
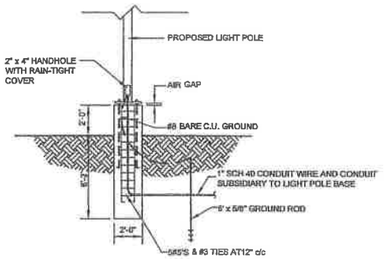
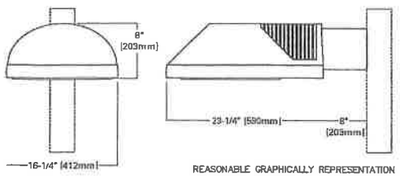


LIGHTING NOTES:

1. THE PURPOSE OF THIS PLAN IS TO GRAPHICALLY REPRESENT THE PROPOSED ILLUMINATION LEVELS ASSOCIATED WITH THE PROPOSED SITE LIGHTING LAYOUT AND CONFIGURATION.
2. SEE ARCHITECTURAL PLANS FOR SPECIFIC FIXTURE/POLE DETAILS (DESIGN BY OTHERS).
3. FOR ADDITIONAL INFORMATION REGARDING LIGHT INSTALLATION AND WIRING REQUIREMENTS. PLEASE REFER TO THE MANUFACTURERS TECHINCAL SPECIFICATIONS (PROVIDED BY OTHERS).
4. SITE LIGHTING LAYOUT & DESIGN INDICATED BELOW PREPARED IN PROFESSINOAL COOPERATION WITH CHARRON LIGHTING.



CONCRETE LIGHT POLE BASE DETAIL
NOT TO SCALE
(MARCH 2008)



REASONABLE GRAPHICALLY REPRESENTATION

THE TALOND LED
NOT TO SCALE

STATAREA_1
PAVED DRIVES AND PARKING
ILLUMINANCE (Fc)
AVERAGE = 0.99
MAXIMUM = 3.5
MINIMUM = 0.3
AVG./MIN. RATIO = 3.30
MAX./MIN. RATIO = 11.67

LUMINAIRE SCHEDULE

SYMBOL	QTY	LABEL	ARRANGEMENT	DESCRIPTION
	2	T3	SINGLE	TLM-B03-LED-E1-SL3/ 20' AFG
	2	T4	SINGLE	TLM-B03-LED-E1-SL4/ 20' AFG
	4	T5	SINGLE	TLM-B03-LED-E1-5XQ/ 20' AFG

CHARRON
INCORPORATED
P.O. BOX 4550
MANCHESTER, NH 03108
(603) 624-4827
FAX (603) 624-9764

LIGHTING PLAN
DUNKIN DONUTS

MAP 105; LOT 19
14 BRADY DRIVE
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:
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KNA KEACH-NORDSTROM ASSOCIATES, INC.
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10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

REVISIONS

No.	DATE	DESCRIPTION	BY
1	04-01-14	ADDED LIGHT POLE BASE DETAIL	PNJ

DATE: JANUARY 24, 2014 | SCALE: 1" = 20'
PROJECT NO: 13-0304-1 | SHEET 10 OF 15

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

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GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

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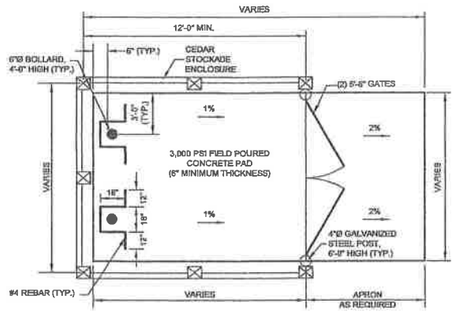
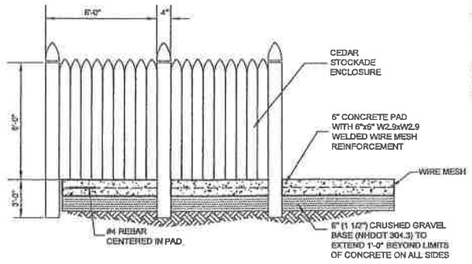
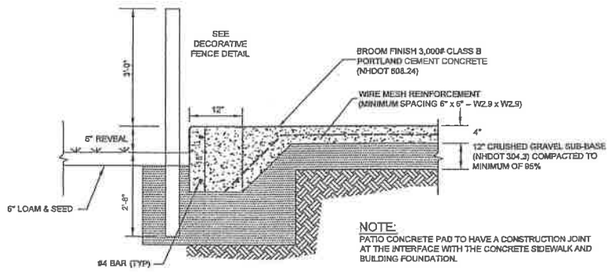




NOTE:
THE DUMPSTER ENCLOSURE DETAIL PROVIDED IS GENERAL IN NATURE AND CAN BE AMENDED IN SIZE ONLY TO COMPLY WITH SITE SPECIFIC DESIGN DIMENSIONS, LOCATION AND GEOMETRY, WHETHER SINGLE or MULTIPLE DUMPSTER INSTALLATIONS.

WOOD STOCKADE TRASH ENCLOSURE DETAIL

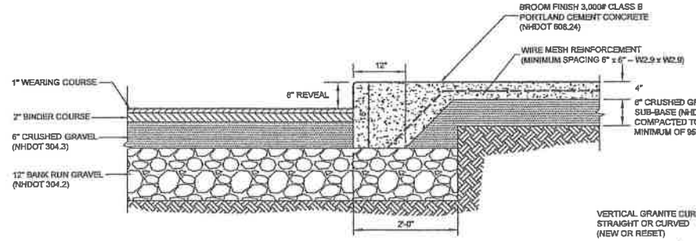
NOT TO SCALE
(MARCH 2008)



NOTE:
PATIO CONCRETE PAD TO HAVE A CONSTRUCTION JOINT AT THE INTERFACE WITH THE CONCRETE SIDEWALK AND BUILDING FOUNDATION.

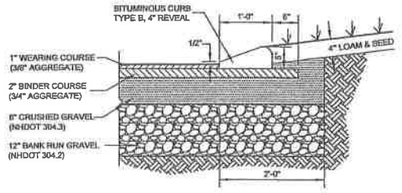
CONCRETE PATIO DETAIL

NOT TO SCALE



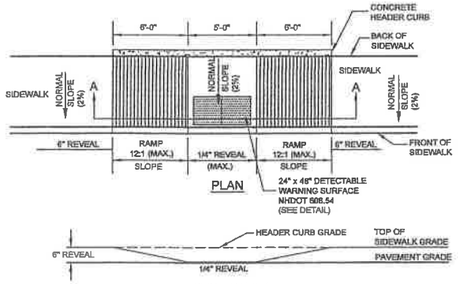
INTEGRAL CURB AND WALK DETAIL

NOT TO SCALE
(MARCH 2008)



BITUMINOUS CURB TYPE B DETAIL

NOT TO SCALE
(MARCH 2008)



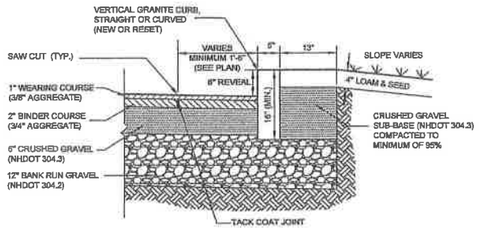
PLAN

SECTION A-A

NOTES:
1. TEXTURED WALK SURFACE TO CONSIST OF CAST TRUNCATED DOMES SUPPLIED BY THE NEENAH FOUNDRY COMPANY, OR APPROVED EQUAL.
2. A BROOM FINISH TRANSVERSE TO THE SLOPE OF THE RAMP SHALL BE USED ON PORTLAND CEMENT CONCRETE RAMPS.
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

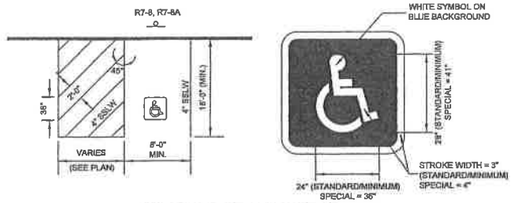
NOT TO SCALE
(JUNE 2012)



VERTICAL GRANITE CURB DETAIL

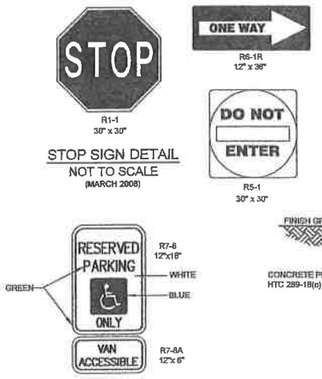
NOT TO SCALE
(MARCH 2008)

SITE IDENTIFICATION SIGNAGE DESIGN, DETAILS, AND NOTES TO BE PROVIDED BY OWNER/CONTRACTOR DURING THE BUILDING APPLICATION PROCESS.



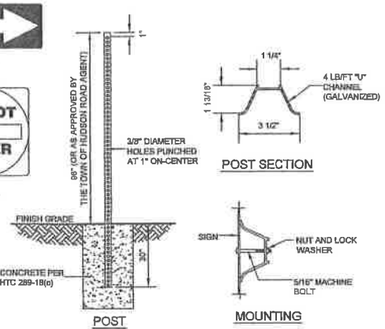
HANDICAP STRIPING DETAIL

NOT TO SCALE
(MARCH 2012)



VAN ACCESSIBLE HANDICAP PARKING SIGN DETAIL

NOT TO SCALE
(MARCH 2008)



POST SECTION

POST

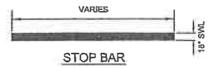
MOUNTING

NOTE:
POST SHALL CONFORM TO NHDOT 615.2.5.3

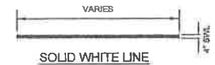
STEEL SIGN POST DETAIL

NOT TO SCALE
(MARCH 2008)

TRAFFIC SIGN NOTES:
1. ALL TRAFFIC SIGN FACES AND SHAPES SHALL CONFORM WITH THE MUTCD.
2. ALL SIGN POST MOUNTS SHALL CONFORM WITH THE AASHTO AND NHDOT SPECIFICATIONS.

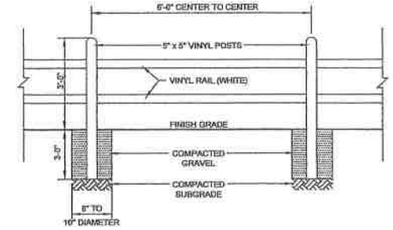


STOP BAR



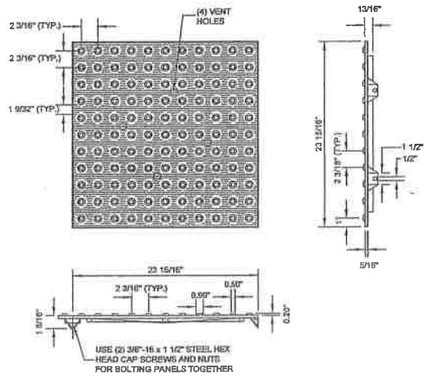
SOLID WHITE LINE

STRIPING NOTES:
1. ALL PAVEMENT MARKINGS SHALL BE IN CONFORMANCE WITH THESE STANDARDS AND THE CURRENT EDITION OF MUTCD.
2. WIDTH OF LINES SHALL VARY NO MORE THAN = 1/4 INCH FROM THAT SPECIFIED.
3. THE WET FILM THICKNESS OF A PAINTED LINE SHALL BE A MINIMUM OF 15 MILS THROUGHOUT THE ENTIRE WIDTH AND LENGTH OF LINE SPECIFIED.
4. OVERSPRAY SHALL BE KEPT TO AN ABSOLUTE MINIMUM.



VINYL DECORATIVE FENCE DETAIL

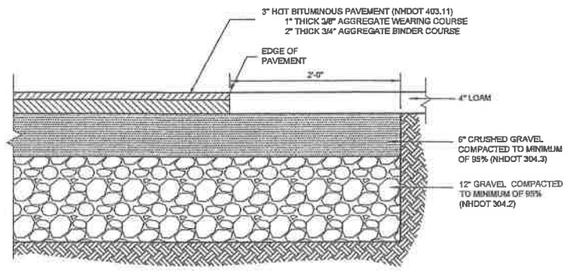
NOT TO SCALE



NOTES:
1. DETECTABLE WARNING PLATE SHALL BE NEENAH FOUNDRY OR APPROVED EQUAL.
2. THE PLATE MUST COMPLY WITH ADAAG (AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES) AND ARCHITECTURAL BARRIER ACT GUIDELINES.
3. MATERIAL SHALL BE CAST GRAY IRON
4. FINISH: NO PAINT

24"x24" DETECTABLE WARNING PLATE DETAIL

NOT TO SCALE
(MARCH 2009)



DRIVEWAY AND PARKING LOT SECTION

NOT TO SCALE
(MARCH 2008)

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

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____
SIGNATURE _____ DATE _____
SIGNATURE _____ DATE _____
SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN ACHIEVES FINAL APPROVAL.

CONSTRUCTION DETAILS
DUNKIN DONUTS

MAP 105; LOT 19
14 BRADY DRIVE
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:	APPLICANT:
NOURY INVESTMENTS, LLC. 17 ELNATHANS WAY HOLLIS, NH 03049 BK. 8369, PG. 2857	CAFUA MANAGEMENT GROUP ATTN: GREGORY NOLAN 280 MERRIMACK STREET, SUITE A METHUEN, MA 01844

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

STATE OF NEW HAMPSHIRE — PETER C. KOUJA No. 10435 — LICENSED PROFESSIONAL ENGINEER

REVISIONS

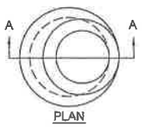
No.	DATE	DESCRIPTION	BY
1	04–01–14	REVISED LOT LAYOUT, ADDED DETAILS/NOTES	PNJ

DATE: JANUARY 24, 2014 | SCALE: AS SHOWN
PROJECT NO: 13–0304–1 | SHEET 11 OF 15

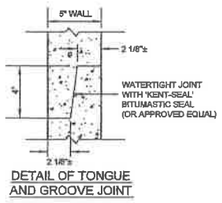
P:_projfiles\13\0304\13130304-SITEXS REV1.dwg, 1/29/2014 8:42:16 AM

NOTES:

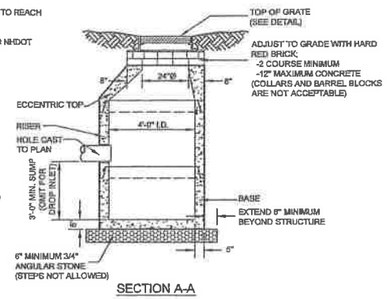
1. ALL SECTIONS SHALL BE CONCRETE CLASS AA(4000 PSI). CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCH PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
2. THE TONGUE OR GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCH PER LINEAR FOOT.
3. RISER OF 1', 2', 3' & 4' CAN BE USED TO REACH DESIRED DEPTH.
4. MATERIALS AND CONSTRUCTION TO NHDOT STANDARDS.



PLAN

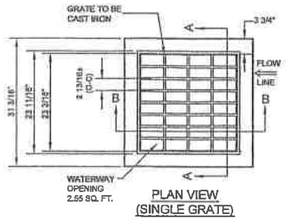


DETAIL OF TONGUE AND GROOVE JOINT

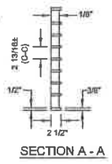


SECTION A-A

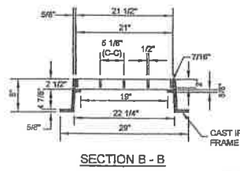
PRECAST REINFORCED CATCH BASIN
NOT TO SCALE
(MAY 2012)



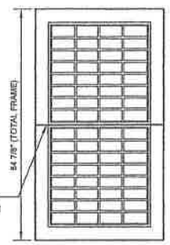
PLAN VIEW (SINGLE GRATE)



SECTION A - A



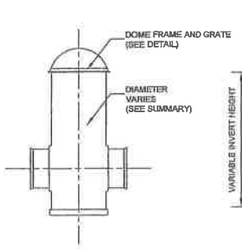
SECTION B - B



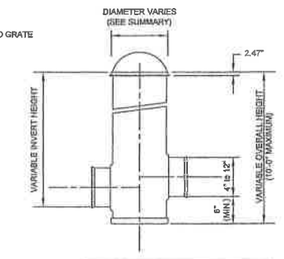
NOTE: FOR DOUBLE GRATE, OMIT FLANGE ON ONE SIDE ON EACH FRAME

PLAN VIEW (DOUBLE GRATE)

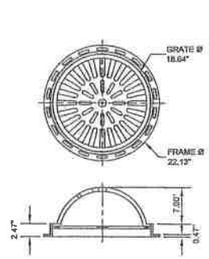
TYPE B FRAME & GRATE DETAIL
NOT TO SCALE



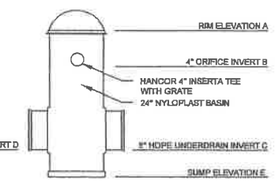
NYLOPLAST DRAIN BASIN
NOT TO SCALE
(MARCH 2008)



NYLOPLAST STRUCTURE SUMMERY TABLE	
BASIN	SIZE (DIAMETER)
DB-4	12.0 INCH Ø
DB-5	12.0 INCH Ø
DB-21	12.0 INCH Ø
DB-102	24.0 INCH Ø
OS-1	24.0 INCH Ø
OS-2	24.0 INCH Ø

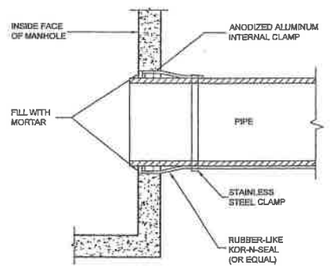


DOME GRATE



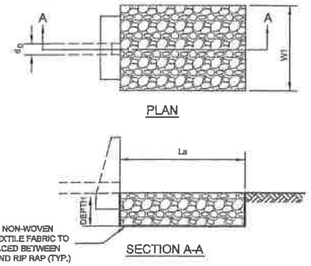
OUTLET STRUCTURE DETAIL

LOCATION	A	B	C	D	E
OUTLET STRUCTURE OS-1	220.50	218.90	215.40	216.40	215.40
OUTLET STRUCTURE OS-2	221.30	218.90	215.80	216.80	214.80



MANHOLE JOINT SLEEVE
NOT TO SCALE

LOCATION	La	W1	d50	DEPTH
PROP. HW#1	16'	6'	4"	12"
PROP. HW#2	10'	6'	4"	12"
PROP. HW#100	12'	6'	4"	12"
PROP. HW#200	12'	6'	4"	12"



PLAN

SECTION A-A

PIPE OUTLET PROTECTION DETAIL
NOT TO SCALE
(MARCH 2008)

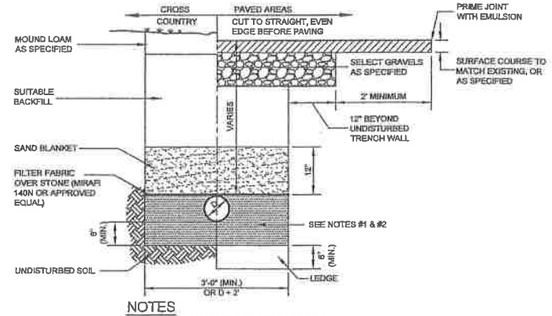
TABLE 7-24 – RECOMMENDED RIP RAP GRADATION RANGES	
PERCENT OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE
100%	1.5 TO 2.0 d50
85%	1.3 TO 1.8 d50
50%	1.0 TO 1.5 d50
15%	0.3 TO 0.5 d50

CONSTRUCTION SPECIFICATIONS:

1. THE SUBGRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC AND RIP RAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
2. THE ROCK OR GRAVEL USED FOR FILTER OR RIP RAP SHALL CONFORM TO THE SPECIFIED GRADATION.
3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIP RAP. DAMAGED AREAS IN 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 MINIMUM 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 SIZES.

MAINTENANCE:

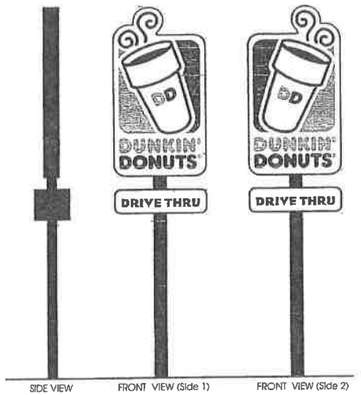
THE OUTLET PROTECTION SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR RAIN EVENT. IF THE RIP RAP HAS BEEN DISPLACED, UNDERMINED, OR DAMAGED, IT SHOULD BE REPAIRED IMMEDIATELY. THE CHANNEL IMMEDIATELY BELOW THE OUTLET SHOULD BE CHECKED TO SEE THAT EROSION IS NOT OCCURRING. THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS, AND SEDIMENT THAT COULD CHANGE FLOW PATTERNS AND/OR TAILWATER DEPTHS ON THE PIPES. REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO THE OUTLET PROTECTION APRON.



NOTES

1. THOROUGHLY COMPACTED SCREENED GRAVEL FOR RCP PIPE. SCREENED GRAVEL TO EXTEND TO SELECT FILL LINE.
2. FOR HDPE OR PVC PIPE, BEDDING SHALL BE 3/4" STONE TO THE TOP OF THE PIPE.

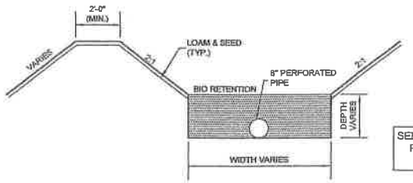
STORM DRAINAGE TRENCH DETAIL
NOT TO SCALE
(MARCH 2008)



SIGN NOTES:

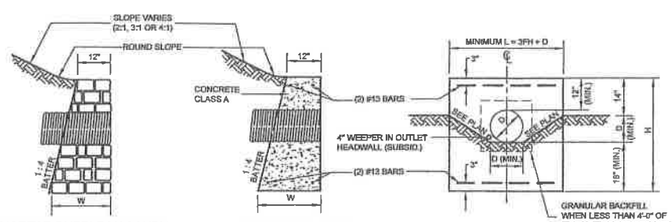
1. THE ABOVE REFERENCED PYLON SIGN IS A REASONABLE GRAPHICAL REPRESENTATION FURNISHED BY DUNKIN DONUTS and THEIR SIGN DESIGN AGENT.
2. ALL FINAL SIGN DESIGN ELEMENTS SHALL COMPLY WITH ALL APPLICATION LOCAL REGULATIONS, AS REGULATED THROUGH THE SIGN APPLICATION PROCESS.

PROJECT PYLON IDENTIFICATION SIGN
NOT TO SCALE



SEE BIO RETENTION POND SECTION SHEET 10

BIORETENTION BASIN CROSS SECTION
NOT TO SCALE



MORTAR RUBBLE MASONRY SECTION ON CENTERLINE

CONCRETE SECTION ON CENTERLINE

ELEVATION

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

DIAMETER D (INCH)	AREA OF PIPE (SF)	MASONRY PER FOOT OF 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.)	ITEM 209 PER LINEAR FOOT	HEADER LENGTH L	HEADER HEIGHT H	FILL HEIGHT FH	WIDTH AT BOTTOM OF HEADER W	"L" HEADWALL	
														MASONRY IN CORNER FRUSTRUM (CU. YD)	HEADER EXC. PER HEADER 1' DEPTH (CU. YD.)
12"	0.79	0.186	1.08	0.61	9	3'-2"	0.111	0.789	0.30	3'-8"	3'-6"	10"	1'-10 1/2"	0.28	1.057
15"	1.23	0.202	1.79	0.85	11	3'-10"	0.120	0.947	0.35	4'-8"	3'-9"	1'-1"	1'-11 1/8"	0.31	1.232
18"	1.77	0.222	2.52	1.13	14	5'-2"	0.130	1.111	0.39	5'-8"	4'-0"	1'-4"	2'-0"	0.35	1.466

NOTE: STEEL QUANTITIES ARE FOR CONCRETE HEADWALLS ONLY.

MORTAR RUBBLE MASONRY AND CONCRETE HEADWALLS
NOT TO SCALE

TP #6

LOGGED BY JAN
PERC. TEST @
DATE: 05/14/13
PERC. RATE:
IMPERVIOUS LAYER: 78"
WATER ENCOUNTERED: NONE

DEPTH	HORIZON	
0"	F1	10YR 3/3 W. GRANULAR, FRIABLE LOAMY FILL MANY FINE ROOTS
4"	F2	10YR 6/4 STRUCTURELESS LOAMY FILL TRACE ORGANICS FEW MEDIUM ROOTS
28"	C	10YR 7/4 W. GRANULAR, FRIABLE LOAMY SAND FEW FAINT FE CONC. @ 60"
78" @ LEDGE		

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

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____
SIGNATURE _____ DATE _____
SIGNATURE _____ DATE _____
SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN ACHIEVES FINAL APPROVAL.

CONSTRUCTION DETAILS
DUNKIN DONUTS

MAP 105; LOT 19
14 BRADY DRIVE
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:
NOURY INVESTMENTS, LLC.
17 ELNATHANS WAY
HOLLIS, NH 03049
BK. 8369, PG. 2857

APPLICANT:
CAFUA MANAGEMENT GROUP
ATTN: GREGORY NOLAN
280 MERRIMACK STREET, SUITE A
METHUEN, MA 01844

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

PETER N. JULIA No. 10435 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE
4/1/14

REVISIONS			
No.	DATE	DESCRIPTION	BY
1	04-01-14	REVISED LOT LAYOUT, ADDED DETAILS/NOTES	PNJ

DATE: JANUARY 24, 2014 | SCALE: AS SHOWN
PROJECT NO: 13-0304-1 | SHEET 12 OF 15

P:\projects\13\0304\13030401\dwg\13030401-DETAILS REV1.dwg, DETAILS, 4/1/2014 8:54:41 AM

INSERT "A"

OPTIONAL ONLY WHEN SOIL CONDITIONS ARE EQUAL TO 6" MINIMUM BEDDING SAND WITH THOROUGH COMPACTION.

INSERT "B"

NOTES:

1. 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 FINISH GRADE.
3. REQUIREMENTS FOR SUBBASE AND BASE MATERIAL TYPE ARE TO BE IN ACCORDANCE WITH LOCAL AUTHORITY HAVING LOCAL JURISDICTION IN PAVED AREAS.
4. REQUIREMENTS FOR GRAVEL, LOAM AND/OR SEED ARE TO BE IN ACCORDANCE WITH LOCAL AUTHORITY HAVING LOCAL JURISDICTION IN NON-PAVED AREAS.
5. 10 GAUGE TRACER WIRE AS MANUFACTURED BY SMS, DIVISION OF ALBESTAR CORP., AVON, MA OR EQUIVALENT.

TRENCH DETAIL
(A-02)
NOT TO SCALE
(MARCH 2008)

NOTES:

1. ALL MATERIAL AND INSTALLATION PROCEDURES WILL CONFORM TO PENNICHUCK WATER WORKS, INC. TECHNICAL SPECIFICATIONS.
2. ALL PIPE SHOULD HAVE A MINIMUM DEPTHS OF 5'-0" FROM TOP OF PIPE TO FINISH GRADE.
3. 3/4"Ø S.S. RODS SHALL BE USED IN CONJUNCTION WITH REQUIRED S.S. NUTS. RODS ARE TO BE ATTACHED TO FITTINGS WITH EITHER STAR BOLTS OR DUC LUGS.
10" FITTING OR SMALLER = (2) 3/4"Ø S.S. RODS & ASSOCIATED HARDWARE.
12" FITTING OR LARGER = (4) 3/4"Ø S.S. RODS & ASSOCIATED HARDWARE.
4. MINIMUM 3'x3'x3' PRE CAST CONCRETE THRUST BLOCK MAY BE USED WITH PENNICHUCK WATER WORKS, INC. APPROVAL OR CONCRETE THRUST BLOCK POURED AGAINST UNDISTURBED EARTH - SIZE TO BE BASED ON SIZE OF FITTING AND PRESSURE IN WATER MAIN. SEE THRUST BLOCK BEHIND FITTINGS DETAIL.

TEE INSTALLATION
(A-06)
NOT TO SCALE
(MARCH 2008)

NOTES:

1. 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 FINISH 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
(A-24)
NOT TO SCALE
(MARCH 2008)

WATER MAIN NOTES

1. ALL WATER MAIN DESIGN, INSTALLATION AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF HUDSON WATER DIVISION AND PENNICHUCK WATER WORKS, WHICHEVER IS MOST STRINGENT.

WATER MAIN PRESSURE AND LEAKAGE TESTING NOTES:

1. ALL WATER MAINS AND FIRE SERVICES SHALL BE SUBJECTED TO PRESSURE AND LEAKAGE TESTING IN ACCORDANCE WITH THE LATEST VERSION OF AWWA STANDARD C-600. ALLOWABLE LEAKAGE FOR EACH SECTION OF WATER MAIN TESTED SHALL BE COMPARED AGAINST THE CHART TITLED "ALLOWABLE LEAKAGE PER 1,000 FEET OF PIPELINE" CONTAINED WITHIN AWWA STANDARD C-600.
2. THE CONTRACTOR SHALL HIRE A TESTING COMPANY WHO IS ACCEPTABLE TO THE TOWN TO COMPLETE THE REQUIRED PRESSURE AND LEAKAGE TESTS. THE TESTER SHALL SUBMIT CERTIFIED LEAKAGE TESTING RESULTS IN WRITING TO THE TOWN FOR EACH SECTION OF MAIN TESTED. THE TOWN SHALL BE NOTIFIED A MINIMUM OF 24 HOURS IN ADVANCE PRIOR TO ANY PRESSURE AND LEAKAGE TESTING.
3. THE PIPE TO BE TESTED SHALL BE FILLED WITH WATER FROM THE TOWN OF DISTRIBUTION SYSTEM AND ALL AIR SHALL BE EXPELLED FROM THE WATER MAIN THROUGH THE USE OF HYDRANTS, AIR RELEASES, SERVICES AND BLOWOFFS LOCATED AT THE HIGH POINTS. IF TEMPORARY AIR RELEASES ARE INSTALLED BY THE CONTRACTOR, THEY SHALL BE REMOVED AND PLUGGED WITH A BRASS PLUG UPON THE SUCCESSFUL COMPLETION OF THE PRESSURE TEST.
4. IF A SECTION OF MAIN FAILS PRESSURE AND LEAKAGE TESTING, THE CONTRACTOR SHALL LOCATE, UNCOVER AND REPAIR OR REPLACE THE DEFECTIVE SECTION OF PIPE, FITTING, VALVE OR JOINT. THE CONTRACTOR'S TESTER SHALL THEN CONDUCT ADDITIONAL PRESSURE AND LEAKAGE TESTING UNTIL SATISFACTORY TEST RESULTS ARE ACHIEVED.

NOTES:

1. ALL MATERIAL AND INSTALLATION PROCEDURES WILL CONFORM TO PENNICHUCK WATER WORKS, INC. TECHNICAL SPECIFICATIONS.
2. ALL PIPE SHOULD HAVE A MINIMUM DEPTHS OF 5'-0" FROM TOP OF PIPE TO FINISH GRADE.
3. 3/4"Ø S.S. RODS SHALL BE USED IN CONJUNCTION WITH REQUIRED S.S. NUTS. RODS ARE TO BE ATTACHED TO FITTINGS WITH EITHER STAR BOLTS OR DUC LUGS.
10" FITTING OR SMALLER = (2) 3/4"Ø S.S. RODS & ASSOCIATED HARDWARE.
12" FITTING OR LARGER = (4) 3/4"Ø S.S. RODS & ASSOCIATED HARDWARE.
4. MIN 3'x3'x3' PRE CAST CONCRETE THRUST BLOCK MAY BE USED WITH PENNICHUCK WATER WORKS, INC. APPROVAL OR CONCRETE THRUST BLOCK POURED AGAINST UNDISTURBED EARTH - SIZE TO BE BASED ON SIZE OF FITTING AND PRESSURE IN WATER MAIN.

THRUST BLOCK BEHIND FITTINGS INSTALLATION
(A-07)
NOT TO SCALE
(MARCH 2008)

NOTES:

1. ALL MATERIAL AND INSTALLATION PROCEDURES WILL CONFORM TO PENNICHUCK WATER WORKS, INC. TECHNICAL SPECIFICATIONS.
2. ALL PIPE SHOULD HAVE A MINIMUM DEPTHS OF 5'-0" FROM TOP OF PIPE TO FINISH GRADE.
3. 3/4"Ø S.S. RODS SHALL BE USED IN CONJUNCTION WITH REQUIRED S.S. NUTS. RODS ARE TO BE ATTACHED TO FITTINGS WITH EITHER STAR BOLTS OR DUC LUGS.
10" FITTING OR SMALLER = (2) 3/4"Ø S.S. RODS & ASSOCIATED HARDWARE.
12" FITTING OR LARGER = (4) 3/4"Ø S.S. RODS & ASSOCIATED HARDWARE.
4. WHEN DISTANCE FROM WATER MAIN TO HYDRANT IS MORE THAN 10'-0" SUBSTITUTE MEGALUGS (OR GRIP RINGS) IN LIEU OF THREADED RODS.
5. MINIMUM 3'x3'x3' PRE CAST CONCRETE THRUST BLOCK MAY BE USED WITH PENNICHUCK WATER WORKS, INC. APPROVAL OR CONCRETE THRUST BLOCK POURED AGAINST UNDISTURBED EARTH - SIZE TO BE BASED ON SIZE OF FITTING AND PRESSURE IN WATER MAIN. SEE THRUST BLOCK BEHIND FITTINGS DETAIL.

HYDRANT INSTALLATION
(A-10)
NOT TO SCALE
(MARCH 2008)

NOTES:

1. 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 FINISH GRADE.

END OF MAIN INSTALLATION
(A-08)
NOT TO SCALE
(MARCH 2008)

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

CONSTRUCTION DETAILS
DUNKIN DONUTS

MAP 105; LOT 19
14 BRADY DRIVE
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:	APPLICANT:
NOURY INVESTMENTS, LLC. 17 ELNATHANS WAY HOLLIS, NH 03049 BK. 8369, PG. 2857	CAFUA MANAGEMENT GROUP ATTN: GREGORY NOLAN 280 MERRIMACK STREET, SUITE A METHUEN, MA 01844

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

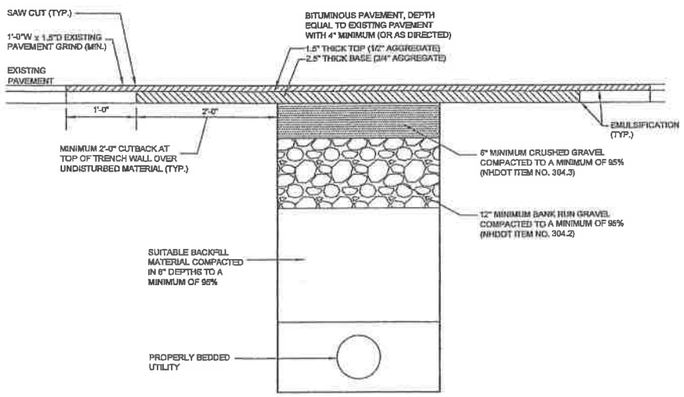
STATE OF NEW HAMPSHIRE PETER A. JULIA No. 10435 LICENSED PROFESSIONAL ENGINEER 4/1/14

REVISIONS

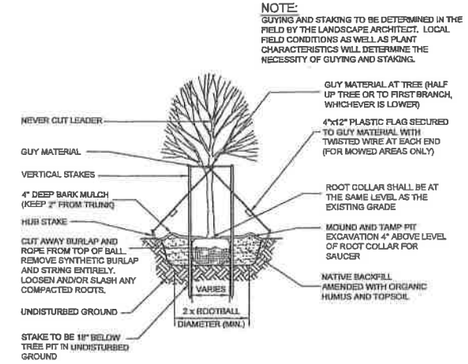
No.	DATE	DESCRIPTION	BY
1	04–01–14	ADDED DETAILS/NOTES	PNJ

DATE: JANUARY 24, 2014	SCALE: AS SHOWN
PROJECT NO: 13–0304–1	SHEET 13 OF 15

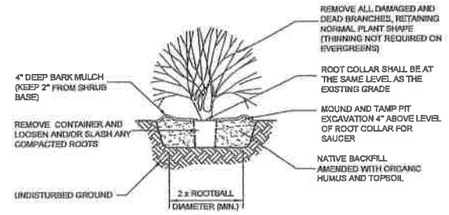
P:_project\1303041\1303041\dwg\1303041-DETAILS REV1.dwg, DETAILS 4/1/2014 9:35:11 AM



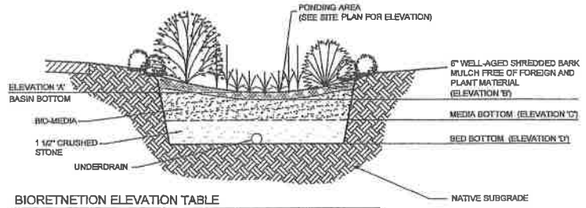
PERMANENT PAVEMENT REPAIR
NOT TO SCALE
(MARCH 2008)



DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE
(JANUARY 2012)



CONTAINER SHRUB PLANTING DETAIL
NOT TO SCALE
(JANUARY 2012)



BIORETNETION ELEVATION TABLE

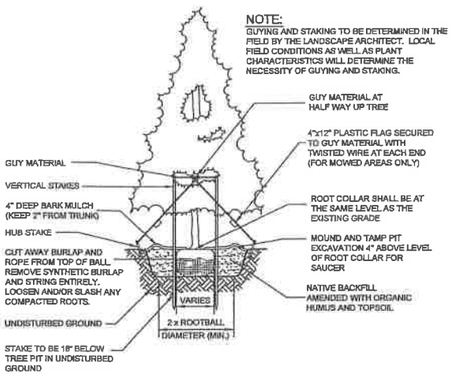
LOCATION	A	B	C	D
BIO-RET. #2	216.50	218.00	217.00	216.00
BIO-RET. #3	216.50	218.00	217.00	216.50

BIO-RETENTION MEDIA SUMMARY:

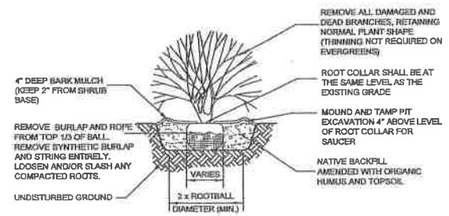
COMPONENT MATERIAL	PERCENT OF MIXTURE BY VOLUME	GRADATION OF MATERIAL	
		SIEVE NO.	PERCENT BY WEIGHT PASSING STANDARD SIEVE
FILTER MEDIA OPTION A			
ASTM C-33 CONCRETE SAND	50 TO 55		
LOAMY SAND TOPSOIL, WITH FINES AS INDICATED	20 TO 30	200	15 TO 25
MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH, WITH FINES AS INDICATED	20 TO 30	200	<5
FILTER MEDIA OPTION B			
MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH, WITH FINES AS INDICATED	20 TO 30	200	<5
LOAMY COARSE SAND	70 TO 80	10	85 TO 100
		20	70 TO 100
		60	15 TO 40
		200	8 TO 15

NOTE:
THIS SYSTEM SHALL NOT BE IN SERVICE UNTIL THE SPECIFIED PLANTINGS ARE INSTALLED AND THE CONTRIBUTING SURFACE AREA IS STABILIZED.

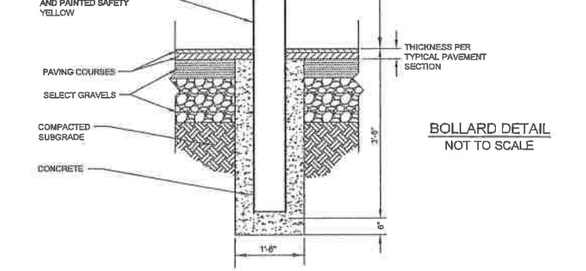
TYPICAL BIORETENTION POND SECTION
NOT TO SCALE



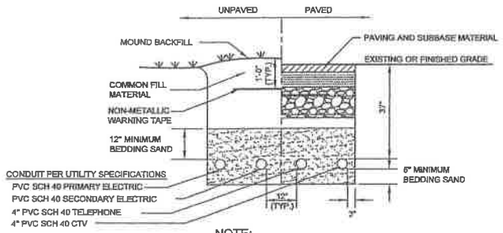
EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE
(JANUARY 2012)



BALLED & BURLAP SHRUB PLANTING DETAIL
NOT TO SCALE
(JANUARY 2012)

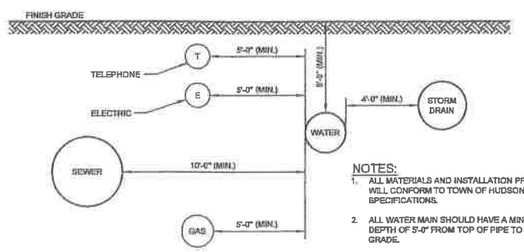


BOLLARD DETAIL
NOT TO SCALE



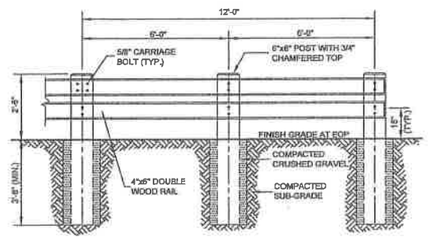
NOTE:
INSTALLATION AND MATERIALS OF UNDERGROUND UTILITIES SHALL CONFORM TO LOCAL UTILITY COMPANY SPECIFICATIONS.

UTILITY TRENCH DETAIL
NOT TO SCALE
(MARCH 2008)

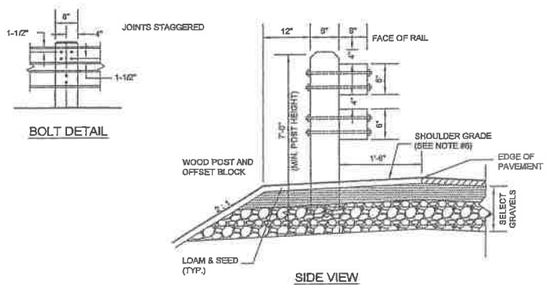


NOTES:
1. ALL MATERIALS AND INSTALLATION PROCEDURES WILL CONFORM TO TOWN OF HUDSON TECHNICAL SPECIFICATIONS.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5'-0" FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL FOR TRENCH SPECIFICATIONS.
4. SEE DETAIL FOR OUTSIDE SERVICE ENTRANCE SPECIFICATIONS.

UTILITY SEPARATION (MAIN) DETAIL
NOT TO SCALE
(MARCH 2008)



ELEVATION



BOLT DETAIL

SIDE VIEW

NOTES:
1. 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
(AUGUST 2011)

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

CONSTRUCTION DETAILS

DUNKIN DONUTS

MAP 105; LOT 19
14 BRADY DRIVE
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:	APPLICANT:
NOURY INVESTMENTS, LLC. 17 ELNATHANS WAY HOLLIS, NH 03049 BK. 8369, PG. 2857	CAFUA MANAGEMENT GROUP ATTN: GREGORY NOLAN 280 MERRIMACK STREET, SUITE A METHUEN, MA 01844

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10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

PETER N. JULIA No. 10435 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE

REVISIONS

No.	DATE	DESCRIPTION	BY
1	04-01-14	REVISED LOT LAYOUT, ADDED DETAILS/NOTES	PHJ

DATE: JANUARY 24, 2014 SCALE: AS SHOWN
PROJECT NO: 13-0304-1 SHEET 14 OF 15

P:\projfiles\13\0304\13\0304(4)\dwg\130304(4)DETAILS REV1.dwg, DETAILS, 4/1/2014 8:43:05 AM

NOTES:

1. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. MATS/ BLANKETS SHALL HAVE GOOD SOIL CONTACT.
2. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
3. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.

EROSION CONTROL BLANKETS - SLOPE INSTALLATION

NOT TO SCALE
(AUGUST 2011)

NOTES:

1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. SILTSOXX™ COMPOST/SOIL/ROCK/SEED FILL TO MEET APPLICATION REQUIREMENTS.
3. SILTSOXX™ DEPICTED IS FOR MINIMUM SLOPES. GREAT SLOPES MAY REQUIRE LARGER SOCKS PER THE ENGINEER.
4. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

FILTREXX® SILTSOXX™ DETAIL

NOT TO SCALE
(AUGUST 2011)

TURF ESTABLISHMENT SCHEDULE

PURPOSE:

TO ESTABLISH AND MAINTAIN PERMANENT AND TEMPORARY TURF AREAS, RESTORE GROWTH TO EXISTING TURF AREAS DISTURBED DURING CONSTRUCTION AND CONTROL SOIL EROSION.

PREPARATION AND EXECUTION:

1. RAKE THE SUBGRADE OF ALL AREAS TO BE LOAMED AND SEEDED TO REMOVE RUBBISH, STICKS, ROOTS AND STONES LARGER THAN 1 INCH.
2. PLACE LOAM OVER AREAS TO BE SEEDED AND SPREAD.
3. FINE GRADE SURFACE AND SUPPLEMENT WITH SUITABLE LOAM WHERE NEEDED TO CREATE A UNIFORM SURFACE ACCORDING TO THE FINISH GRADES INDICATED; TOP AND BOTTOM OF SLOPES SHALL BE ROUNDED. NO LOAM SHALL BE SPREAD IF THE SUBGRADE IS EXCESSIVELY WET OR FROZEN.
4. 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 MIXTURE FOR AREA TO BE SEEDED BASED ON EXAMINATION OF PROJECT PLANS. UNIFORMLY SPREAD THE SEED BY BROADCASTING OR HYDROSEEDING. IF BROADCASTING, LIGHTLY RAKE INTO THE PREPARED SURFACE AND ROLL. IF, HYDROSEEDING, USE 4 TIMES THE RECOMMENDED RATE OF INOCULANT. AFTER SEED IS SPREAD, WATER THOROUGHLY WITH A FINE SPRAY.
7. 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 UNTILLABLE.
8. WITHIN 24 HOURS AFTER SEEDING OPERATION, UNIFORMLY MULCH THE AREA WITH HAY. ANCHOR MULCH ON ALL SLOPES EXCEEDING 3 : 1 USING MULCH NETTING INSTALLED IN ACCORDANCE WITH THE MANUFACTURER.
9. PROTECT AND PREVENT AGAINST WASHOUTS, ANY WASHOUTS WHICH OCCUR SHALL BE PROMPTLY REGRADED AND RESEEDED.
10. WHEN IT IS IMPRACTICAL TO ESTABLISH PERMANENT GROWTH ON DISTURBED EARTH BY 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 SEEDED AREAS SHALL BE KEPT WATERED AND IN GOOD CONDITION. RESEED AS NECESSARY TO ESTABLISH HEALTHY UNIFORM GROWTH OVER THE ENTIRE SEEDED AREA. MAINTAIN SEEDED 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 POUNDS PER 1,000 S.F.
3. FERTILIZER SHALL BE APPLIED AT A RATE OF 30 POUNDS PER 1,000 S.F.
4. 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.
6. SEED MIXTURE FOR SLOPE AREAS SHALL BE APPLIED AT A RATE OF 80 POUNDS PER ACRE OR 2 POUNDS PER 1,000 S.F.
7. SEED MIXTURE FOR STORMWATER MANAGEMENT AREAS SHALL BE APPLIED AT A RATE OF 70 POUNDS PER ACRE OR 1.6 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 TOPSOIL SHALL BE FRIABLE, FERTILE, NATURAL FREE-DRAINING LOAM; FREE OF ROOTS, GRASS, STICKS, WEEDS, CLAY, SOD LUMPS, DEBRIS AND STONES LARGER THAN 1 INCH IN ANY DIMENSION. SOIL SHALL NOT BE EXCESSIVELY ACID OR ALKALINE AND CONTAIN NO TOXIC MATERIALS.
2. LIME SHALL BE GROUND LIMESTONE CONTAINING NO LESS THAN 95% CALCIUM AND MAGNESIUM CARBONATES.
3. FERTILIZER SHALL BE 10-20-20 COMMERCIAL GRADE.
4. SEED MIXTURE FOR LAWN AREAS SHALL BE 99% PURE LIVE SEED AND CONSIST OF THE FOLLOWING:
   - 25% CREEPING RED FESCUE
   - 25% KENTUCKY BLUEGRASS
   - 25% REDTOP
   - 25% MANHATTAN PERENNIAL RYEGRASS
5. TEMPORARY SEEDING MIXTURE SHALL BE AN APPROVED CONSERVATION MIX OR CONSIST OF THE FOLLOWING:
   - 15% BLACKWELL OR SHELTER SWITCHGRASS
   - 30% NIAGRA OR KAW BIG BLUESTEM
   - 30% CAMPER OR BLAZE LITTLESTEM
   - 15% NE-27 OR BLAZE SAND LOVEGRASS
   - 10% VIKING BIRDSFOOT TREFOIL
   - INOCULUM SPECIFIC TO BIRDSFOOT TREFOIL MUST BE USED WITH THIS MIXTURE. IF SEEDING BY HAND, A STICKING AGENT SHALL BE USED. IF SEEDING WITH A HYDROSEEDER, USE FOUR TIMES THE RECOMMENDED AMOUNT OF INOCULUM.
6. SEED MIXTURE FOR SLOPE AREAS SHALL BE 99% PURE LIVE SEED AND SHALL CONSIST OF THE FOLLOWING:
   - 30% CREEPING RED FESCUE
   - 40% PERENNIAL RYE GRASS
   - 15% REDTOP
   - 15% BIRDSFOOT TREFOIL
   - *IN ADDITION TO THE MIX SPECIFIED ABOVE, CROWN 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.
7. SEED MIXTURE FOR STORMWATER MANAGEMENT AREAS, INCLUDING DETENTION BASINS AND VEGETATED TREATMENT SWALES SHALL CONSIST OF THE FOLLOWING:
   - 25% CREEPING RED FESCUE
   - 15% SWITCH GRASS
   - 15% FOX SEDGE
   - 15% CREEPING BENTGRASS
   - 10% FLATPEA
   - 20% WILDFLOWER VARIETY
8. 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.

CONSTRUCTION SEQUENCE

1. 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 REQUIREMENTS AND INTENT OF RSA 430:53 AND AGR 3800 RELATIVE TO INVASIVE SPECIES.
2. PRIOR TO COMMENCEMENT OF ANY EARTHMOVING OPERATIONS, ALL APPLICABLE TEMPORARY EROSION CONTROL MEASURES, INCLUDING SPECIFIED PERIMETER SILTATION FENCING AND STABILIZED CONSTRUCTION EXIT SHALL BE IN PLACE AS SHOWN ON THE PROJECT PLANS.
3. COMPLETE GRUBBING OPERATIONS. ALL STUMPS AND SIMILAR ORGANIC DEBRIS SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR. NATIVE ORGANIC SOIL MATERIALS SUITABLE FOR USE AS TOPSOIL SHALL BE STOCKPILED WITHIN AREAS OUT OF THE WAY OF OTHER CONSTRUCTIONS ACTIVITIES AND DRAINAGE FLOW. STOCKPILES SHALL BE TEMPORARILY SEEDED WITH WINTER RYE AND BE SURROUNDED WITH HAY BALES AND/OR FABRIC SILTATION FENCE IN ORDER TO PREVENT LOSS DUE TO EROSION.
4. BEGIN EARTHMOVING OPERATIONS, COMMENCING WITH WORK NEEDED TO BALANCE SITE AND FACILITATE BUILDING FOUNDATION AND RETAINING WALL CONSTRUCTION. PERMANENT DOWNSLOPE WORK SHALL BE PROTECTED FROM UPGRADIENT STORMWATER FLOW BY THE CONSTRUCTION OF TEMPORARY EARTHEN DIKES OR EXCAVATED SWALES.
5. ONCE BUILDING FOUNDATION WORK IS UNDERWAY, CONTINUE EARTHMOVING OPERATIONS UNTIL DESIGN SUBGRADE IS ACHIEVED.
6. INSTALL DRAINAGE SWALE 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 FULLY STABILIZED.
7. PLACE GRAVEL AND CRUSHED GRAVEL OVER PROPOSED DRIVEWAY, WALKS AND PARKING AREAS AND COMPACT IN SPECIFIED LIFT THICKNESS.
8. COMPLETE EXCAVATION/STABILIZATION GRADING ACTIVITIES. WHEN COMPLETE, IMMEDIATELY BEGIN TOPSOILING PROPOSED TURF AREAS USING STOCKPILED LOAM SUPPLEMENTED WITH BORROW LOAM, IF NECESSARY, TO LEAVE A THICKNESS OF 4 INCHES OF FRIABLE LOAM.
9. 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 STABILIZED AND VEGETATED WITH A HEALTHY STAND OF TURF OR GROUND COVER. MAINTAIN SPECIFIED SILTATION/EROSION CONTROL MEASURES THROUGH ONE WINTER.
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

1. 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 GIVEN AREA OF THE SITE SHALL BE LEFT IN AN UNSTABILIZED CONDITION FOR A PERIOD OF TIME EXCEEDING FORTY-FIVE (45) CALENDAR DAYS.
2. TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH PROJECT PLANS. IN ADDITION, SIMILAR MEASURES SHALL BE INSTALLED WHERE AND WHEN THE FIELD CONDITION, OR FIELD 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 RAINFALL OR MORE. THEY SHALL BE CLEANED AND MAINTAINED AND OTHERWISE KEPT IN AN EFFECTIVE OPERATING MANNER THROUGHOUT THE CONSTRUCTION PERIOD.
3. 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 CLEANED OF DEPOSITED SEDIMENT SO AS TO MAINTAIN AN EFFECTIVE GRADE AND CROSS SECTION. ALL SWALES AND DITCHLINES SHALL BE FULLY STABILIZED PRIOR TO HAVING STORMWATER 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.
6. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
   A. BASE COURSE GRAVELS ARE INSTALLED IN AREAS TO BE PAVED;
   B. A MINIMUM OF 85% 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.
7. 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 JUDGEMENT IN INSTALLING SUPPLEMENTARY EROSION CONTROL MEASURES WHERE AND WHEN SPECIFIC SITE CONDITIONS AND/OR CONSTRUCTION METHODOLOGIES MAY WARRANT.
9. 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 CONFORM WITH THE RECOMMENDED BEST MANAGEMENT PRACTICE OUTLINED IN VOLUME 3 OF THE NEW HAMPSHIRE STORMWATER MANUAL "EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION."
10. 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.

WINTER CONSTRUCTION NOTES:

1. 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 INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 4:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE PLACEMENT OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
2. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
3. AFTER NOVEMBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3 OR, IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON, BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT.
4. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
   A. BASE COURSE GRAVELS ARE INSTALLED IN AREAS TO BE PAVED;
   B. A MINIMUM OF 85% 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.

PLAN - A

STOCK PILE STABILIZATION MEASURE A:
TEMPORARY HAY BALE PERIMETER

PLAN - B

STOCK PILE STABILIZATION MEASURE B:
TEMPORARY SILT FENCE PERIMETER

GENERAL NOTES:

1. THIS PROJECT DOES ANTICIPATE THE NEED OR USE OF STANDING STOCKPILES FOR GREATER THAN 24 HOURS. ALL MATERIALS WILL EITHER BE IMMEDIATELY REMOVED OR PLACED WITHIN THE ACTIVE LIMIT OF PROJECT.
2. ALL MATERIAL STOCKPILES LEFT STANDING GREATER THAN 72 HOURS WILL REQUIRE PERIMETER MEASURES (A OR B), AS NOTED ABOVE.
3. NO TEMPORARY OR PERMANENT MATERIAL STOCKPILES WILL BE PERMITTED WITHIN THE PROJECT LIMITS FOLLOWING PROJECT SUBSTANTIAL COMPLETION.

STOCKPILE STABILIZATION

NOT TO SCALE

STONE CHECK DAM DETAIL

NOT TO SCALE

STABILIZED CONSTRUCTION EXIT DETAIL

NOT TO SCALE
(MARCH 2008)

MAINTENANCE:

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

IF WASHING FACILITIES ARE USED, THE SEDIMENT TRAPS SHOULD BE CLEANED OUT AS OFTEN AS NECESSARY TO ASSURE THAT ADEQUATE TRAPPING EFFICIENCY AND STORAGE VOLUME IS AVAILABLE. VEGETATIVE FILTER STRIPS SHOULD BE MAINTAINED TO INSURE 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 CONCRETE EQUIVALENT.
2. THE LENGTH OF THE STABILIZED EXIT SHALL NOT BE LESS THAN 50 FEET, 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 6 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.
5. 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.
6. 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 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
7. THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED PROMPTLY.
8. 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.

HI-FLOW DANDY BAG® (SAFETY ORANGE)

MECHANICAL PROPERTIES	TEST METHOD	UNITS	MARV
GRAB TENSILE STRENGTH	ASTM D 4632	kN (lbs)	1.62 (365) x 0.89 (200)
GRAB TENSILE ELONGATION	ASTM D 4632	%	24 x 10
PUNCTURE STRENGTH	ASTM D 4833	kN (lbs)	0.40 (90)
MULLEN BURST STRENGTH	ASTM D 3786	kPa (psi)	3097 (450)
TRAPEZOID TEAR STRENGTH	ASTM D 4533	kN (lbs)	0.51 (115) x 0.33 (75)
UV RESISTANCE	ASTM D 4355	%	90
APPARENT OPENING SIZE	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
FLOW RATE	ASTM D 4491	1/min/m² (gal/min/ft²)	5907 (145)
PERMITTIVITY	ASTM D 4491	Sec⁻¹	2.1

DANDY BAG®

NOT TO SCALE

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

CONSTRUCTION DETAILS

DUNKIN DONUTS

MAP 105; LOT 19
14 BRADY DRIVE
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:	APPLICANT:
NOURY INVESTMENTS, LLC. 17 ELNATHANS WAY HOLLIS, NH 03049 BK. 8369, PG. 2857	CAFUA MANAGEMENT GROUP ATTN: GREGORY NOLAN 280 MERRIMACK STREET, SUITE A METHUEN, MA 01844

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

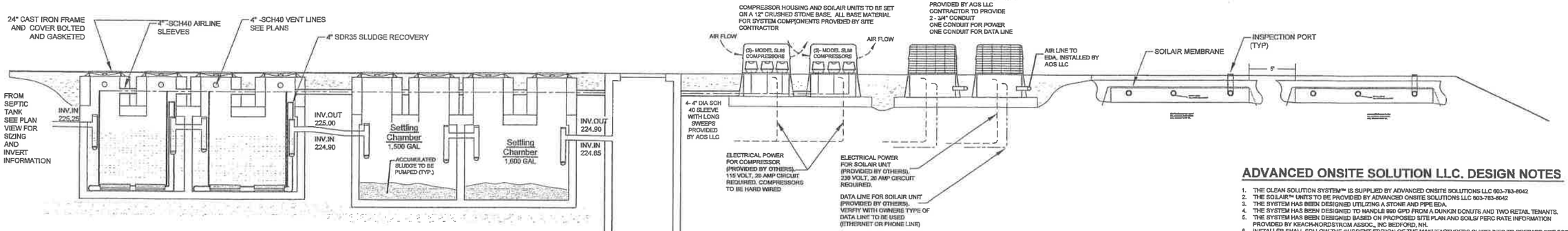
STATE OF NEW HAMPSHIRE - PETER N. JULIA No. 10435 LICENSED PROFESSIONAL ENGINEER 4/1/14

REVISIONS

No.	DATE	DESCRIPTION	BY
1	04-01-14	REVISED LOT LAYOUT, ADDED DETAILS/NOTES	PNJ

DATE: JANUARY 24, 2014	SCALE: AS SHOWN
PROJECT NO: 13-0304-1	SHEET 15 OF 15

P:_projects\13030431\13030431\dwg\13030431-DETAILS REV1.dwg, DETAILS, 4/1/2014 8:43:33 AM



BioCon Tank (BC-1)

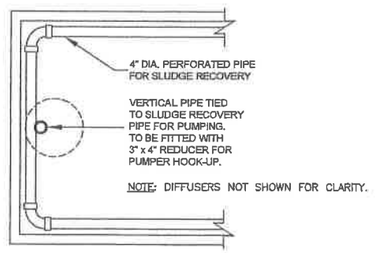
- BY AOS -
3000 GAL HD LOADED
2-Compartment Tank
(15'4"L x 8'4"W x 6'0"H)

Settling Tank (SET-1)

- BY AOS -
3000 GAL HD LOADED
2-Compartment Tank
(15'4"L x 8'4"W x 6'0"H)

FLOW PROFILE OF THE CLEAN SOLUTION

SCALE: N.T.S.

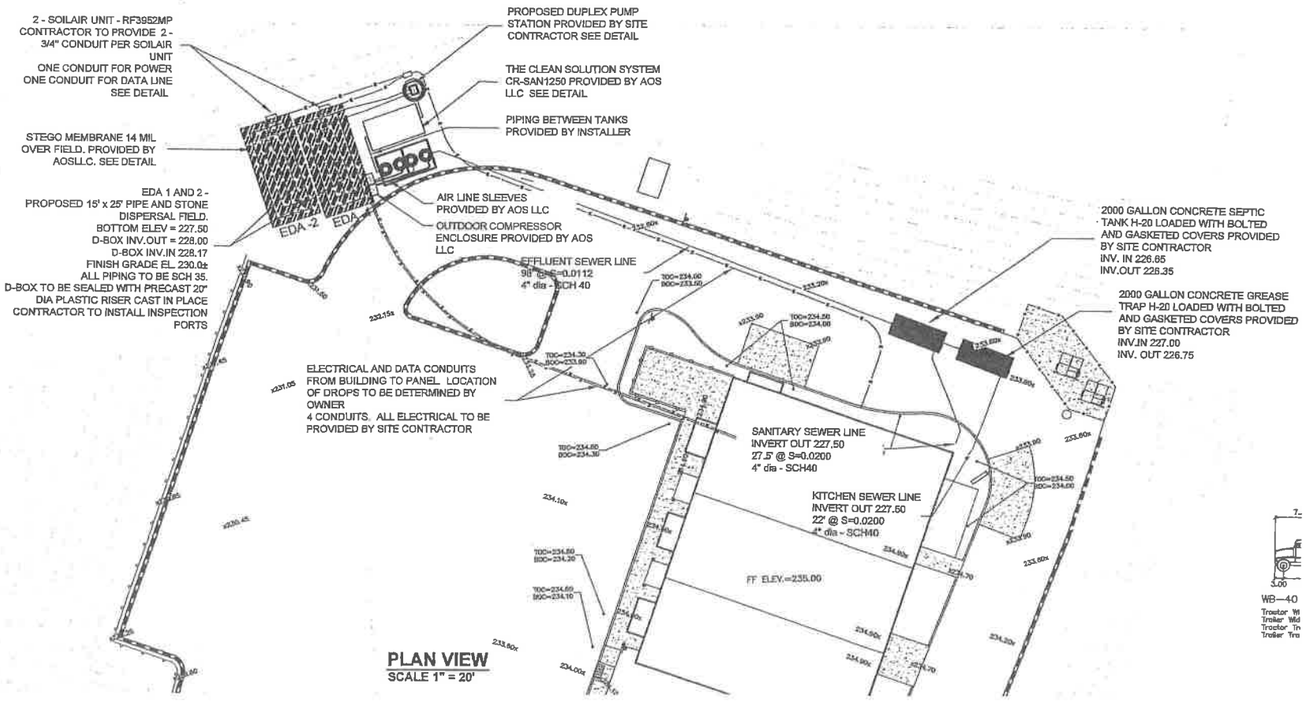


SLUDGE RECOVER DETAIL

SCALE: N.T.S.

ADVANCED ONSITE SOLUTION LLC. DESIGN NOTES

1. THE CLEAN SOLUTION SYSTEM™ IS SUPPLIED BY ADVANCED ONSITE SOLUTIONS LLC 603-783-8042
2. THE SOILAIR™ UNITS TO BE PROVIDED BY ADVANCED ONSITE SOLUTIONS LLC 603-783-8042
3. THE SYSTEM HAS BEEN DESIGNED UTILIZING A STONE AND PIPE EDA.
4. THE SYSTEM HAS BEEN DESIGNED TO HANDLE 860 GPD FROM A DUNKIN DONUTS AND TWO RETAIL TENANTS.
5. THE SYSTEM HAS BEEN DESIGNED BASED ON PROPOSED SITE PLAN AND SOILS/ PERC RATE INFORMATION PROVIDED BY KEACH-NORDSTROM ASSOC., INC BEDFORD, NH.
6. INSTALLER SHALL FOLLOW THE CURRENT EDITION OF THE MANUFACTURERS GUIDELINES TO PREPARE SITE FOR INSTALLATION OF THE CLEAN SOLUTION SYSTEM AND SHALL PROVIDE THE FOLLOWING:
   - A.) CONTRACTOR SHALL FOLLOW APPROVED DESIGN PLANS AND NHDES SUBSURFACE SYSTEM RULES.
   - B.) CONTRACTOR TO SUPPLY NECESSARY SEPTIC TANKS , GREASE TRAPS, BIOCON AND SETTLING TANKS AS REQUIRED BY DESIGNER.
   - C.) EXCAVATION OF ALL TANKS INCLUDING TANKS SUPPLIED BY WAI TO GRADES ESTABLISHED BY DESIGNER.
   - D.) SETTING AND LEVELING OF ALL TANKS.
   - E.) SERVICE CONNECTIONS FROM BUILDING TO SEPTIC TANK(S), SEPTIC TANK(S) TO BIOCON TANK(S), BIOCON TANK(S) TO SETTLING TANK(S), SETTLING TANK(S) TO DISPERSAL FIELD(S).
   - F.) CONTRACTOR SHALL EXCAVATE FOR ALL AIR CONDUIT LINES FROM COMPRESSOR HOUSING TO BIOCON TANK(S).
   - G.) CONTRACTOR TO WATER PLUG ALL TANK PENETRATIONS TO PREVENT GROUNDWATER LEAKS.
   - H.) CONTRACTOR TO WATER PLUG ALL INLET AND OUTLETS NOT USED.
   - I.) CONTRACTOR SHALL SET ALL RISERS TO GRADES ESTABLISHED BY DESIGNER. CONTRACTOR TO INSTALL ACCESS STACKS PER THE MANUFACTURERS INSTALLATION GUIDELINES. CONTRACTOR TO ENSURE THAT RUBBER GASKET O-RING IS IN PLACE PRIOR TO SECURING SECTIONS. ALL SCREW HOLES TO BE USED TO SECURE SECTIONS TO EACH OTHER.
   - J.) CONTRACTOR TO BUILD / MODIFY OVERBOARD DISCHARGE LINE AS REQUIRED BY DESIGNER.
   - K.) CONTRACTOR SHALL CALL NHDES AND LOCAL BOARDS (IF REQUIRED) FOR SYSTEM INSPECTION.
   - L.) CONTRACTOR TO PROVIDE OWNER AND WAI WITH TIES FROM TWO FIXED POINTS TO ACCESS COVERS.
   - M.) CONTRACTOR SHALL BACKFILL SYSTEM AFTER APPROVAL FOR OPERATION BY NHDES.
7. THE OWNER/CONTRACTOR SHALL PROVIDE THE FOLLOWING:
   - A.) OWNER/CONTRACTOR SHALL SUPPLY NECESSARY OUTLETS CAPABLE OF 4.5 AMPS AND 120 WATTS FOR EACH COMPRESSOR. 20 AMP CIRCUITS REQUIRED NON GFI PROTECTED.
   - B.) COMPRESSOR(S) LOCATION TO BE MUTUALLY DETERMINED BY OWNER / REPRESENTATIVE AND WAI.
   - C.) MAXIMUM DISTANCE FROM COMPRESSOR(S) TO BIOCON TANK IS 50'. FOR DISTANCES GREATER THAN 50' CONTACT AOS.
   - D.) CONTRACTOR SHALL PROVIDE SLEEVES FOR AIR LINES TO EACH CHAMBER ACCESS.
8. REQUIRED MAINTENANCE BY OWNER:
   - A.) SIGN SYSTEM INSPECTION AGREEMENT FOR THE CLEAN SOLUTION SYSTEM. INSPECTION AGREEMENT IS PROVIDED BY AOS!
   - B.) SEPTIC TANK(S) AND SETTLING TANK(S) TO BE INSPECTED EVERY 6 MONTHS AND PUMPED OUT AS NEEDED.
   - C.) GREASE TRAPS TO BE PUMPED OUT EVERY 2 MONTHS.
   - C.) BIOCON TANK(S) TO BE INSPECTED EVERY 6 MONTHS BY APPROVED AOS TECHNICIAN.
   - D.) OWNER SHALL KEEP ALL PUMPING RECORDS.
   - E.) WASTEWATER SAMPLE WILL BE REQUIRED AT A MINIMUM OF TWICE A YEAR TESTING MAY BE REVISED AFTER FIRST FULL YEAR IN USE
   - F.) SEE SALES AGREEMENT AND INSPECTION AGREEMENT FOR ADDITIONAL INSPECTION REQUIREMENTS BY OWNER(S)
   - G.) FAILURE TO COMPLY WITH "A" - "G" ABOVE WILL VOID WARRANTY OF THE CLEAN SOLUTION SYSTEM AND AOS.



PLAN VIEW
SCALE 1" = 20'

LAYOUT VIEW
SCALE 1" = 20'

ADVANCED ONSITE SOLUTION LLC. NOTES

DESIGN BASED ON INFORMATION PROVIDED TO AOS, LLC BY KEACH - NORDSTROM ASSOC, INC. PRIOR TO INSTALLING SYSTEM CONTRACTOR SHALL HAVE ONSITE A COPY OF THE NHDES APPROVED PLAN

PROPOSED ISDS PLAN FOR A NEW SYSTEM
Tax Map 105 Lot 19
14 BRADY DRIVE
HUDSON, NH

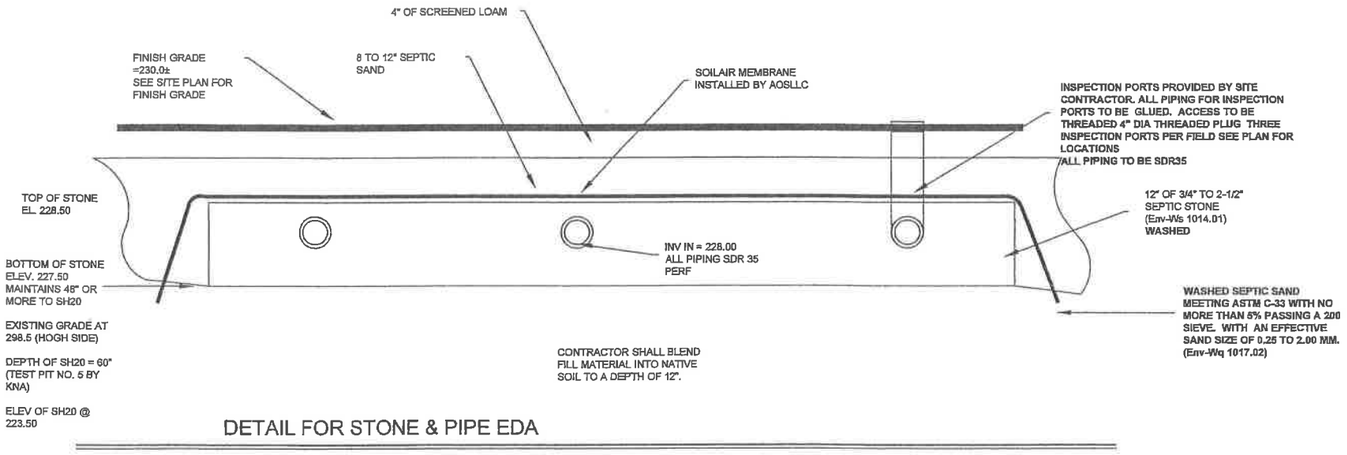
SCALE: NTS DATE: 01-24-2014

OWNER: **CAFUA REALITY TRUST LIV, LLC**
280 MERRIMACK STREET
METHUEN, MA 01844

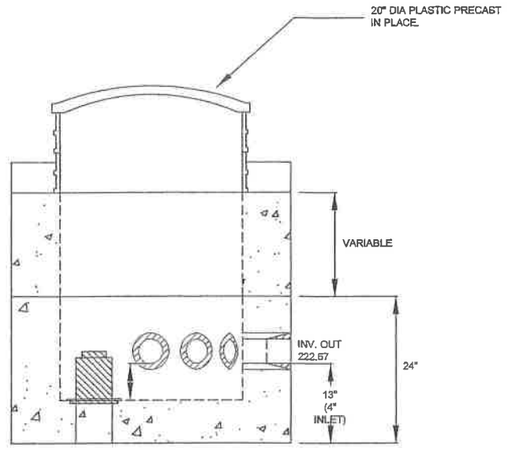
Advanced Onsite Solutions, LLC
innovative wastewater solutions with sustainable results
2 Whitney Road - Concord - NH
P.O Box 248 - Canterbury - NH 03224
Phone (603) 783-8042 web: aosne.com

REV.	DATE	DESCRIPTION			
1	04.01.2014	REVISED LOT LAYOUT			
			XX	XX	
			C/O	DR	CK

FILE

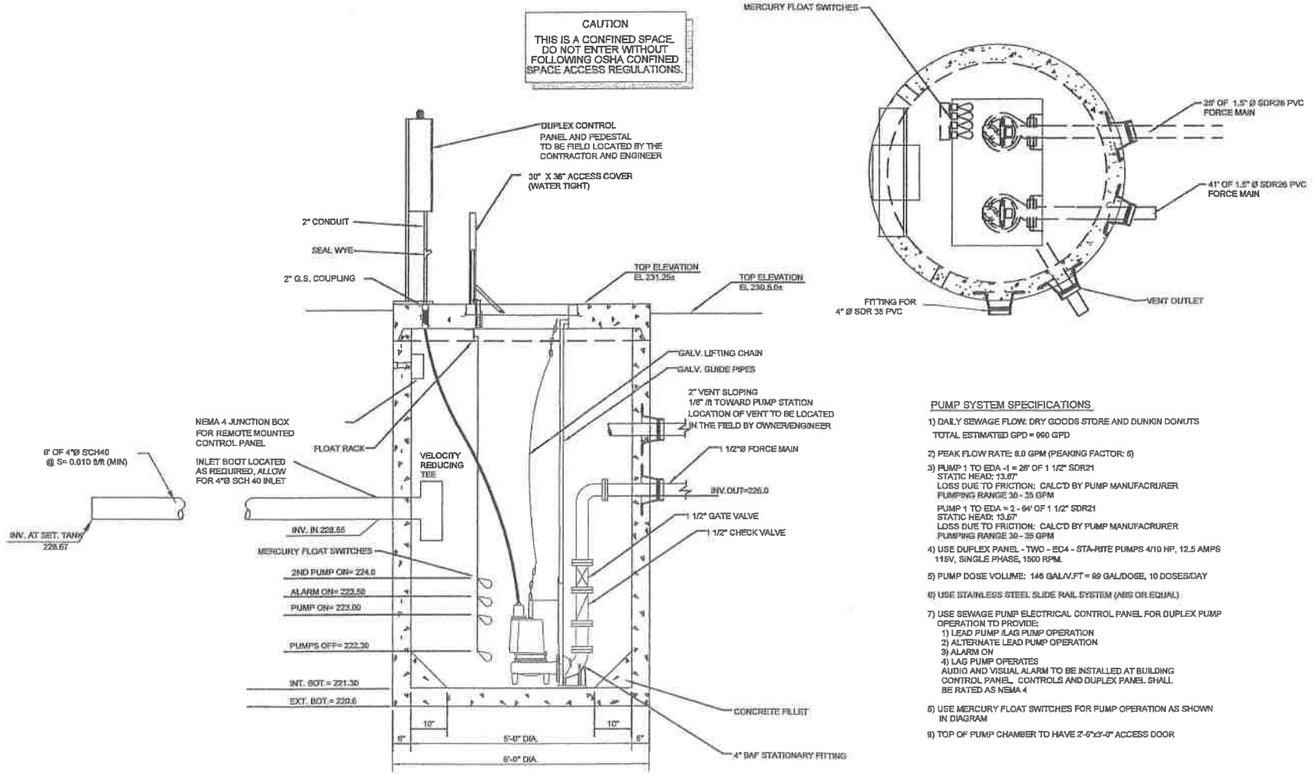


DETAIL FOR STONE & PIPE EDA



BOTTOM OF D-BOX TO BE SET ON 12" OF CLASS I BEDDING EXTENDING 12" BEYOUND EDGE OF D-BOX AND 12" THINK

STANDARD DUTY LOADED- "D" BOX - 7 OUTLET (USE 3 OUTLETS)



DUPLEX PUMP DETAIL

PUMP SYSTEM SPECIFICATIONS

1) DAILY SEWAGE FLOW: DRY GOODS STORE AND DUNKIN DONUTS
TOTAL ESTIMATED GPD = 960 GPD

2) PEAK FLOW RATE: 8.0 GPM (PEAKING FACTOR: 6)

3) PUMP 1 TO EDA -1 = 28' OF 1 1/2" SDR21
STATIC HEAD: 13.67'
LOSS DUE TO FRICTION: CALC'D BY PUMP MANUFACRURER
PUMPING RANGE 30 - 35 GPM
PUMP 1 TO EDA = 2 - 94' OF 1 1/2" SDR21
STATIC HEAD: 13.67'
LOSS DUE TO FRICTION: CALC'D BY PUMP MANUFACRURER
PUMPING RANGE 30 - 35 GPM

4) USE DUPLEX PANEL - TWO - EC4 - STA-RITE PUMPS 4/10 HP, 12.5 AMPS 115V, SINGLE PHASE, 1500 RPM.

5) PUMP DOSE VOLUME: 146 GAL/V.FT = 69 GAL/DOSE, 10 DOSES/DAY

6) USE STAINLESS STEEL SLIDE RAIL SYSTEM (ABS OR EQUAL)

7) USE SEWAGE PUMP ELECTRICAL CONTROL PANEL FOR DUPLEX PUMP OPERATION TO PROVIDE:
1) LEAD PUMP /LAG PUMP OPERATION
2) ALTERNATE LEAD PUMP OPERATION
3) ALARM ON
4) LAG PUMP OPERATES
AUDIO AND VISUAL ALARM TO BE INSTALLED AT BUILDING CONTROL PANEL. CONTROLS AND DUPLEX PANEL SHALL BE RATED AS NEMA 4

8) USE MERCURY FLOAT SWITCHES FOR PUMP OPERATION AS SHOWN IN DIAGRAM

9) TOP OF PUMP CHAMBER TO HAVE 2'-6"x3'-0" ACCESS DOOR

PROPOSED ISDS PLAN FOR A NEW SYSTEM
Tax Map 105 Lot 19
14 BRADY DRIVE
HUDSON, NH

SCALE: NTS DATE: 01-24-2014

OWNER: **CAFUA REALITY TRUST LIV, LLC**
280 MERRIMACK STREET
METHUEN, MA 01844

AOS
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2 Whitney Road - Concord - NH
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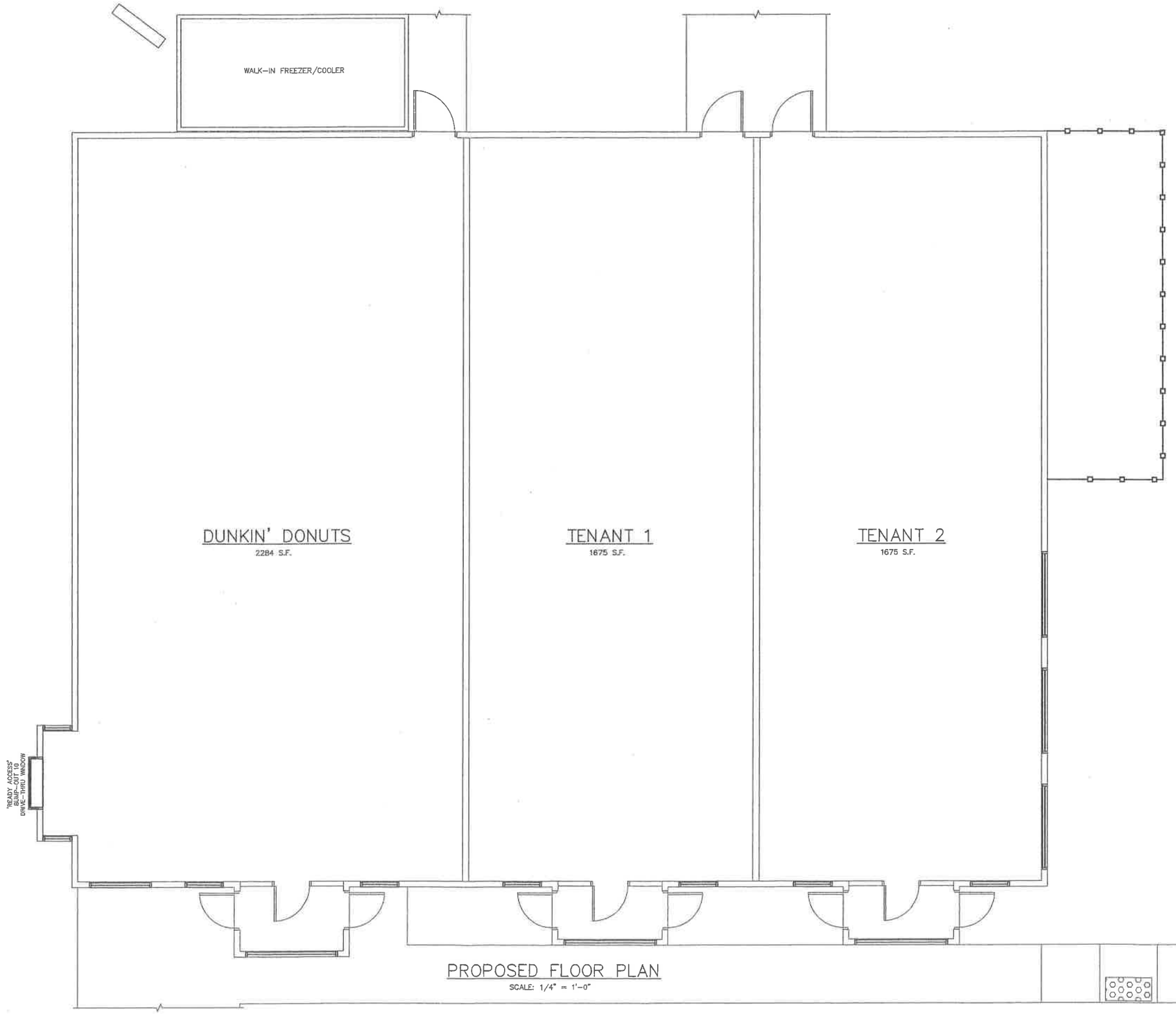
Phone (603) 783-8042 *web: aosne.com*

REV.	DATE	DESCRIPTION		C/O	DR	CK
1	04.01.2014	REVISED LOT LAYOUT		XX	XX	

FILE



PROPOSED FLOOR PLAN

SCALE: 1/4" = 1'-0"

dunkin' brands

JAMES D. SMITH, ARCHITECT, AIA
35 LOTHROP'S LN.
W. BARNSTABLE, MA 02668
PHONE: 508-367-8920
EMAIL: JAMESDSMITH1@COMCAST.NET

REVISIONS

NO.	DESCRIPTION	BY	DATE
	INITIAL ISSUE	JS	11/21/13

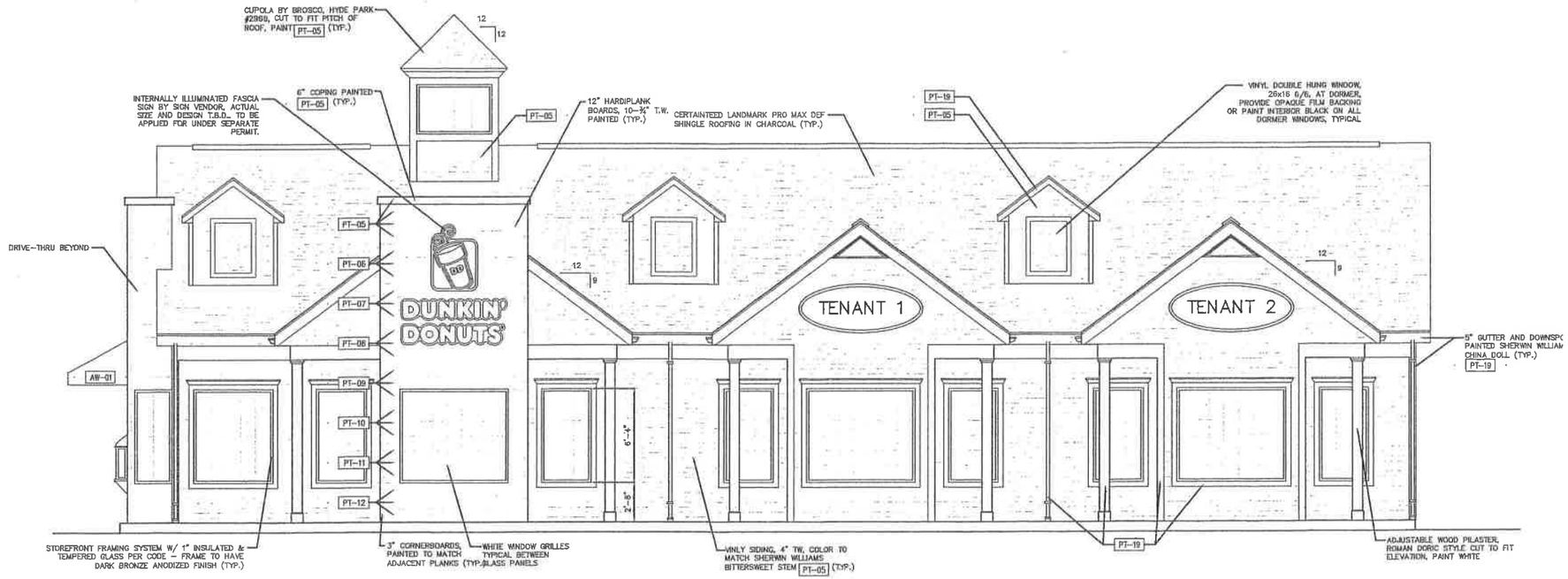
JOB LOCATION:
HUDSON, NH
XXXX

PROPOSED FLOOR PLAN

IMAGE TYPE: T.B.D.

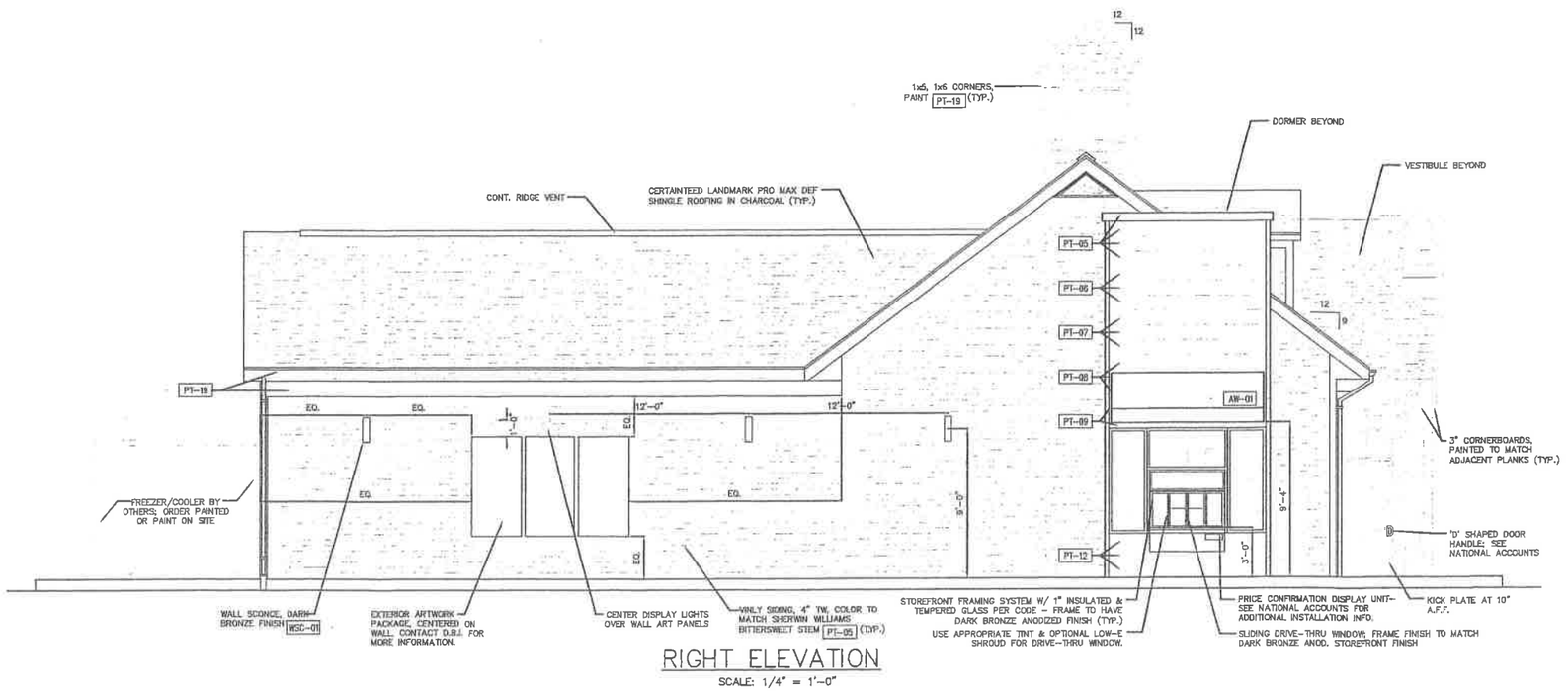
SHEET
A1

JOB#: D13143
DATE: 11/21/13
PC#:
C.M.



FRONT ELEVATION

SCALE: 1/4" = 1'-0"



RIGHT ELEVATION

SCALE: 1/4" = 1'-0"

JAMES D. SMITH, ARCHITECT, AIA
35 LOTHROP'S LN.
W. BARNSTABLE, MA 02668
PHONE: 508-367-8920
EMAIL: JAMESDSMITH1@COMCAST.NET

REVISIONS		
NO.	DESCRIPTION	BY	DATE
1	INITIAL ISSUE	JS	11/21/13

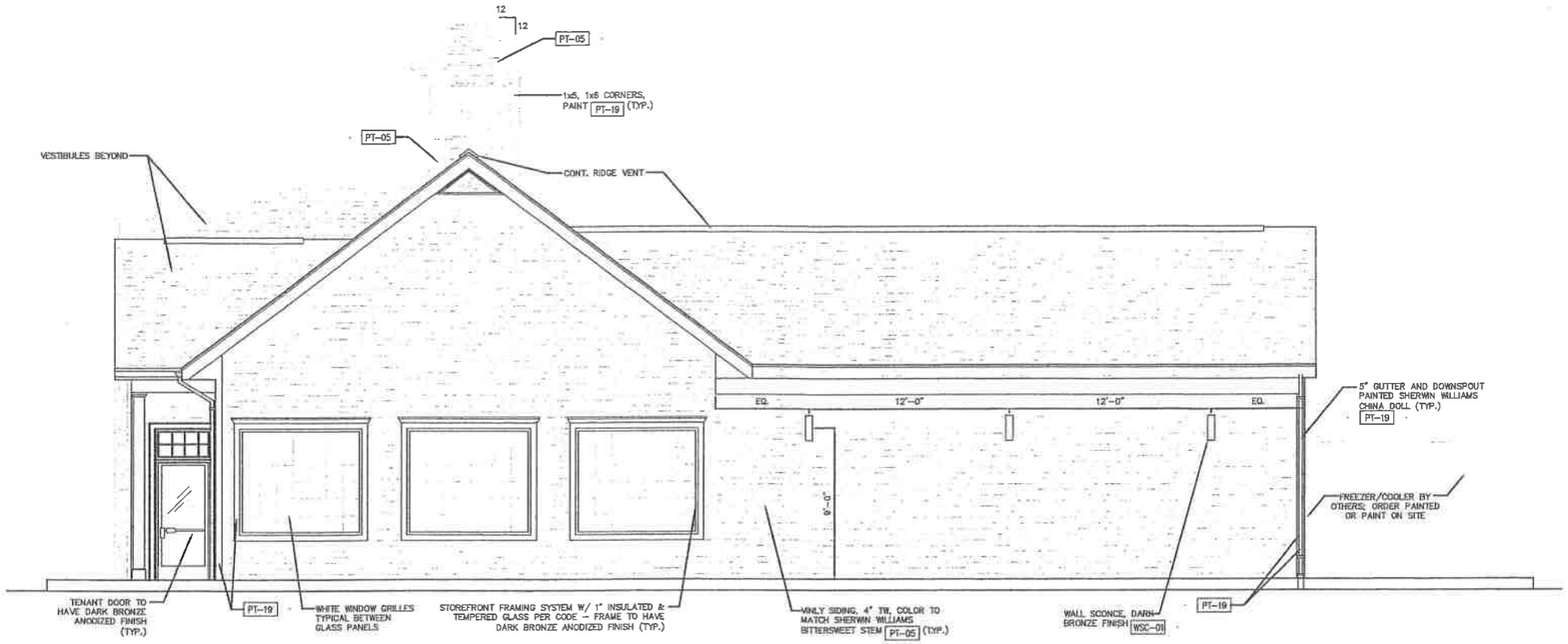
JOB LOCATION:
HUDSON, NH
XXXX

EXTERIOR ELEVATIONS

IMAGE TYPE: T.B.D.

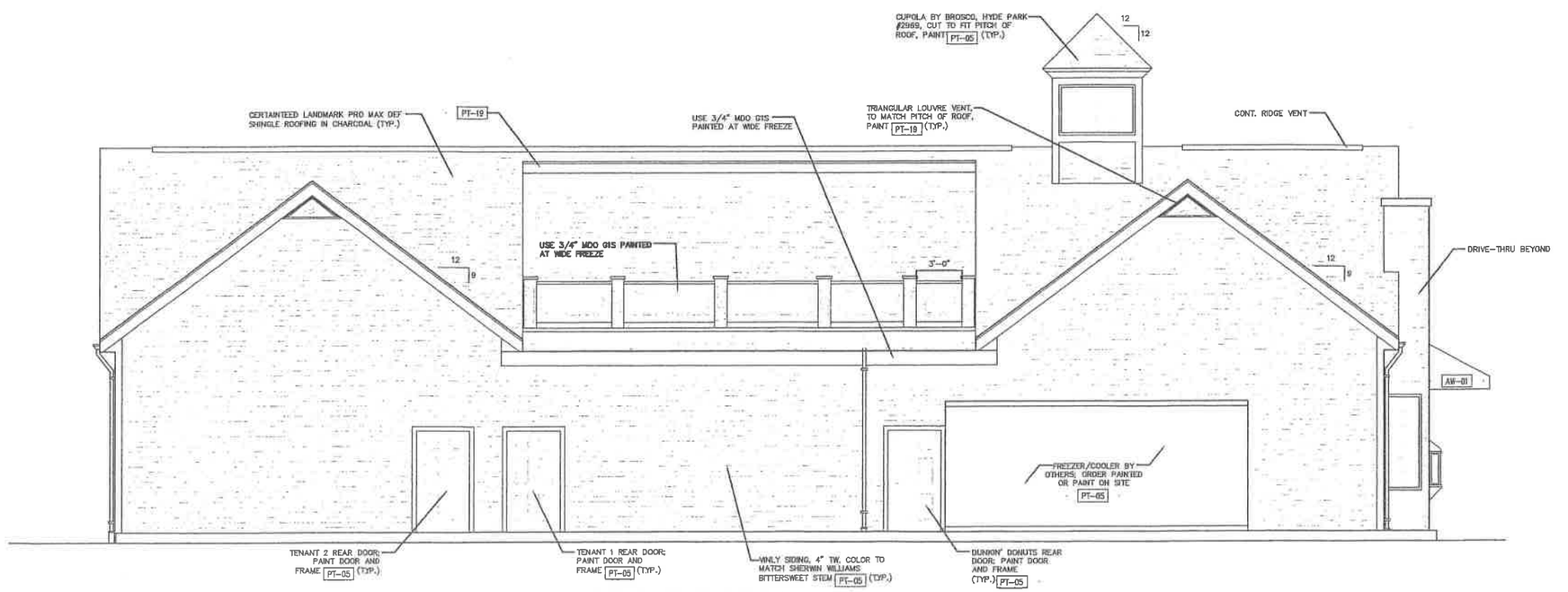
SHEET
A2

JOB#: D13143
DATE: 11/21/13
PC#:
C.M.



LEFT SIDE ELEVATION

SCALE: 1/4" = 1'-0"



REAR ELEVATION

SCALE: 1/4" = 1'-0"

dunkin' brands

JAMES D. SMITH, ARCHITECT, AIA
35 LOTHROP'S LN.
W. BARNSTABLE, MA 02668
PHONE: 508-367-8920
EMAIL: JAMESDSMITH11@COMCAST.NET

REVISIONS

NO.	DESCRIPTION	BY	DATE
	INITIAL ISSUE	JS	11/21/13

JOB LOCATION:
HUDSON, NH
XXXX
EXTERIOR ELEVATIONS

IMAGE TYPE: T.B.D.

SHEET
A3

JOB#: D13143
DATE: 11/21/13
PC#:
C.M.

Granite State Indoor Range & Gun Shop (Change of Use) Site Plan

STAFF REPORT

April 9, 2014

SITE: 2-4 Hampshire Drive -- Map 221/Lot 004 -- SB# 01-14

ZONING: Industrial (I)

PURPOSE OF PLAN: To show the proposed change of use of 12,700 sq. ft. of the existing industrial building at 2-4 Hampshire Drive to an indoor gun range and gun shop. Deferred Date Specific from the March 12, 2014 Meeting.

PLAN UNDER REVIEW ENTITLED: Change of Use Plan Granite State Indoor Range & Gunshop, Map 221 Lot 4, 2 -4 Hampshire Drive, Hudson, NH, prepared by Keach-Nordstrom Associates, Inc., dated: Jan. 12, 2014, last revised Mar. 25, 2014, consisting of Sheet 1 of 1 and Notes 1 – 16 and the Interior Fit-up Preliminary Construction Plans Entitled: Granite State Indoor Range, Hudson, NH, consisting of Sheets 1 – 6, prepared by Meggitt Smart Engineering for Extreme Environments, dated March 20, 2014 (no revision date). Said plans are attached hereto.

ATTACHMENTS: The above-cited Plans only.

ATTACHMENTS INCLUDED IN THE MARCH 12, 2014 MEETING PACKETS:

1) Project Narrative, Site Plan Application, Checklist, Waiver Forms, and an aerial site photo date stamped Feb.18, 2014 – Attachment "**A**".
2) Comments/Memos from Zoning Administrator, Bill Oleksak, Road Agent, Kevin Burns, HFD Deputy Fire Chief, John O'Brien, , and Asst. Assessor, Jim Michaud, date stamped Feb. 18, 2014 – "**B**".
3) Most Recent Amended Site Plan for 2 – 4 Hampshire Drive – "**C**".

REQUESTED WAIVERS (approved at the March 12, 2014 Meeting):

1. HTC 275-9(A) -- Drainage Study
2. HTC 275-9(B) -- Traffic Study
3. HTC 275-9(D) -- Fiscal Impact Study
4. HTC 275-9(H) -- HISS Mapping
5. HTC 275-6 -- Development Agreement

NOTE: the requested waiver HTC 275-9(C) - Noise Study - was denied by a 3 (yeas) to 4 (nays) vote. As a result, the applicant was requested to submit a noise study for the proposed use for this meeting (04/09/14). In lieu of said study, the Applicant plans to present the attached fit-up plans, relative to demonstrating that a Noise Study is not required for this use. To this effect, below please find the associated waiver motion for the board's reconsideration.

STAFF COMMENTS/OUTSTANDING ISSUES:

1. From the initial hearing on this project, the board's remaining concerns had to do with noise emanating from the inside firing range to the outside of the building, together with the overall design of the new use, and weather the HVAC and round capturing systems meet industry standards for the associated use. To this effect, for this meeting, the Applicant has supplied Preconstruction Fit-up Plans attached to the Master Plan Sheet. From these plans, the Applicant's eng. plans to demonstrate at the meeting that both the HVAC and round capturing systems meet/exceed industry standards for the use, and he will also use these plans to describe that the firing of ammunition inside the building will not produce noise beyond what is allowed by Town Code.

2. Other than the proposed use calling for Planning Board approval, i.e., to amend a previously approved Site Plan ("**C**"), no building addition, no parking alterations, no onsite travel lane changes, no landscaping, no exterior lighting or sign changes are proposed. What will change on this site pertains to the proposed interior fit-up of 50% of the existing building, i.e., to transform said area into an indoor shooting range and a retail gun shop. Hence, the need for Planning Board Approval of this proposed Amended Site Plan Application.

3. With no new building area, additional parking or added PM Peak Hour traffic than what already exists on this site, a CAP Fee is not applicable.

4. In regard to the most recent Site Plan the board reviewed concerning an interior fit-up of an existing industrial building for a shooting range and gun shop, i.e., 13 River Rd. in 2012, please note the board took the following action on same, as applicable to this application:

    a) The board requested to have Police Chief, Jason Lavoie, submit a signed copy of his letter in support of the 13 River Rd. project. Note: the Applicant for said project requested the Police Chief's support for same. **Status:** for this application, 2 - 4 Hampshire Drive, Police Chief Lavoie provided an email correspondence at the March 12th meeting in support of this project.

    b) The board requested that a note be added to the 13 River Rd. Site Plan, stating: Noise originating from the interior shooting range to the exterior of the shooting range shall not exceed the allowed decibel level prescribed in the Town's Noise Ordinance. **Status**: this note has been added to Sheet 1 of 1. Please see Note 16.

    c) The Applicant was required to have at a meeting a certified expert in the field of interior shooting ranges, and for this person to address the board on noise related issues of the shooting range. **Status**: this person is scheduled to be in attendance for Wednesday night's meeting.

    d) The board required that a note be added to the 13 River Rd. Site Plan, stating: The Hrs. of operation. 10:00 A.M. to 9:00 P.M. Monday thru Saturday. No Sunday Hrs. **Status**: this note is on the 2 – 4 Hampshire Drive Plan, with requested hrs. of operation being 9 A.M. to 9 P.M., Mon. – Sat. and 10:00 A.M. to 6:00 P.M. on Sunday. Please see Note 15 on Sheet 1 of 1.

e) The board required information, relative to how the wastewater associated with the shooting range is disposed of. **Status**: this information is provided in the attached Fit-up Plans, which will be explained by the Applicant's engineer at the meeting.

NOTE: at this time, no other issues remain outstanding with this application.

APPLICATION TRACKING:

- 02/18/2014 – Amended Site Plan application submitted.
- 03/12/14 - Initial Public Hearing scheduled.
- 03/12/14 – Application accepted, waivers were voted on and project deferred date specific to the 04/09/14 Meeting.

RECOMMENDATION:

(i) Open and conduct the public hearing;
(ii) Allow the applicant to present his presentation on the above-cited outstanding issues.
(i) If the board finds everything to be in order for this application, a DRAFT MOTION to approve has been provided below.

DRAFT MOTIONS:

I move for the Planning Board to defer further review of this Site Plan Application, date specific, to the April 23d or May 14th meeting.

Motion by: _____Second:_____Carried/Failed:_____

WAIVER REQUEST:

3) HTC 275-9C – Noise Study

I move to grant the requested waiver: HTC 275-9C - Noise Study - because such a study is unnecessary, taking into consideration the proposed use is not expected to create noise levels that would violate Town noise ordinances, and as such, the granting of this waiver is not contrary to the spirit and intent of the Site Plan regulations.

Motion by: _____Second: _____Carried/Failed: _____.

DRAFT MOTION TO APPROVE:

I move to approve the Site Plan entitled: Change of Use Plan Granite State Indoor Range & Gunshop, Map 221 Lot 4, 2 -4 Hampshire Drive, Hudson, NH, prepared by Keach-Nordstrom Associates, Inc., dated: Jan. 12, 2014, last revised Mar. 25, 2014, consisting of Sheet 1 of 1 and Notes 1 – 16 and the Interior Fit-up Preliminary Construction Plans Entitled: Granite State Indoor Range, Hudson, NH, consisting of Sheets 1 – 6, prepared by Meggitt Smart Engineering for Extreme Environments, dated March 20, 2014, in accordance with the following terms and conditions:

1) 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.

2) Hours of operation shall be limited to: Mon. – Sat. 9:00 A.M. to 9:00 P.M. and 10:00 A.M. to 6:00 P.M. on Sunday.

3) All other pertinent notes and Site Plan requirements are inscribed on the above-cited Plans.

Motion by: _____Second: _____Carried/Failed: _____.

PACKET 4/9/14

UTILITY NOTE

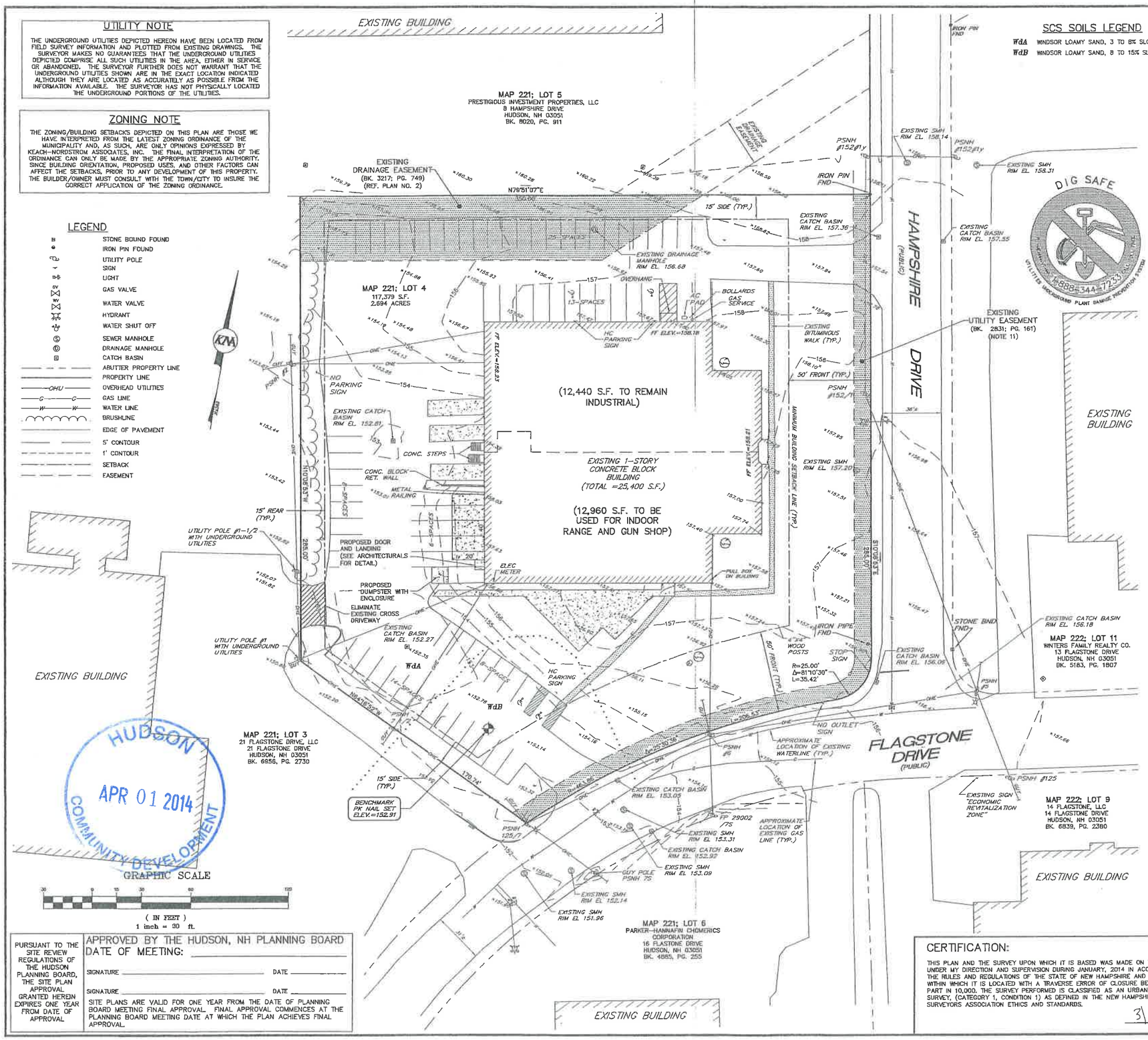
THE UNDERGROUND UTILITIES DEPICTED HEREON HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND PLOTTED FROM EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES DEPICTED COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND PORTIONS OF THE UTILITIES.

ZONING NOTE

THE ZONING/BUILDING SETBACKS DEPICTED ON THIS PLAN ARE THOSE WE HAVE INTERPRETED FROM THE LATEST ZONING ORDINANCE OF THE MUNICIPALITY AND, AS SUCH, ARE ONLY OPINIONS EXPRESSED BY KEACH-NORDSTROM ASSOCIATES, INC. THE FINAL INTERPRETATION OF THE ORDINANCE CAN ONLY BE MADE BY THE APPROPRIATE ZONING AUTHORITY. SINCE BUILDING ORIENTATION, PROPOSED USES, AND OTHER FACTORS CAN AFFECT THE SETBACKS, PRIOR TO ANY DEVELOPMENT OF THIS PROPERTY. THE BUILDER/OWNER MUST CONSULT WITH THE TOWN/CITY TO INSURE THE CORRECT APPLICATION OF THE ZONING ORDINANCE.

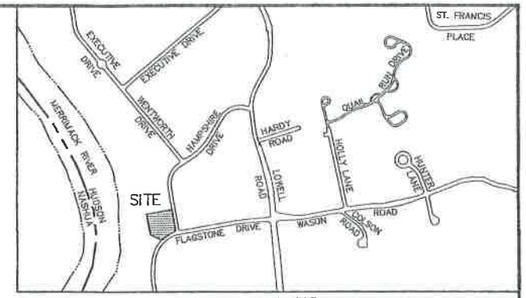
LEGEND

- STONE BOUND FOUND
- IRON PIN FOUND
- UTILITY POLE
- SIGN
- LIGHT
- GAS VALVE
- WATER VALVE
- HYDRANT
- WATER SHUT OFF
- SEWER MANHOLE
- DRAINAGE MANHOLE
- CATCH BASIN
- ABUTTER PROPERTY LINE
- PROPERTY LINE
- OHU — OVERHEAD UTILITIES
- G — G — GAS LINE
- W — W — WATER LINE
- BRUSHLINE
- EDGE OF PAVEMENT
- 5' CONTOUR
- 1' CONTOUR
- SETBACK
- EASEMENT



SCS SOILS LEGEND

- WdA — WINDSOR LOAMY SAND, 3 TO 8% SLOPES
- WdB — WINDSOR LOAMY SAND, 8 TO 15% SLOPES



VICINITY MAP
SCALE: 1"=1,000'

REFERENCE PLANS:

1. "LOT LINE RELOCATION – LOWELL ROAD – HUDSON, NH"; PREPARED FOR: GERALD Q. NASH, 40 TEMPLE STREET, NASHUA, NH; PREPARED BY: A.E. MAYNARD CIVIL ENGINEER, 12 PROGRESS AVE., NASHUA, NH; SCALE: 1" = 100', DATED: SEPT. 1980, H.C.R.D. PLAN NO. 13476.
2. "DRAINAGE EASEMENT PLAN – LOTS 10-7-3, 10-55 & 10-56 – HAMPSHIRE DRIVE, HUDSON, NH"; PREPARED BY: THOMAS F. MORAN, INC.; SCALE: 1" = 100', DATED: JAN. 17, 1983; H.C.R.D. PLAN NO. 16827.
3. "SITE PLAN – 8 HAMPSHIRE DRIVE – MAP 221/LOT 5 – HUDSON, NEW HAMPSHIRE"; PREPARED FOR: PRESTIGIOUS INV. PROP., LLC, 8 HAMPSHIRE DRIVE, HUDSON, NEW HAMPSHIRE 03051; PREPARED BY: MAYNARD & PAQUETTE ENGINEERING ASSOCIATES, LLC; SACLE: 1" = 50'; DATED: AUGUST 9, 2011; H.C.R.D. PLAN NO. 37340.
4. "SUBDIVISION PLAN – SAGAMORE INDUSTRIAL PARK – SAGAMORE PARK ROAD – HUDSON, N.H."; PREPARED BY: A.E. MAYNARD CIVIL ENGINEER, 12 PROGRESS AVE., NASHUA, NH; SCALE: 1" = 100'; DATED: AUGUST 1974; H.C.R.D. PLAN NO. 14650.

NOTES:

1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE EXISTING CONDITIONS ON THE SUBJECT PREMISES IN SUPPORT OF A PROPOSED CHANGE OF USE ON THE PROPERTY.
2. TOTAL SITE AREA: 117,379 SQ. FT., 2.694 ACRES
3. PRESENT ZONING: INDUSTRIAL (I)
4. MINIMUM LOT REQUIREMENTS:
   - LOT AREA 30,000 SQ. FT.
   - LOT FRONTAGE 150 FT.

   MINIMUM BUILDING SETBACKS:
   - FRONT 50 FT.
   - SIDE 15 FT.
   - REAR 15 FT.
5. MAP 221; LOT 4 INDICATES TOWN OF HUDSON TAX ASSESSOR'S MAP AND LOT NUMBER.
6. OPEN SPACE:
   REQUIRED: 35%
   PROVIDED: 38%
7. PARKING:
   INDUSTRIAL USE: 1 SPACE/600 S.F.x 12,440 S.F. = 21 SPACES
   GUN RANGE/SHOP:
   RANGE: 15 LANES @ 1 SPACE/LANE = 15 SPACES
   RETAIL: 2,000 S.F. @ 1 SPACE/200 S.F. = 10 SPACES
   STORAGE: 1,220 S.F. @ 1 SPACE/1,000 S.F. = 1 SPACES
   ASSEMBLY: 42 SEATS @ 1 SPACE/4 SEATS = 10 SPACES
   REQUIRED = 57 SPACES
   PROVIDED = 73 SPACES EXISTING;
8. EXAMINATION OF THE FEDERAL EMERGENCY (FEMA) FLOOD INSURANCE RATE MAPS (FIRM) FOR THE TOWN OF HUDSON, NEW HAMPSHIRE, HILLSBOROUGH COUNTY, COMMUNITY PANEL NUMBER 330092 0656D PANEL NUMBER 656 OF 701, EFFECTIVE DATE: SEPTEMBER 25, 2009 INDICATES THAT THE SUBJECT PREMISES IS NOT LOCATED WITHIN A DESIGNATED FLOOD HAZARD AREA.
9. BENCHMARKS SET AS NOTED, BASED ON NGVD 1929.
10. THE LOCATION OF ANY UNDERGROUND UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. KEACH-NORDSTROM ASSOCIATES, INC. MAKES NO CLAIM TO THE ACCURACY OR COMPLETENESS OF UTILITIES SHOWN. PRIOR TO ANY EXCAVATION ON SITE THE CONTRACTOR SHALL CONTACT DIG SAFE AT 1-888-344-7233.
11. BOUNDARY AND TOPOGRAPHIC INFORMATION IS BASED ON A FIELD SURVEY PERFORMED BY THIS OFFICE IN JANUARY, 2014. HORIZONTAL DATUM IS NAD 83. VERTICAL DATUM IS NGVD 29.
12. PRESENT OWNER OF RECORD:
    NASH FAMILY INVESTMENT PROPERTIES
    91 AMHERST STREET
    NASHUA, NH 03064
    BK.7018, PG. 1960
11. EASEMENTS, RIGHTS AND RESTRICTIONS SHOWN OR IDENTIFIED HEREON ARE THOSE FOUND DURING RESEARCH AT THE HILLSBOROUGH COUNTY REGISTRY OF DEEDS. OTHER EASEMENTS, RIGHTS, AND RESTRICTIONS MAY EXIST WHICH A TITLE EXAMINATION OF THE SUBJECT PREMISES WOULD DETERMINE.
12. WAIVERS REQUESTED:
    275-9A DRAINAGE STUDY
    275-9B TRAFFIC STUDY
    275-9C NOISE STUDY
    275-9D FISCAL IMPACT STUDY
    275-9H HISS MAPPING
    275-6 DEVELOPMENT AGREEMENT
13. BOOK 2831; PAGE 161 OF THE HILLSBOROUGH COUNTY REGISTRY OF DEEDS CONVEYS RIGHTS TO PLACE UTILITIES ACROSS, OVER AND UNDER THE PRIVATE WAYS IN THE "HAMPSHIRE DRIVE DEVELOPMENT OFF FLAGSTONE DRIVE". THE DOCUMENT FURTHER RESERVES 10 FOOT WIDE STRIPS "ALONG THE LOT LINES ADJACENT TO STREETS OR PUBLIC WAYS" AS DEPICTED HEREON.
14. NO MONUMENT OR FREE STANDING SIGN PROPOSED.
15. HOURS OF OPERATION: MONDAY THRU SATURDAY – 9AM TO 9PM, SUNDAY – 10AM TO 6 PM
16. NOISE FROM THE PROPOSED ACTIVITIES WITHIN THE SITE SHALL MEET MINIMUM STANDARDS AS SET FORTH IN SECTION 249 OF THE HUDSON, NH TOWN CODE.

CHANGE OF USE PLAN
GRANITE STATE INDOOR RANGE AND GUN SHOP, LLC
MAP 221; LOT 4
2 - 4 HAMPSHIRE DRIVE
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:	APPLICANT:
NASH FAMILY INVESTMENT PROPERTIES 91 AMHERST STREET NASHUA, NH 03064 BK. 7018, PG. 1960	GRANITE STATE INDOOR RANGE AND GUN SHOP, LLC PO BOX 11 DURHAM, NH 03824

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

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

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____

SIGNATURE _____ DATE _____

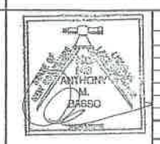
SIGNATURE _____ DATE _____

SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN ACHIEVES FINAL APPROVAL.

CERTIFICATION:

THIS PLAN AND THE SURVEY UPON WHICH IT IS BASED WAS MADE ON THE GROUND UNDER MY DIRECTION AND SUPERVISION DURING JANUARY, 2014 IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE STATE OF NEW HAMPSHIRE AND THE CITY/TOWN WITHIN WHICH IT IS LOCATED WITH A TRAVERSE ERROR OF CLOSURE BETTER THAN 1 PART IN 10,000. THE SURVEY PERFORMED IS CLASSIFIED AS AN URBAN STANDARD SURVEY, (CATEGORY 1, CONDITION 1) AS DEFINED IN THE NEW HAMPSHIRE LAND SURVEYORS ASSOCIATION ETHICS AND STANDARDS.

3/28/14
DATE



REVISIONS			
No.	DATE	DESCRIPTION	BY
1	03/25/14	REV. PER TOWN COMMENTS	AMB

DATE: JANUARY 12, 2014	SCALE: 1" = 30'
PROJECT NO: 14-0203-1	SHEET 1 OF 1

IMPORTANT SAFETY NOTICE

RANGE SAFETY DEPENDS CHIEFLY UPON RANGE DISCIPLINE. USE OF EYE AND HEARING PROTECTION SHOULD BE MANDATORY.

GRANITE STATE INDOOR RANGE HUDSON, NH

001 INDEX PAGE

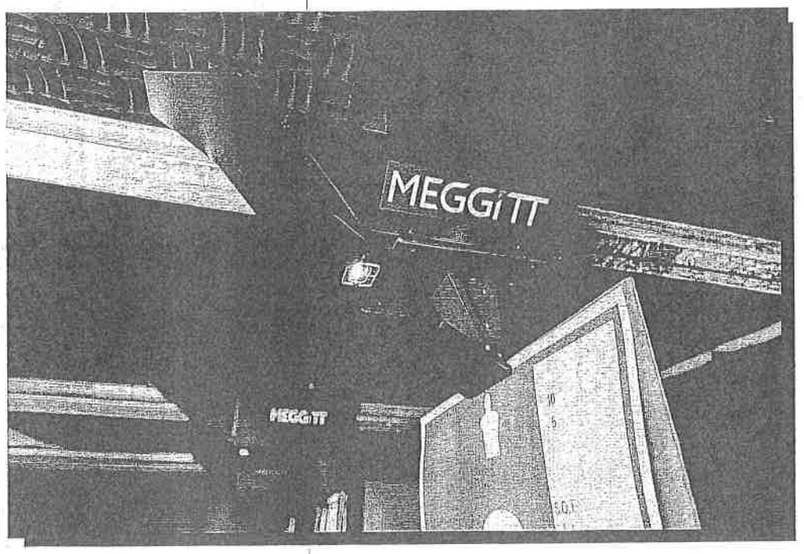
002 EQUIPMENT LISTING

003 BAY A – RANGE PLAN AND SECTION

004 BAY B – RANGE PLAN AND SECTION

005 BAY A – RECOMMENDED SPRINKLER AND LIGHTING

006 BAY B – RECOMMENDED SPRINKLER AND LIGHTING



MEGGiTT

smart engineering for extreme environments

CUSTOMER ACKNOWLEDGMENTS

NOTES:

1. ALL CONDUIT, A.C. WIRING, A.C ELECTRICAL HOOK UP, CONTROL WIRE CONDUITS, LIGHTING, LIGHTING CONTROLS OR INTERFACES BY G.C
2. ANY ACOUSTICAL MATERIALS/TREATMENTS NOT SHOWN BY G.C.
3. ALL BRIDGING MATERIAL (IF REQUIRED) BY G.C. ALL BRIDGING MUST BE INSTALLED PRIOR TO THE ARRIVAL OF MTSI TECHNICIAN.
4. ALL CONCRETE ANCHORS AND TIES BY MTSI.
5. WALLS AND FLOORS IN TRAP AREA MUST BE FLAT WITH NO DEPRESSIONS.
6. G.C. TO VERIFY THAT MTSI'S EQUIPMENT AS SHOWN, DOES NOT CONFLICT WITH DUCTWORK, PIPES, AND OTHER TRADES.
7. UNLOADING OF ALL EQUIPMENT BY G.C.
8. REMOVAL AND INSTALLATION OF SHOOTING RANGE EQUIPMENT BY MTSI.

IT IS THE CUSTOMER'S RESPONSIBILITY TO VERIFY THE STRUCTURAL INTEGRITY OF THE BUILDINGS CEILINGS AND WALLS ABILITY TO SUPPORT THE ADDITIONAL LOAD OF THE RANGE EQUIPMENT PROVIDED BY MEGGITT TRAINING SYSTEMS, INC. CUSTOMER TO VERIFY THAT MTSI EQUIPMENT AS SHOWN DOES NOT CONFLICT WITH DUCT WORK, PIPES AND/OR OTHER TRADES.

G.C./CUSTOMER TO SIGN:_____DATE:_____

ALL DRAWINGS SPECIFICATIONS AND OTHER DESIGN DOCUMENTS PREPARED BY MEGGITT TRAINING SYSTEMS AND ITS CONSULTANTS IN CONNECTION WITH THE PROJECT ARE THE PROPERTY OF MTSI. MTSI SHALL RETAIN ALL COMMON LAW, STATUTORY AND OTHER RIGHTS, INCLUDING ALL COPYRIGHT, RELATED TO SAID DESIGN DOCUMENTS. THE GENERAL CONTRACTOR OR CUSTOMER SHALL NOT USE THE DESIGN DOCUMENTS ON OTHER PROJECTS WITHOUT THE SPECIFIC WRITTEN CONSENT OF MEGGITT TRAINING SYSTEMS.

G.C./CUSTOMER TO SIGN:_____DATE:_____

MEGGITT TRAINING SYSTEMS REQUIRES THE G.C./CUSTOMER TO VERIFY THE DIMENSION AS NOTED ON THE DRAWING. MEGGITT TRAINING SYSTEMS WILL BUILD OUR EQUIPMENT TO MATCH THE DIMENSION DATA AS SHOWN. MEGGITT TRAINING SYSTEMS RESERVES THE RIGHT TO SEEK ADDITIONAL CHARGES IF THE BUILDING SPACE IS DIFFERENT FROM THE DIMENSIONAL DATA AS SHOWN ON OUR DRAWINGS.

G.C./CUSTOMER TO SIGN:_____DATE:_____

THE EQUIPMENT BALLISTIC INTEGRITY MUST TAKE PRIORITY OVER ALL WORK WITHIN THIS SPACE. IT IS THE GENERAL CONTRACTORS RESPONSIBILITY TO COORDINATE WITH OTHER TRADES – NOT TO INTERFERE WITH RANGE EQUIPMENT LOCATIONS, SUSPENSION LOCATIONS AND OTHER RANGE EQUIPMENT LOCATIONS AND REQUIRED ACCESS AREAS.

G.C./CUSTOMER TO SIGN:_____DATE:_____

REVISION		DESCRIPTION	DATE	SIGN
DRAWN BY	DRH	MEGGITT		
PROJECT MANAGER	LS	Meggitt Training Systems, Inc 296 Brogdon Rd. Suwanee GA 30024, USA		
DATE	03.20.14	GRANITE SATE INDOOR RANGE INDEX PAGE		
REV. AJ		SIZE F1 CAGE CODE 087W6 SCALE NTS PROJECT NO. US5212 REV A		
		FILENAME: [illegible]	SHEET 1 OF 6	

EQUIPMENT LIST

BAY A - STATIC

ITEM	DESCRIPTION	QTY.
1.	BULLET TRAP 9'-0" MODEL LE7500-OT	17'-4" LFT.
2.	WIRELESS MONORAIL TARGET SYSTEM WITH ICU MODEL XWT-75'	5 EACH.
3.	LOCAL CONTROLS MODEL ICU	5 EACH.
4.	BASTION STALLS (MID) W/SHELF, BLAST SHIELD AND BRASS RECEPT MODEL BP16B - RIFLE	4 EACH.
5.	BASTION STALLS (ENDS) W/SHELF, BLAST SHIELD AND BRASS RECEPT MODEL BP3/4U - RIFLE	1 PAIR.
6.	MASTER COMMUNICATION STATION MODEL EG-58 (10 CHANNEL) LOCATED IN (OFFICE-110)	1 EACH.
7.	SAFETY CEILING MODEL JG12C	206 SQFT. 3 ROWS.
8.	LIGHT GUARD MODEL JR7C	69'-4" LFT. 4 ROWS.
9.	REDIRECTIVE GUARD MODEL JR5D	69 SQFT. 1 ROW.
10.	DATA CABLE MODEL EG43	135 LFT.
11.	STALL SPEAKERS (MOUNT TO BASTION STALLS) MODEL EG66	5 EACH.
12.	SIGHT LIGHT MODE MC65	5 EACH.

BAY A - OPTIONS

A.	FIRING LINE SECURITY SYSTEM MODEL EM30	1 EACH.

EQUIPMENT LIST

BAY B -TACTICAL

ITEM	DESCRIPTION	QTY.
1.	BULLET TRAP 9'-0" MODEL LE7500-OT	38'-4" LFT.
2.	WIRELESS MONORAIL TARGET SYSTEM WITH ICU MODEL XWT-75'	10 EACH.
3.	LOCAL CONTROLS MODEL ICU	10 EACH.
4.	PHOENIX STALLS - CLEAR VIEW (MID) W/SHELF, BLAST SHIELD EXTENSION, BRASS RECEPTACLE AND GATE BARRICADE MODEL BV10E - PISTOL	9 EACH.
5.	PHOENIX STALLS - CLEAR VIEW (ENDS) W/SHELF, BLAST SHIELD EXTENSION, BRASS RECEPTACLE AND GATE BARRICADE MODEL BV3/4E - PISTOL	1 PAIR.
6.	MASTER COMMUNICATION STATION MODEL EG-58 (10 CHANNEL) LOCATED IN (OFFICE-110)	1 EACH.
7.	SAFETY CEILING MODEL JG12C	455 SQFT. 3 ROWS.
8.	LIGHT GUARD MODEL JR7C	153'-4" LFT. 4 ROWS.
9.	REDIRECTIVE GUARD MODEL JR5D	152 SQFT. 1 ROW.
10.	DATA CABLE MODEL EG43	370 LFT.
11.	STALL SPEAKERS (MOUNT TO PHOENIX STALLS) MODEL EG66	10 EACH.
12.	SIGHT LIGHT MODE MC65	10 EACH.

BAY B - OPTIONS

A.	FIRING LINE SECURITY SYSTEM MODEL EM30	1 EACH.
B.	RANGE MASTER - LOCATED IN (OFFICE 110) MODEL RMCS	1 EACH.

REVISION		DESCRIPTION	DATE	SIGN
DRAWN BY	DWH			
PROJECT MANAGER	LS			
DATE	03.20.14			

MEGGITT
Meggitt Training Systems, Inc
296 Brogdon Rd, Suwanee GA 30024, USA

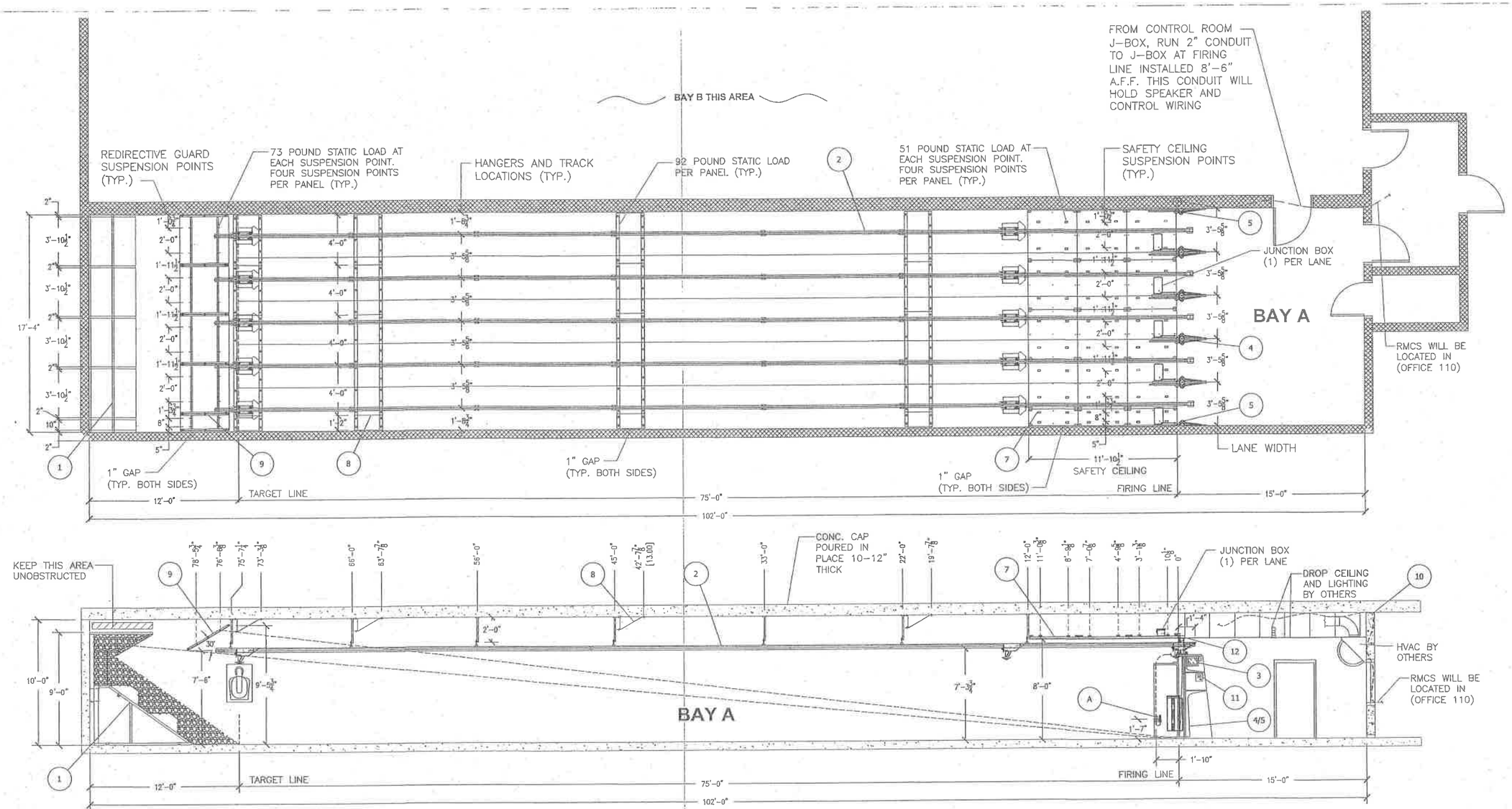
GRANITE STATE
INDOOR RANGE
EQUIPMENT LISTING

SIZE	CAGE CODE	SCALE	PROJECT NO.	REV
E1	087W6	NTS	US5212	A

FILENAME: [illegible]

SHEET 2 OF 6

REV. A1



REVISION	DESCRIPTION	DATE	SIGN
DRAWN BY	DWH	MEGGITT	
PROJECT MANAGER	LS	Meggitt Training Systems, Inc 296 Brogdon Rd, Suwanee GA 30024, USA	
DATE	03.20.14		

GRANITE STATE INDOOR RANGE
BAY A
PLAN AND SECTION

SIZE	CAGE CODE	SCALE	PROJECT NO.	REV
E1	087W6	NTS	US5212	A

FILENAME: US5212 - GRANITE STATE INDOOR RANGE

SHEET 3 OF 6

REV. AJ

REDIRECTIVE GUARD SUSPENSION POINTS (TYP.)

73 POUND STATIC LOAD AT EACH SUSPENSION POINT. FOUR SUSPENSION POINTS PER PANEL (TYP.)

HANGERS AND TRACK LOCATIONS (TYP.)

92 POUND STATIC LOAD PER PANEL (TYP.)

51 POUND STATIC LOAD AT EACH SUSPENSION POINT. FOUR SUSPENSION POINTS PER PANEL (TYP.)

SAFETY CEILING SUSPENSION POINTS (TYP.)

JUNCTION BOX (1) PER LANE

BAY B

FROM CONTROL ROOM J-BOX, RUN 2" CONDUIT TO J-BOX AT FIRING LINE INSTALLED 8'-6" A.F.F. THIS CONDUIT WILL HOLD SPEAKER AND CONTROL WIRING

RMCS WILL BE LOCATED IN (OFFICE 110)

38'-4"

1 1/4" GAP (TYP. BOTH SIDES)

TARGET LINE

1 1/4" GAP (TYP. BOTH SIDES)

BAY A THIS AREA

1 1/4" GAP (TYP. BOTH SIDES)

SAFETY CEILING

FIRING LINE

LANE WIDTH

12'-0" | 75'-0" | 15'-0"

102'-0"

KEEP THIS AREA UNOBSTRUCTED

CONC. CAP POURED IN PLACE 10-12" THICK

JUNCTION BOX (1) PER LANE

DROP CEILING AND LIGHTING BY OTHERS

HVAC BY OTHERS

RMCS WILL BE LOCATED IN (OFFICE 110)

BAY B

10'-0"

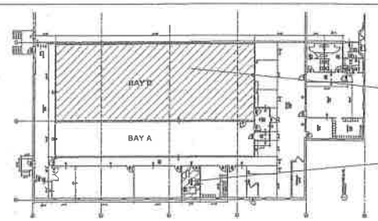
9'-0"

TARGET LINE

FIRING LINE

12'-0" | 75'-0" | 15'-0"

102'-0"



BAY B

RMCS – (OFFICE 110)

REVISION		DESCRIPTION	DATE	SIGN
DRAWN BY	DWH			
PROJECT MANAGER	LS			
DATE	03.20.14			

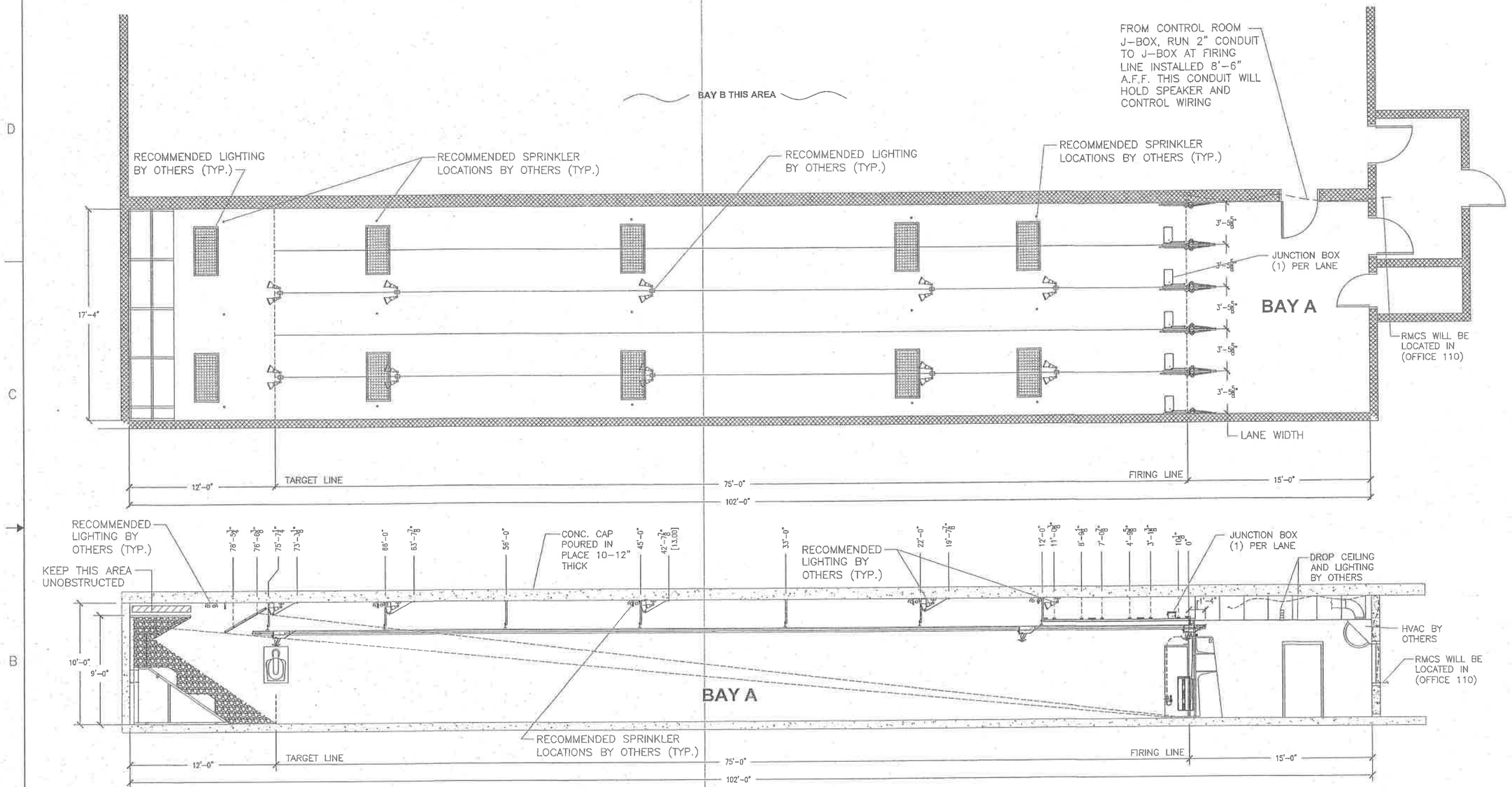
MEGGITT

Meggitt Training Systems, Inc
296 Brogdon Rd, Suwanee GA 30024, USA

GRANITE STATE INDOOR RANGE
BAY B
PLAN AND SECTION

SIZE	CAGE CODE	SCALE	PROJECT NO.	REV
F1	067W6	NTS	US5212	A

FILENAME: [illegible] SHEET 4 OF 6



REVISION	DESCRIPTION	DATE	SIGN
DRAWN BY	DWH		
PROJECT MANAGER	LS		
DATE	03.20.14		

MEGGITT

MeggiTt Training Systems, Inc
296 Brogdon Rd, Suwanee GA 30024, USA

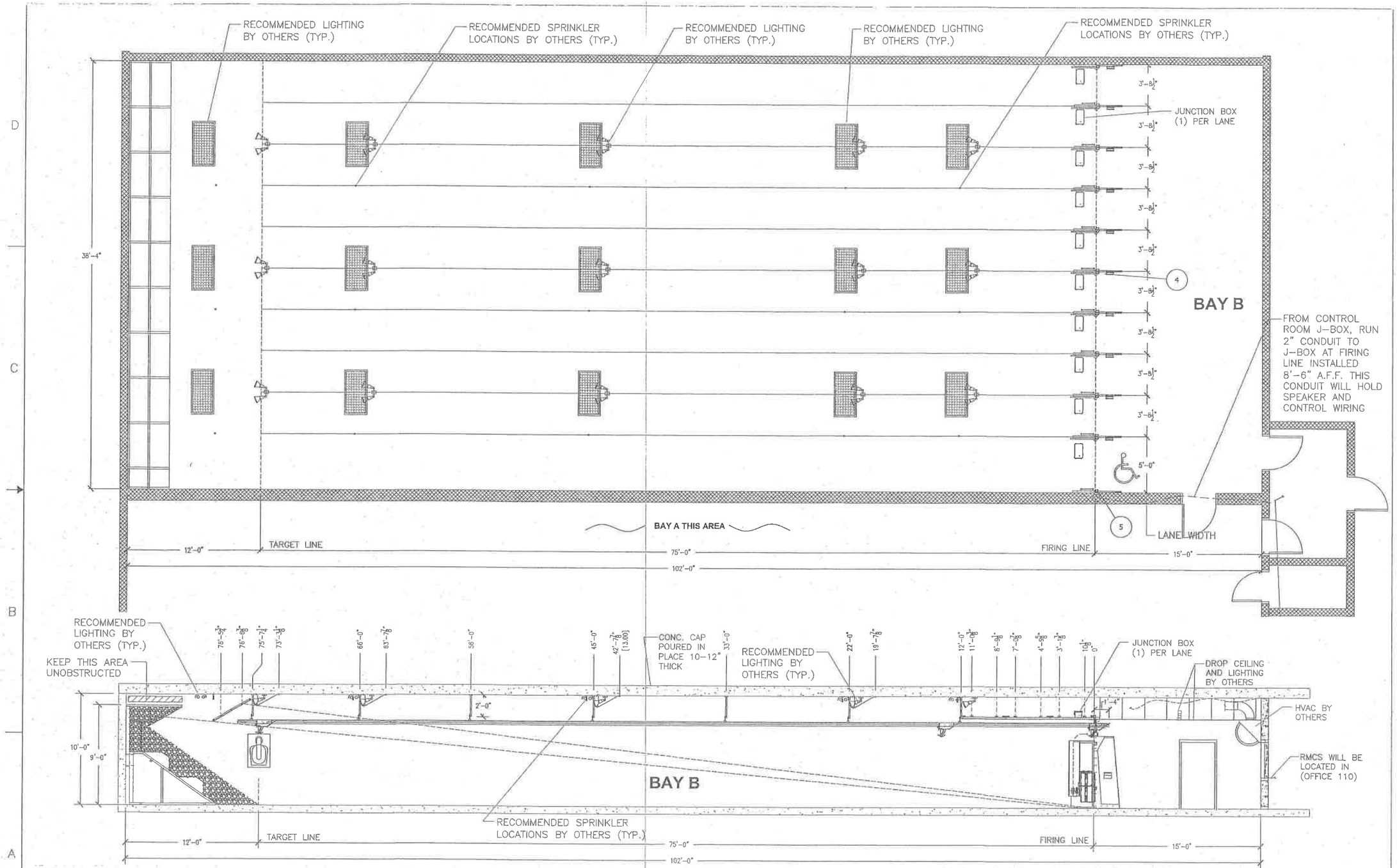
GRANITE STATE INDOOR RANGE
BAY A
RECOMMENDED SPRINKLER AND LIGHTING

SIZE	CAGE CODE	SCALE	PROJECT NO.	REV
F1	087W6	NTS	US5212	A

FILENAME: [illegible]

SHEET 5 OF 6

REV. AJ



REVISION	DESCRIPTION	DATE	SIGN
DRAWN BY	DWH		
PROJECT MANAGER	LS		
DATE	03.20.14		

MEGGITT

Meggitt Training Systems, Inc
296 Brogdon Rd, Suwanee GA 30024, USA

GRANITE STATE INDOOR RANGE
BAY B
RECOMMENDED SPRINKLER AND LIGHTING

SIZE	CAGE CODE	SCALE	PROJECT NO.	REV
E1	087W6	NTS	US5212	A

FILENAME: [illegible] SHEET 6 OF 6

REV. AJ

CAREY'S

SMALL ARMS RANGE VENTILATION

INDEX

- RM-001 RANGE MECHANICAL GENERAL NOTES, ABBREVIATIONS & SYMBOLS
- RM-101 RANGE MECHANICAL FLOOR PLAN
- RM-102 RANGE MECHANICAL INTERSTITIAL SPACE PLAN
- RM-103 RANGE MECHANICAL ROOF PLAN & CURB PLAN
- RM-104 RANGE MECHANICAL EQUIPMENT PAD LAYOUT AND PENETRATIONS PLAN
- RM-301 RANGE MECHANICAL SECTION
- RM-501 RANGE MECHANICAL DETAILS
- RM-601 RANGE MECHANICAL SCHEDULES
- RM-700 RANGE MECHANICAL CONTROL NOTES, ABBREVIATIONS & SYMBOLS
- RM-701 RANGE MECHANICAL CONTROLS CONDUIT PLAN

SYMBOL LEGEND

XXX-X	EQUIPMENT IDENTIFICATION TAG
	EQUIPMENT HATCH
XXØ	ROUND DUCT
WxH	RECTANGULAR DUCT
WxH XXØ	RECTANGULAR TO ROUND DUCT CONNECTION
	SUPPLY AIR UP OR IN SECTION
	RETURN, EXHAUST, OR OUTSIDE AIR UP OR IN SECTION
	SUPPLY AIR DOWN OR AWAY
	RETURN, EXHAUST, OR OUTSIDE AIR DOWN OR AWAY
	MANUAL VOLUME DAMPER
XX	AIR FLOW MARKER

RANGE MECHANICAL NOTES

- THESE GENERAL NOTES APPLY TO ALL BALLISTIC RANGE VENTILATION WORK. CAREYS SHALL BE IMMEDIATELY NOTIFIED OF ANY DISCREPANCIES OR CHANGES TO THE RANGE LAYOUT.
- THE RANGE VENTILATION SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH NATIONAL INSTITUTE OF OCCUPATIONAL SAFETY AND HEALTH (NIOSH) SUGGESTED DESIGN CRITERIA. THESE REQUIREMENTS HAVE PROVEN TO PROVIDE EXPOSURES UNDER THE OCCUPATIONAL SAFETY AND HEALTH ASSOCIATION (OSHA) ALLOWABLE LIMITS FOR LEAD EXPOSURE FOUND IN OSHA 29 CFR.
- DUCT SIZES SHOWN ARE FREE AREA SIZES. INSULATE ALL OUTSIDE SUPPLY DUCT WITH MINIMUM R-6 EXTERNAL INSULATION AND WEATHERPROOF JACKETING. NO DUCTWORK SHALL BE LINED.
- ALL RANGE SUPPLY AND EXHAUST DUCT SHALL BE 2" WATER COLUMN PRESSURE RATED AND INSTALLED PER SMACNA STANDARDS EXCEPT FOR THE SECTION CONNECTING THE RANGE FILTER BANK (RFB) TO THE RANGE EXHAUST FAN (REF) SHALL BE 10" WATER COLUMN PRESSURE RATED AND INSTALLED PER SMACNA STANDARDS.
- USE A FLANGED TYPE TRANSVERSE DUCT CONNECTOR OR DUCTMATE TYPE CONNECTION ON ALL DUCTWORK.
- SEAL ALL DUCTS WITH UNITED OR EQUIVALENT SEALANT. SEAL ALL TRANSVERSE JOINTS, LONGITUDINAL SEAMS, CONNECTIONS, AND DUCT PENETRATIONS. ALL DUCT SHALL MEET THE REQUIREMENTS OF SEAL CLASS A.
- FOLLOW SMACNA STANDARDS FOR DUCT CONSTRUCTION AND DUCT REINFORCEMENT DETAILS.
- INSTALLING SHEET METAL CONTRACTOR SHALL VERIFY FINAL SIZES AND LOCATION OF EQUIPMENT WITH FINAL MANUFACTURER SUBMITTALS OR IN FIELD PRIOR TO FABRICATION OF DUCTWORK.
- REFER TO RM-700 FOR GENERAL CONTROL NOTES AND SPECIFICATIONS.
- THE INDOOR FIRING RANGE ENVELOPE SHALL BE AN AIR-TIGHT SEALED SPACE INCLUDING ALL DOORS AND WINDOWS BY THE GENERAL CONTRACTOR.
- ALL WALL PENETRATIONS BY GENERAL CONTRACTOR OR OTHER APPOINTED TRADE. COORDINATE FINAL LOCATIONS WITH INSTALLING MECHANICAL CONTRACTOR.
- ALL CONCRETE PADS BY GENERAL CONTRACTOR OR OTHER APPOINTED TRADE.

THE SEAL AND SIGNATURE APPLY ONLY TO THE DOCUMENT THEY ARE AFFIXED, AND EXPRESSLY DISCLAIM ANY RESPONSIBILITY FOR ADDENDA, REVISIONS, OR SUBSEQUENT ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS RELATING TO OR INTENDED FOR USE ON THE PROJECT BY ANY PERSON OTHER THAN THE ARCHITECT/PE OR ENGINEERING PROJECT.

REVISIONS

MARKER	DATE

PRELIMINARY NOT FOR CONSTRUCTION

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STATE OF NEW HAMPSHIRE
JAMES C. CORNETT
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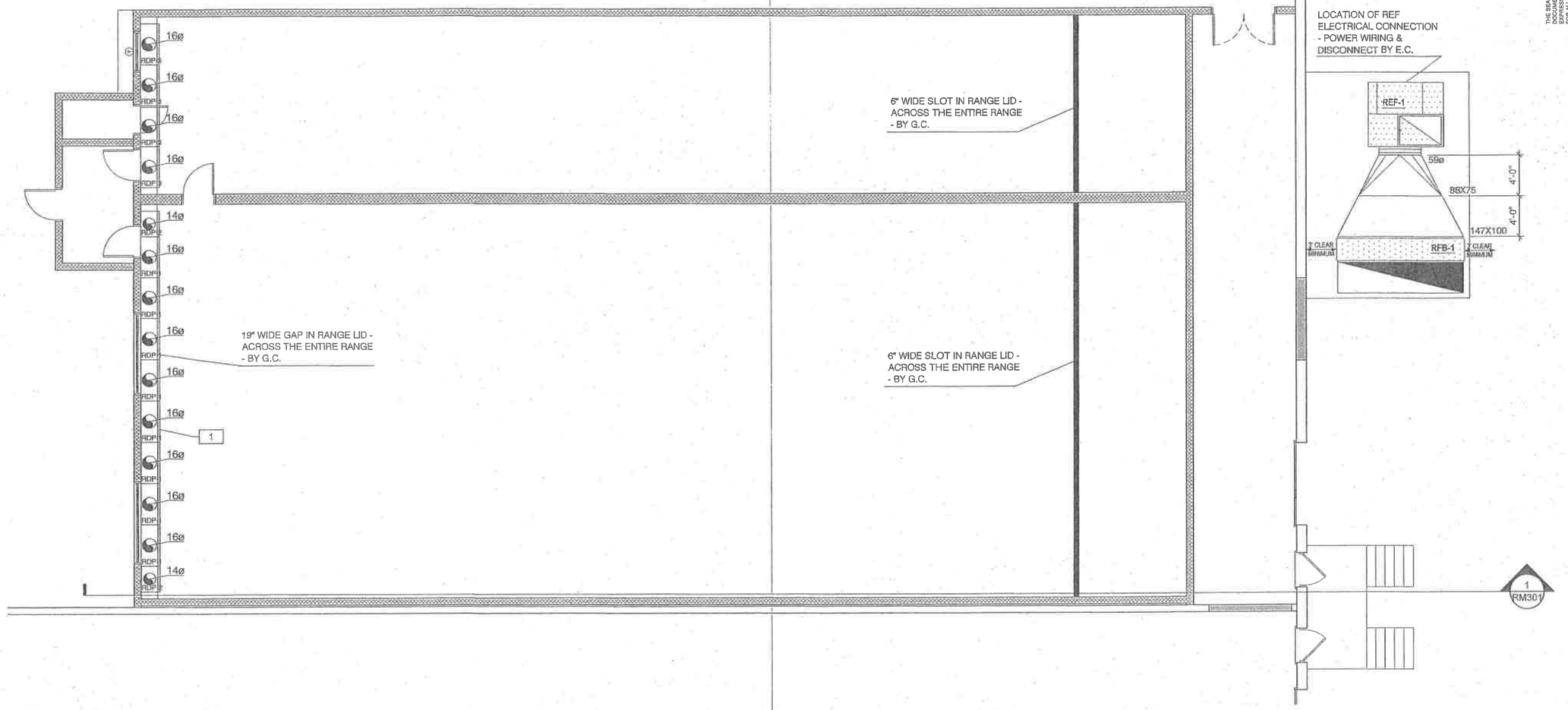
LICENSED PROFESSIONAL ENGINEER
JAN 24 2014

GRANITE STATE
INDOOR FIRING RANGE
HUDSON, NH

DRAWN	KMW
CHECKED	WJP
DATE	2014-03-21
JOB NO.	
SHEET	RM-001



RANGE MECHANICAL FLOOR PLAN

SCALE: 3/16" = 1' - 0"

XX KEY NOTES:

1. RADIAL DIFFUSER PLENUM ASSEMBLY PROVIDED BY CAREY'S - SEE SCHEDULE

DRAWING NOTES:

- REFER TO RM-001 FOR GENERAL NOTES AND SYMBOLS
- INSTALL DIFFUSER PLENUMS, ROUND DUCT CROSSOVERS, AND GRADUATED DUCTWORK AS SHOWN - ANY VARIATIONS MUST BE APPROVED BY CAREY'S PRIOR TO INSTALLATION
- ALL DIFFUSER PLENUMS SHALL BE CENTERED EVENLY ACROSS THE RANGE SPACE - **INSTALL PLENUMS STARTING AT THE CENTERLINE AND WORKING OUTWARD TOWARD THE SIDES OF THE RANGE**
- DUCT SIZES SHOWN CONNECTING TO RFB ARE FOR REFERENCE ONLY. SHEET METAL CONTRACTOR TO VERIFY FINAL SIZES AND LOCATIONS OF EQUIPMENT IN FIELD.
- PROVIDE HEAVY DUTY CANVAS CONNECTION AT INLET OF REF

4 0 4 8 12

SCALE: 3/16" = 1'-0"

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MARKER	REVISIONS	DATE

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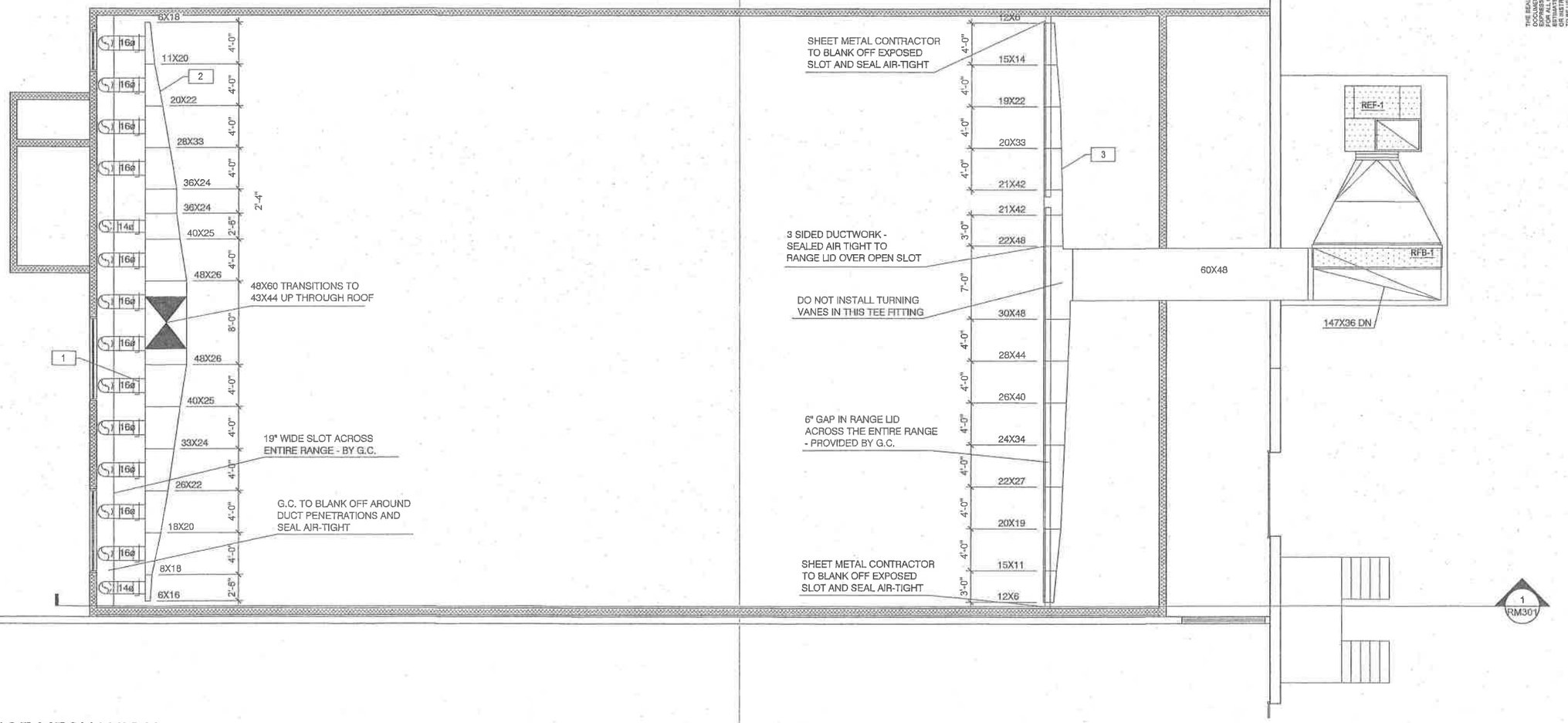
MAR 24 2014

GRANITE STATE INDOOR FIRING RANGE

HUDSON, NH

DRAWN	KMW
CHECKED	WJP
DATE	2014-03-21
JOB NO.	
SHEET	RM-101



RANGE MECHANICAL INTERSTITIAL SPACE PLAN

SCALE: 3/16" = 1' - 0"

XX KEY NOTES:

1. ROUND MANUAL VOLUME BALANCING DAMPER PROVIDED BY CAREY'S - SEE SCHEDULE
2. GRADUATED SUPPLY DUCT STRAIGHT ON TOP
3. THREE SIDED GRADUATED EXHAUST DUCT STRAIGHT ON BOTTOM

DRAWING NOTES:

- REFER TO RM-001 FOR GENERAL NOTES AND SYMBOLS
- INSTALL DIFFUSER PLENUMS, ROUND DUCT CROSSOVERS, AND GRADUATED DUCTWORK AS SHOWN - ANY VARIATIONS MUST BE APPROVED BY CAREY'S PRIOR TO INSTALLATION
- DO NOT INSTALL TURNING VANES IN GRADUATED DUCT FITTINGS

4 0 4 8 12

SCALE: 3/16" = 1'-0"

THE SEAL AND SIGNATURE APPLY ONLY TO THE DOCUMENT TO WHICH THEY ARE AFFIXED AND EXPRESSLY DISCLAIM ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE ARCHITECTURAL OR ENGINEERING PROJECT.

MARKER	REVISIONS	DATE

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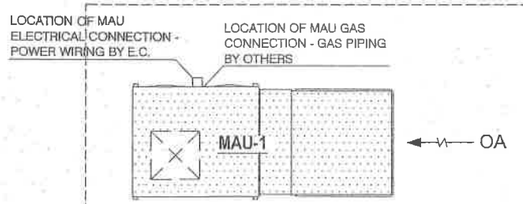
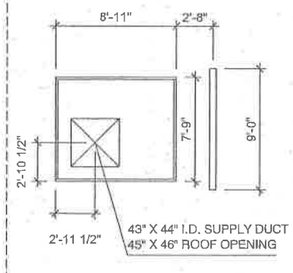
GRANITE STATE INDOOR FIRING RANGE

HUDSON, NH

DRAWN	KMW
CHECKED	WJP
DATE	2014-03-21
JOB NO.	
SHEET	RM-102



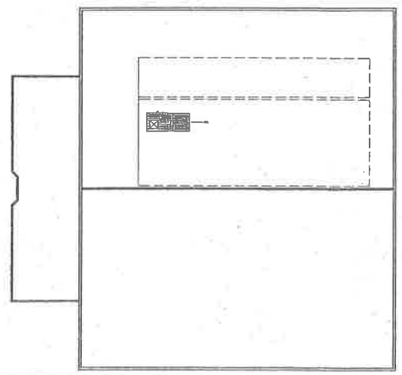
RANGE MECHANICAL
ROOF PLAN
SCALE: 3/16" = 1' - 0"



RANGE MECHANICAL
CURB PLAN
SCALE: 3/16" = 1' - 0"

DRAWING NOTES:

- REFER TO RM-001 FOR GENERAL NOTES AND SYMBOLS
- GAS AND ELECTRIC LOCATIONS FOR REFERENCE ONLY. INSTALLING CONTRACTORS TO VERIFY FINAL LOCATIONS IN THE FIELD.



ROOF OVERVIEW
SCALE: 1/32" = 1' - 0"

4 0 4 8 12
SCALE: 3/16" = 1'-0"

THE SEAL AND SIGNATURE APPLY ONLY TO THE DOCUMENT TO WHICH THEY ARE AFFIXED, AND DO NOT EXTEND TO ANY REPRODUCTIONS, FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS, OR DOCUMENTS PREPARED BY THE ARCHITECT FOR THIS PROJECT OR INSTRUMENTS RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE ARCHITECTURAL WORK ON THIS PROJECT.

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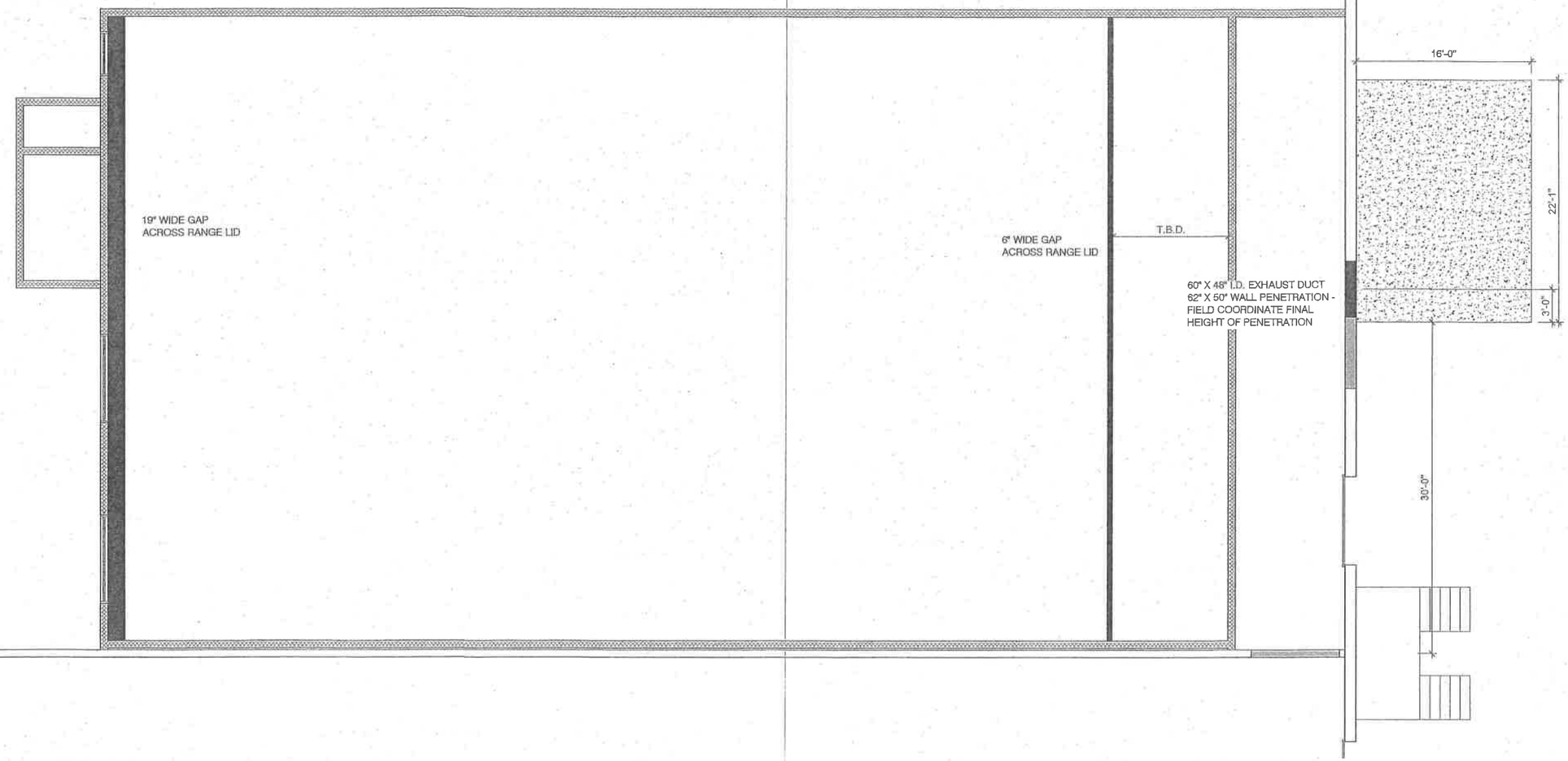
GRANITE STATE
INDOOR FIRING RANGE
HUDSON, NH

DRAWN	KMW
CHECKED	WJP
DATE	2014-03-21
JOB NO.	
SHEET	RM-103

THIS DRAWING IS OUT OF SCALE AS ALUMINUM SHEETING AND OTHER MATERIALS ARE SUBJECT TO SHRINKAGE AND EXPANSION DUE TO CHANGES IN TEMPERATURE AND HUMIDITY. DO NOT SCALE DRAWINGS. USE FIGURED DIMENSIONS ONLY. ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK. THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR ANY CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, NOR FOR ANY ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, NOR FOR ANY FAILURE OF ANY OF THE FOREGOING TO COMPLY WITH ANY APPLICABLE LAWS, RULES, REGULATIONS, ORDINANCES, CODES OR ORDERS.



RANGE MECHANICAL
EQUIMENT PAD LAYOUT AND WALL PENETRATIONS PLAN

SCALE: 3/16" = 1' - 0"

DRAWING NOTES:

- REFER TO RM-001 FOR GENERAL NOTES AND SYMBOLS
- COORDINATE FINAL LOCATIONS OF PENETRATIONS AND OPENINGS WITH STRUCTURAL
- ALL PENETRATIONS AND OPENING PROVIDED BY GENERAL CONTRACTOR
- ALL EQUIPMENT PADS PROVIDED BY GENERAL CONTRACTOR

4 0 4 8 12
SCALE: 3/16" = 1'-0"

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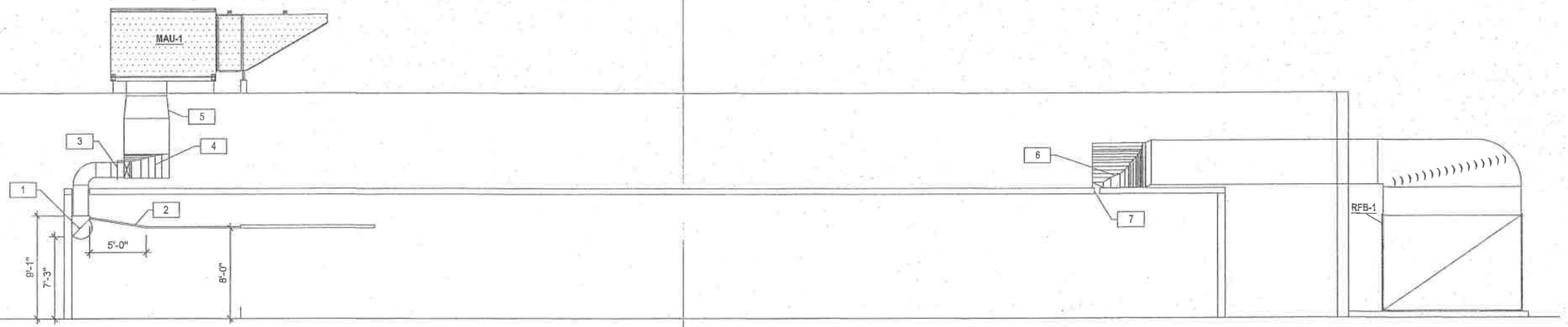
GRANITE STATE INDOOR FIRING RANGE
HUDSON, NH

DRAWN	KMW
CHECKED	WJP
DATE	2014-03-21
JOB NO.	
SHEET	RM-104



RANGE MECHANICAL SECTION

SCALE: 3/16" = 1' - 0"

RM-101 (1)

KEY NOTES:

1. RADIAL DIFFUSER PLENUM ASSEMBLY - INSTALL AS LOW AS POSSIBLE WHILE PERMITTING ACCESS AND VIEW INTO THE RANGE - TYPICALLY INSTALLED JUST ABOVE DOOR OR WINDOW FRAME - WHICHEVER IS HIGHER
2. LAY-IN CEILING SHALL MOUNT ON CONTINUOUS ANGLE FROM HEADER OF DIFFUSER PLENUM TO 5' OFF FRONT OF PLENUM AND THEN RUN FLAT TO START OF BALLISTIC SAFETY CEILING - CEILING AND INSTALLATION BY GENERAL CONTRACTOR OR OTHER APPOINTED TRADE
3. ROUND MANUAL VOLUME DAMPER
4. GRADUATED SUPPLY DUCT
5. SUPPLY DUCT TRANSITIONS THROUGH ROOF TO MAU OUTLET
6. THREE SIDED GRADUATED EXHAUST DUCT
7. 6" GAP IN RANGE LID

DRAWING NOTES:

- REFER TO RM-001 FOR GENERAL NOTES AND SYMBOLS
- COORDINATE ALL WALL AND CEILING PENETRATIONS WITH STRUCTURAL AND BALLISTIC CONTRACTOR
- INSULATE ALL SUPPLY DUCT WITH MINIMUM R-6 INSULATION
- DRAWINGS ARE FOR REFERENCE TO RANGE VENTILATION SYSTEM ONLY. BALLISTIC EQUIPMENT HAS BEEN SHOWN FOR ILLUSTRATION PURPOSES. REFER TO BALLISTIC DRAWINGS FOR ACTUAL LAYOUTS.

4 0 4 8 12

SCALE: 3/16" = 1'-0"

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REVISIONS

MARKER	DATE
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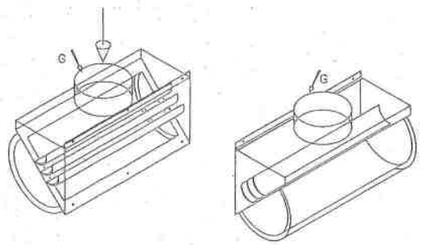
JAMES C. CORNETT No. 13169 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE MAR 2 7 2014

GRANITE STATE INDOOR FIRING RANGE
HUDSON, NH

DRAWN	KMW
CHECKED	WJP
DATE	2014-03-21
JOB NO.	
SHEET	RM-301

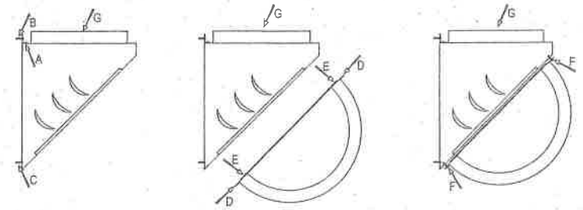


RADIAL DIFFUSER PLENUM
CONCEPTUAL DETAIL

SCALE: NTS

1

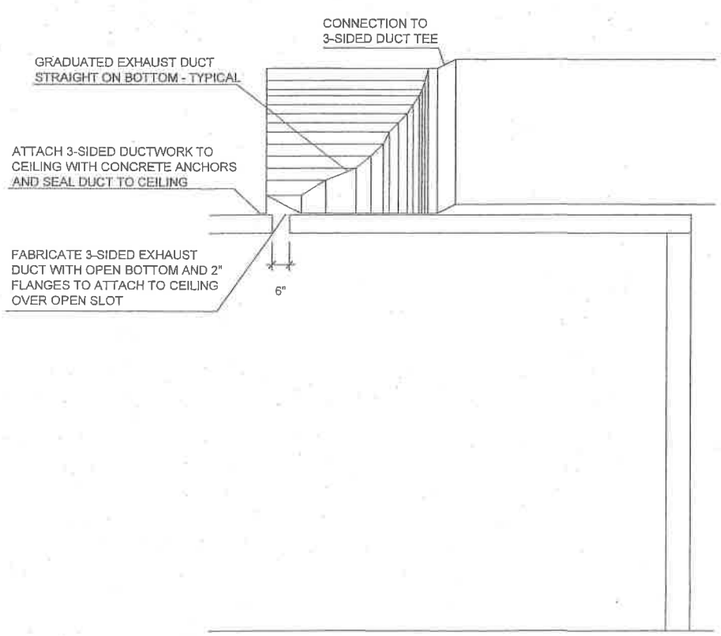
A. USE 18GA SHOPANGLE 2.5"H X 1.5"W X LENGTH OF THE DIFFUSER. CONNECT 1.5" WIDE SECTION TO THE TOP OF THE DIFFUSER USING 10 X 3/4 TEC SCREWS.
B. CONNECT TO THE WALL USING 18GA SHOPANGLE AND ADEQUATE SCREWS / ANCHORS.
C. CONNECT TO THE WALL USING ADEQUATE SCREWS / ANCHORS 3.5-4" ABOVE THE BOTTOM OF THE DIFFUSER.
D. DIFFUSER HAS AN EXTENDED CHANNEL WITH PRE-DRILLED HOLES.
E. USE 1" WIDE GASKET AROUND PERIMETER OF THE DIFFUSER (PROVIDED BY CAREY'S).
F. USE 10 X 1" TEC SCREWS TO CONNECT DIFFUSER TO PLENUM.
G. START COLLAR SUPPLIED BY SHEET METAL CONTRACTOR.



RADIAL DIFFUSER PLENUM
INSTALLATION INSTRUCTIONS

SCALE: NTS

2



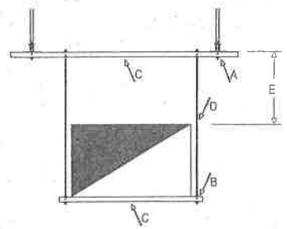
EXHAUST DUCT
DETAIL

SCALE: NTS

3

A. USE TWO NUTS WITH APPROPRIATELY SIZED ¼" THICK SQUARE WASHERS TO CONNECT ⅜" HANGING ROD TO THE BOTTOM OF BAR JOISTS.
B. CONNECT HANGING ROD TO UNISTRUT USING TWO NUTS WITH 2" PLASTER WASHERS.
C. USE 1⅝" UNISTRUT TO SUPPORT RECTANGULAR RANGE DUCTWORK.
D. USE ⅜" ROD FOR TRAPEZING RECTANGULAR RANGE DUCTWORK.
E. MINIMIZE DISTANCE FROM TOP OF DUCT TO BOTTOM OF BAR JOIST.

ALL DUCT HANGING METHODS MUST BE SMACNA APPROVED AND ACCEPTED BY CAREY'S HEATING & AIR CONDITIONING, INC.



DUCT SUPPORT
DETAIL

SCALE: NTS

4

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MARKER	REVISIONS	DATE

PRELIMINARY
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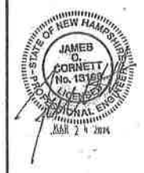

GRANITE STATE
INDOOR FIRING RANGE
HUDSON, NH

DRAWN	KMW
CHECKED	WJP
DATE	2014-03-21
JOB NO.	
SHEET	RM-501

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RADIAL DIFFUSER PLENUM SCHEDULE

TAG	SERVICE	LOCATION	DIFFUSER QUANTITY	DES. AIRFLOW (CFM)	DAMPER SIZE	BASIS OF DESIGN	NOTES
RDP-1	FIRING RANGE SUPPLY AIR	FIRING RANGE	8	2,400	1 - 16ø	CAREY'S 48ABS24-1-16	1 - 3
RDP-2	FIRING RANGE SUPPLY AIR	FIRING RANGE	2	2,100	1 - 14ø	CAREY'S 30ABS24-1-14	1 - 3
RDP-3	FIRING RANGE SUPPLY AIR	FIRING RANGE	4	2,550	1 - 16ø	CAREY'S 48ABS24-1-16	1 - 3

1. ROUND MANUAL VOLUME BALANCING DAMPERS ARE SHIPPED LOOSE FOR FIELD INSTALLATION.
2. INSTALLING CONTRACTOR TO MOUNT DAMPERS AS CLOSE TO GRADUATED SUPPLY DUCT AS POSSIBLE WHILE PERMITTING EASE OF ACCESS FOR BALANCING.
3. INSTALLING CONTRACTOR TO SUPPLY START COLLARS

VARIABLE FREQUENCY DRIVE SCHEDULE

UNIT NO.	SERVICE	MOTOR/ELECTRICAL DATA				ENCLOSURE TYPE	BASIS OF DESIGN	REMARKS
		HP	VOLTS	PH	HZ			
VFD-1	MAU-1	40.0	460	3	60	NEMA 1	ABB-ACH550	1 - 3
VFD-2	REF-1	75.0	460	3	60	NEMA 1	ABB-ACH550	1 - 3

1. DISCONNECT PROVIDED BY OTHERS
2. NO BY-PASS
3. ABLE TO COMMUNICATE ON N2-BUS

MAKEUP AIR UNIT SCHEDULE

UNIT NO.	SERVICE	LOCATION	FAN DATA					MOTOR/ELECTRICAL DATA				HEATING SECTION				ESTIMATED WEIGHT (Lbs)	BASIS OF DESIGN	REMARKS
			CFM	ESP IN WG	RPM	FAN TYPE	DRIVE	HP	VOLTS	PH	HZ	INPUT CAPACITY (BTU/H)	OUTPUT CAPACITY (BTU/H)	dT (°F)	TYPE			
MAU-1	FIRING RANGE	ROOF	33,600	2.5	537	FC	BELT	40	460	3	60	3,155,478	2,903,040	80	NAT. GAS.	4,650	RAM-36	1 - 11

1. H2 - HORIZONTAL INDUSTRIAL DIRECT FIRED HEATER
2. OUTDOOR DISCONNECT
3. PREMIUM EFFICIENCY MOTOR RATED FOR INVERTER DUTY
4. MODULATING GAS HEAT
5. LOW FIRE START
6. MAXITROL SC-10 TEMP CONTROL
7. ADJUSTABLE DRIVES
8. EXTENDED GREASE LINES
9. INTERNAL DISCHARGE DAMPER
10. SEPARATE 120V 20A CIRCUIT TO CONTROL SECTION BY OTHERS
11. V-BANK FILTER RACK WITH MERV-7 FILTERS (10-16X25X2 & 15-20X25X2)

RANGE EXHAUST FAN SCHEDULE

UNIT NO.	SERVICE	LOCATION	FAN DATA					MOTOR/ELECTRICAL DATA						ESTIMATED WEIGHT (Lbs)	BASIS OF DESIGN	REMARKS
			CFM	S.P. IN WG	RPM	FAN TYPE	DRIVE	HP	BHP	VOLTS	PH	HZ	RPM			
REF-1	FIRING RANGE	GRADE	36,960	7.50	974	CA-SWSI	BELT	75	59.4	460	3	60	1725	4,536	COOK 490CA-SWSI	1 - 12

1. CLASS II AIRFOIL CENTRIFUGAL BLOWER
2. CLOCKWISE UP DISCHARGE
3. ARRANGEMENT 10
4. STEEL ACCESS DOOR-HINGE
5. STEEL DRAIN
6. STEEL WEATHER COVER
7. ISOLATION BASE
8. CONCENTRIC LOCK BRGS
9. PREMIUM EFFICIENCY MOTOR RATED FOR INVERTER DUTY
10. HF-1250 SET(4) - ISOLATORS
11. ADSG - 490 DISCHARGE DAMPER
12. DISCONNECT PROVIDED BY OTHERS

RANGE FILTER BANK SCHEDULE

UNIT NO.	SERVICE	LOCATION	CFM	PRE-FILTER					FINAL FILTER							ESTIMATED WEIGHT (Lbs)	BASIS OF DESIGN	REMARKS
				QUANTITY & SIZES (IN)	TYPE	EFFICIENCY	FACE AREA (SQFT)	DES. FACE VELOCITY (FPM)	QUANTITY & SIZES (IN)	TYPE	EFFICIENCY	FACE AREA (SQFT)	MAX FACE VELOCITY (FPM)	S.P. DROP CLEAN IN WG	S.P. DROP DIRTY IN WG			
RFB-1	FIRING RANGE	GRADE	36,960	(24) 24x24x4	MERV-8	30%	96	385	(24) 24x24x12	HEPA	99.97%	96	385	1.2	4.2	1,800	BLC SL26HL12X08	1 - 5

1. FILTERS ARE SHIPPED LOOSE FOR FIELD INSTALLATION.
2. INSTALLING CONTRACTOR SHALL RECEIVE THE FILTERS AND PLACE INTO STORAGE UNTIL READY FOR INSTALLATION OF THE FILTERS.
3. INSTALLING CONTRACTOR SHALL INSTALL THE FILTERS IN THE FILTER FRAMES WHEN DIRECTED TO BY THE RANGE START-UP TECHNICIAN JUST PRIOR TO THE RANGE CLOSE-OUT TESTING.
4. INSTALLING CONTRACTOR TO PROVIDE A MINIMUM $\frac{3}{4}$" SPACE BELOW RANGE FILTER BANK FOR VENTILATION
5. ALL FILTERS SHALL BE RATED FOR MINIMUM 2000 CFM - NOT EXCEPTIONS.

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REVISIONS

MARKER	DATE

PRELIMINARY NOT FOR CONSTRUCTION

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STATE OF NEW HAMPSHIRE
JAMES O. CORNETT
No. 13169
LICENSED
PROFESSIONAL ENGINEER
AUG 21 2014

GRANITE STATE
INDOOR FIRING RANGE
HUDSON, NH

DRAWN	KMW
CHECKED	WJP
DATE	2014-03-21
JOB NO.	
SHEET	RM-601

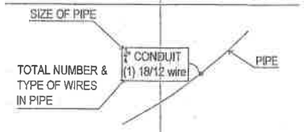
CONTROL NOTES AND SPECIFICATIONS:

- CAREY'S SHALL SUPPLY RANGE VENTILATION DIRECT DIGITAL CONTROL PANEL (DDC) AND SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR.
- DDC PANEL IS TO BE MOUNTED AT A HEIGHT OF 6 FEET FROM THE FLOOR TO THE TOP OF THE PANEL WITH A MINIMUM CLEARANCE OF 6 INCHES ON EACH SIDE OF THE PANEL - BY ELECTRICAL CONTRACTOR.
- DEDICATED 20A BREAKER WITH LOCKING DEVICE TO POWER THE RANGE CONTROL PANEL - ELECTRICAL CONTRACTOR.
- CAREY'S SHALL SUPPLY FILTER STATUS PANEL (FSP) AND SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR.
- ALL CONTROL CONDUITS WITH PULL STRINGS SHALL BE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR.
- ALL CONTROL WIRE SHALL BE RUN IN CONDUIT BY CAREYS.
- FINAL CONTROL WIRING CONNECTIONS TO CONTROL DEVICES BY CAREY'S.
- FINAL WHIPS FROM JUNCTION BOXES TO CONTROL DEVICES SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR.
- ELECTRICAL DISCONNECTS ARE SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR.
- VFD'S SHALL BE INSTALLED INDOORS WITHIN 100' OF RESPECTIVE UNIT BY ELECTRICAL CONTRACTOR. THE LOCATIONS OF THE VFD'S SHOWN ON THE CONTROLS PLAN ARE SUBJECT TO CHANGE PENDING COORDINATION WITH SITE CONDITIONS AND OWNER PREFERENCE.
- EACH VFD SHALL HAVE A CONDUIT FOR CONTROL WIRE AND A DEDICATED CONDUIT FOR COMMUNICATION BUS WIRE RUN TO IT.
- DSL LINE / NETWORK CONNECTION TO CONTROL PANEL FOR REMOTE COMMUNICATIONS TO BE SUPPLIED BY OWNER. OWNER I.T. TO COORDINATE WITH CAREYS TO PROVIDE STATIC IP ADDRESS FOR NETWORKING AND ESTABLISH COMMUNICATIONS PROTOCOL FOR REMOTE ACCESS.
- ALL CONTROL DEVICES WILL BE MOUNTED BY CAREY'S FIELD TECHNICIAN UNLESS SPECIFICALLY STATED OTHERWISE.
- PROVIDE 120V POWER TO MAU CONTROL PANEL - ELECTRICAL CONTRACTOR.
- ELECTRICAL CONTRACTOR SHALL PROVIDE A DEEP TWO GANG 1900 BOX AND PLASTER RING FOR THE REMOTE START/STOP/ALARM STATION AND COORDINATE FINAL LOCATION OF STATION WITH OWNER.

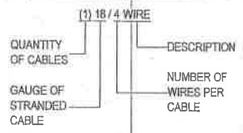
SYMBOL LEGEND

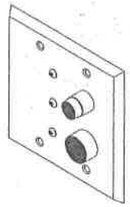
(P)	PRESSURE SENSOR
J	JUNCTION BOX
(T)	TEMPERATURE SENSOR
(Ss)	MAGNETIC DOOR SWITCH
DDC	RANGE VENTILATION CONTROL PANEL
VFD	VARIABLE FREQUENCY DRIVE
SS	REMOTE START/STOP STATION
FSP	FILTER STATUS PANEL
UP	CONDUIT UP TO FLOOR/ROOF ABOVE
DN	CONDUIT DOWN TO FLOOR BELOW

CONDUIT LABELING SCHEME

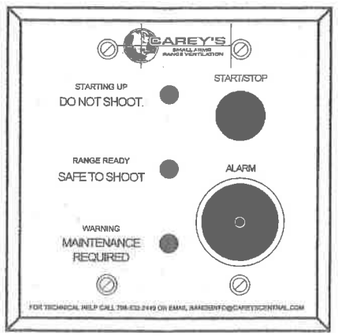


NOMENCLATURE

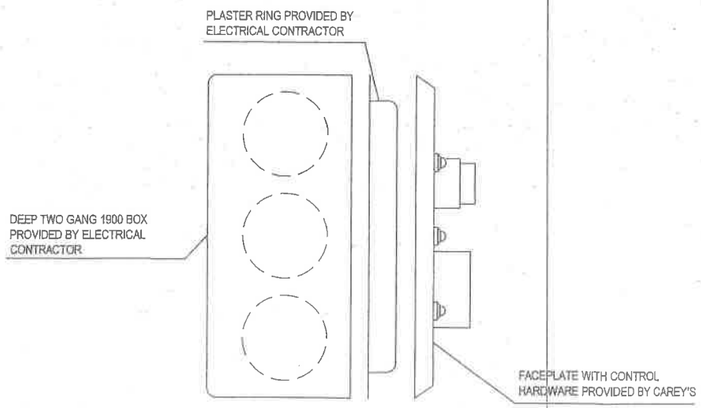




REMOTE START/STOP & ALARM STATION CONCEPTUAL DETAIL
1



REMOTE START/STOP & ALARM STATION COVER
2



REMOTE START/STOP & ALARM STATION SIDE PROFILE
3

CONTROL SEQUENCE:

1. THE OPERATOR WILL PUSH THE SWITCH. THE "DON'T SHOOT" LIGHT SHALL GO ON.
2. MOTORIZED OA DAMPER SHALL RECEIVE A 0-10 VDC SIGNAL TO DRIVE TO OPEN POSITION SET AT COMMISSIONING STARTUP.
3. EXHAUST AND SUPPLY FANS SHALL START WITH THE CLOSURE OF THE END SWITCH OF THE UNIT'S DAMPERS. EXHAUST FAN SHALL START SLIGHTLY AHEAD OF SUPPLY FAN (APPROXIMATELY 6 SECONDS).
4. EXHAUST FAN VARIABLE FREQUENCY DRIVE (VFD) SHALL MODULATE TO MAINTAIN A .05" WG NEGATIVE RANGE DIFFERENTIAL STATIC PRESSURE WHILE THE SUPPLY FAN SLOWLY RAMPS UP TO THE PRESET SUPPLY VFD SETTING DETERMINED DURING COMMISSIONING.
5. AFTER A TIME OF APPROXIMATELY 12 MINUTES WHEN THE SYSTEMS REACH STEADY STATE, THE "SAFE TO SHOOT" LIGHT WILL TURN ON AND THE "STARTUP IN PROGRESS" LIGHT WILL TURN OFF.
6. THE EXHAUST VFD WILL MODULATE THROUGHOUT THE OCCUPIED CYCLE TO MAINTAIN RANGE PRESSURE OF A NEGATIVE 0.05" WG AS REFERENCED TO THE BASE BUILDING.
7. THE RANGE ENTRANCE DOORS WILL BE MONITORED. IF THE RANGE DOOR IS OPEN FOR LONGER THAN 15 SECONDS (ADJ.) DURING START UP, THE RANGE WILL ALARM AND SHUT DOWN. DURING STEADY STATE, IF A RANGE DOOR IS OPEN FOR LONGER THAN 3 MINUTES (ADJ) THE RANGE WILL ALARM.
8. IF OUTSIDE AIR IS LESS THAN 65 DEGREES F, (ADJ.) DIRECT FIRED GAS BURNERS SHALL STAGE ON TO MAINTAIN SUPPLY AIR TEMPERATURE OF 70 DEGREES F, (ADJ.).
9. IF AT ANY TIME THE RANGE DIFFERENTIAL PRESSURE RISES ABOVE 0.0"WG FOR MORE THAN 2 MINUTES, THE RANGE WILL AUTOMATICALLY ALARM AND SHUT DOWN.
10. IF AT ANY TIME THE FILTER PRESSURE DIFFERENTIAL EXCEEDS PARAMETERS (DETERMINED DURING START-UP), THE RANGE WILL ALARM.
11. THE SYSTEMS SHALL MONITOR AND REACT TO A LOSS OF DUCT PRESSURE IN EACH OF THE SUPPLY AND EXHAUST DUCTS. IF PRESSURE IS LOST IN EITHER SUPPLY OR RETURN DUCTS THEN THE SYSTEM SHALL SHUT DOWN. (THIS WILL STOP POTENTIAL BUILDING DAMAGE IF ONLY ONE FAN WAS RUNNING,)
12. THE RANGE SHALL BE SHUT OFF WITH THE PUSH BUTTON SWITCH. SYSTEMS SHALL HAVE A DELAY ON THE SHUT DOWN. THERE SHALL BE A FIVE MINUTE DELAY AFTER SHUT DOWN WHERE THE SYSTEM CANNOT BE RESTARTED.
13. THE SYSTEM SHALL HAVE REMOTE COMMUNICATION. OWNER SHALL SUPPLY INTERNET / NETWORK CONNECTION FOR SHOOTING RANGE CONTROL CONTRACTOR.
14. THE DDC SYSTEM SHALL PROVIDE THE FOLLOWING MINIMUM DATA TRENDING:
    - 14.a. DIFFERENTIAL STATIC PRESSURE
    - 14.b: DISCHARGE TEMPERATURE
    - 14.c. OUTSIDE TEMPERATURE
    - 14.d. FILTER DIFFERENTIAL FOR THE HEPA FILTER
    - 14.e. SUPPLY STATIC PRESSURE
15. SYSTEM WILL REMAIN OFF DURING UNOCCUPIED CONDITIONS.
16. IT IS RECOMMENDED THAT THE USER RUNS THE VENTILATION SYSTEM FOR 15 MINUTES AFTER RANGE USE BEFORE SHUTTING DOWN.

CONTROL WIRING SUMMARY:

- INSTALL ONE 18/12 WIRE FROM DDC PANEL TO MAU-1 CONTROL SECTION
- INSTALL ONE 18/2 WIRE STRUNG IN SERIES FROM DDC PANEL TO EACH RANGE DOOR
- INSTALL ONE 18/2 WIRE STRUNG IN SERIES FROM DDC PANEL TO EACH RANGE TRAP DOOR
- INSTALL ONE 18/12 WIRE FROM DDC PANEL TO RFB-1 FILTER STATUS PANEL
- INSTALL ONE 18/12 WIRE FROM DDC PANEL TO SUPPLY DUCT DROP FOR TEMPERATURE AND PRESSURE SENSORS
- INSTALL ONE ¼" PNEUMATIC TUBE FROM DDC PANEL TO SUPPLY DUCT
- INSTALL ONE 18/12 WIRE FROM DDC PANEL TO REMOTE START/STOP STATION
- INSTALL ONE 18/6 WIRE FOR CONTROLS FROM DDC PANEL TO REF-1 VFD
- INSTALL ONE 18/6 WIRE FOR CONTROLS FROM DDC PANEL TO MAU-1 VFD
- INSTALL ONE 18/4 WIRE SHIELDED FOR COMMUNICATIONS BUS IN SERIES FROM DDC PANEL TO MAU-1 VFD
- INSTALL ONE 18/4 WIRE SHIELDED FOR COMMUNICATIONS BUS IN SERIES FROM MAU-1 VFD TO REF-1 VFD

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MARKER	REVISIONS	DATE
	PRELIMINARY NOT FOR CONSTRUCTION	

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JAMES O. CORNETT No. 13192 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE JAN 24 2014

GRANITE STATE INDOOR FIRING RANGE
HUDSON, NH

DRAWN	KMW
CHECKED	WJP
DATE	2014-03-21
JOB NO.	
SHEET	RM-700

THESE DRAWINGS ARE AND SHALL REMAIN THE PROPERTY OF CAREY'S SMALL ARMS RANGE VENTILATION. THEY ARE NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CAREY'S SMALL ARMS RANGE VENTILATION. VISUAL CONTACT WITH THESE DRAWINGS SHALL CONSTITUTE PRIMA FACIE EVIDENCE OF ACCEPTANCE OF THESE RESTRICTIONS.

RANGE MECHANICAL CONTROLS CONDUIT PLAN

SCALE: 3/16" = 1' - 0"

SYMBOL LEGEND

(P)	PRESSURE SENSOR
[J]	JUNCTION BOX
(T)	TEMPERATURE SENSOR
(S_D)	MAGNETIC DOOR SWITCH
DDC	RANGE VENTILATION CONTROL PANEL
VFD	VARIABLE FREQUENCY DRIVE
SS	REMOTE START/STOP STATION
FSP	FILTER STATUS PANEL
UP	CONDUIT UP TO FLOOR/ROOF ABOVE
DN	CONDUIT DOWN TO FLOOR BELOW

[XX] KEY NOTES:

1. MOUNT THIS JUNCTION BOX ON SUPPLY DUCT DROP. RUN $\frac{1}{2}$" FLEX FROM JUNCTION TO TEMPERATURE AND PRESSURE SENSORS MOUNTED AT SUPPLY DUCT DROP

DRAWING NOTES:

- REFER TO RM-700 FOR GENERAL CONTROL NOTES, SYMBOLS, AND SPECIFICATIONS.
- CONDUIT DRAWINGS ARE FOR DIAGRAMMATIC PURPOSES ONLY. INSTALLING CONTRACTOR TO DETERMINE FINAL PATHWAYS FOR CONDUITS.
- ALL CONDUITS SHALL BE RUN ABOVE GROUND
- ALL DOORS LEADING INTO A RANGE SPACE WHETHER SHOWN OR NOT SHALL HAVE A $\frac{1}{2}$" CONDUIT RUN TO IT FROM THE NEAREST JUNCTION WITH 18/2 WIRE FOR A MAGNETIC DOOR SWITCH.
- FINAL INDOOR LOCATION OF DDC PANEL TO BE DETERMINED BY ELECTRICAL CONTRACTOR
- FINAL INDOOR LOCATION OF VFDS WITHIN 100' OF RESPECTIVE UNIT TO BE DETERMINED BY ELECTRICAL CONTRACTOR - TYPICAL FOR (2)
- FINAL LOCATION OF REMOTE START/STOP/ALARM STATION TO BE DETERMINED BY OWNER
- COMMUNICATION BUS WIRE SHALL BE RUN IN DEDICATED CONDUIT - NO EXCEPTIONS.
- COMMUNICATION BUS WIRE SHALL DAISY CHAIN STARTING AT RANGE VENTILATION CONTROL PANEL AND ENDING AT LAST VFD.

SCALE: 3/16" = 1'-0"

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MARKER	REVISIONS	DATE

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STATE OF NEW HAMPSHIRE
JAMES O. CORNETT
No. 13169
MAR 2 4 2014

GRANITE STATE
INDOOR FIRING RANGE
HUDSON, NH

DRAWN KMW
CHECKED WJP
DATE 2014-03-21
JOB NO.
SHEET RM-701

Acoustical Surfaces, Inc.

SOUNDPROOFING, ACOUSTICS, NOISE & VIBRATION CONTROL SPECIALISTS
123 Columbia Court North • Suite 201 • Chaska, MN 55318
(952) 448-5300 • Fax (952) 448-2613 • (800) 448-0121
Email: sales@acousticalsurfaces.com
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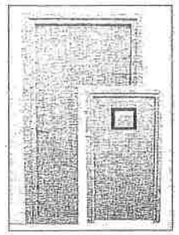

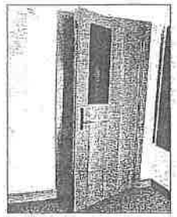

STUDIO 3D™ SOUNDPROOF INTERIOR & EXTERIOR DOORS

ASI is proud to offer the markets first affordable soundproof interior door. Our sound control doors have an STC value up to 56. The Studio 3D soundproof doors are ideal for recording studios, offices, band rooms, hotels, dorm rooms, conference rooms or any application where a soundproof interior door is required. The doors come standard in oak, ready to stain with silver hardware. Custom finishes and hardware options are available.

- Low cost high performance
- STC ratings up to 56
- Products tested per ASTM E-90
- Custom manufactured to any size specification
- Appx. 300 pound door assembly
- 2¼" 13 layer door assembly
- Comes pre-hung and assembled
- Adjustable jams and seals
- Ready to stain/paint to match your decor
- Best performance wood/metal finished door assembly available
- Automatic sill
- Heavy duty hinges (4)
- 3-point handle latching system

4 SOUNDPROOF DOOR 119
SCALE: NTS

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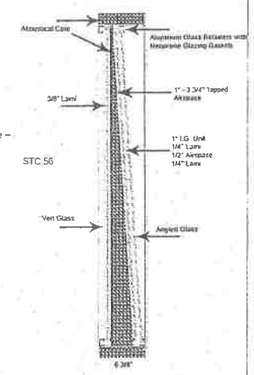
WINDOW MODEL Studio 6

Features:

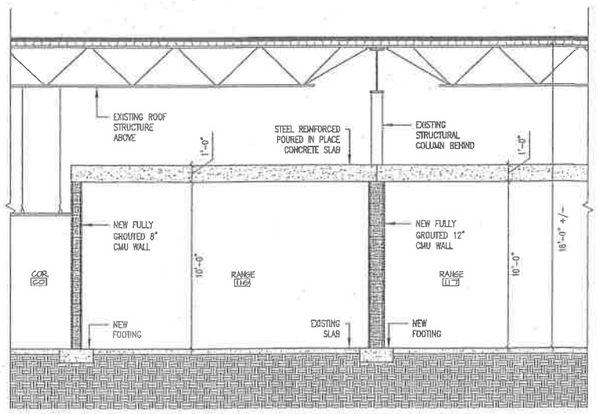
- STC rating up to 56
- Custom sized to fit your needs
- Extra large units available with mullions.
- Frames available in clear anodized or bronze anodized
- Optional tinted, one-way mirror pane, safety glass and etc.
- 4° Angled glass for max acoustical performance – optional flat glass configuration

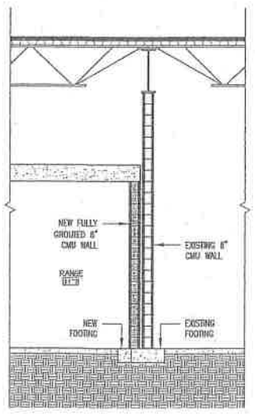
Window Specifications:

- One insulated glass unit with 2 pieces of 1/4" laminated glass plus an air cavity and an additional pane of 3/8" laminated glass
- 6-3/8" Aluminum frame
- Acoustically treated frames and seal.
- Angled and flat glass for maximum acoustical performance
- Class A-1 ASTM E-84 nonflammable Sound Silencer™ acoustical frame insert
- Fits any wall thickness by insetting or offsetting acoustical window

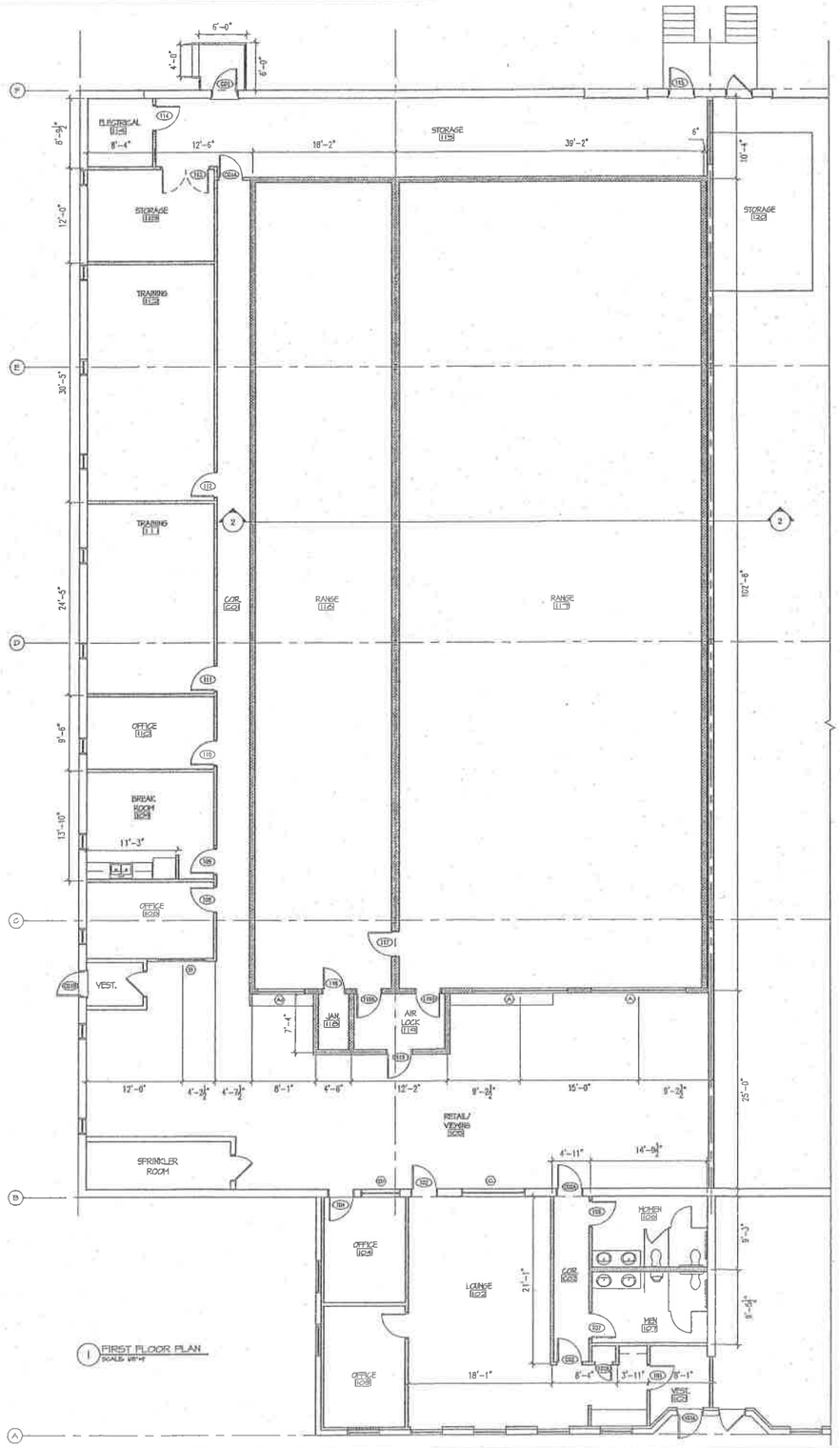


3 SOUNDPROOF WINDOW TYPE A
SCALE: NTS





2 PARTIAL BLDG. SECTION
SCALE: 3/8"=1'



1 FIRST FLOOR PLAN
SCALE: 1/8"=1'

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Structural

Fire Protection

Plumbing

HVAC

Electrical

Seal

LICENSED ARCHITECT
WILLIAM CARY MAYES
No. 1579
THE STATE OF NEW HAMPSHIRE

Rev. No.	Description	Date

Project: GRANITE STATE FIRING RANGE
HUDSON, NH

Phase: Schematic Design

Project No.: 2014-10
Date: 3-26-14
Scale: As Noted
Drawn By: EM
Reviewed By: WD

Sheet Contents:
FLOOR PLAN, PARTIAL BUILDING SECTION, SOUNDPROOF DOOR AND WINDOW TYPES

Sheet No.: A1.1

Goodwill Industries of Northern N.E. Site Plan

STAFF REPORT
April 9, 2014

SITE: Lowell/Wason Road -- Map 222/Lot 041 -- SP# 03-14

ZONING: Business (B)

PURPOSE OF PLAN: to convert the existing Stop & Shop Supermarket facility into a Goodwill Retail Store and shipping/receiving center. Application Acceptance & Hearing.

PLAN UNDER REVIEW ENTITLED: Amended Site Plan Goodwill Industries Map 222 Lot 41, 9 Wason Road, Hudson, NH, prepared by Keach-Nordstrom Associates, Inc., dated: Feb. 5, 2014, no revision date, consisting of Sheets 1 - 10 and Notes 1 – 25 (said plans are attached hereto).

ATTACHMENTS:

1) Project Narrative, Site Plan Application, Checklist and Waiver Forms, including an aerial site photo date stamped Mar. 07, 2014 – Attachment "**A**".
2) Keach-Nordstrom's Traffic Impact Analysis, dated March 4, 2014 – "**B**".
3) Keach-Nordstrom's Stormwater Management Analysis, dated March 3, 2014 – "**C**".
4) Comments/Memos from Zoning Administrator, Bill Oleksak, HFD Deputy Fire Chief, John O'Brien, and Asst. Assessor, Jim Michaud - ps – **"D".**
5) CLD's Initial Comments Report, dated Apr. 3, 2014 – "**E**".

REQUESTED WAIVERS:

1. HTC 275-9(C) -- Noise Study
2. HTC 275-9(D) -- Fiscal/Environmental Impact Study

STAFF COMMENTS/OUTSTANDING ISSUES:

1. The proposed new use, as depicted in Bill Oleksak's letter, dated Feb. 21, 2014, is allowed in the B district, and although it's not a supermarket, the business activities included in the new use are very similar to that of a supermarket. That is, products are delivered, sold and refuse/unused products are removed/distributed offsite. One important difference, as described in the traffic analysis, the amount of traffic associated with the new use, as opposed to the former supermarket, is a fraction of the latter. This is not to say that Stop & Shop ever came close to generating the amount of traffic that was professionally analyzed, and the basis for paid CAP Fee and offsite improvement costs associated with the former use. NOTE: in regard to a CAP Fee involving the new proposed use, with less P.M. Peak Hr. traffic associated with the site, and the fact that the new use is projected to create far less traffic to and from the site, no CAP Fee applies.

2. In regard to the possible future widening of both Lowell Rd. and Wason Rd., please refer to the "Master Plan" Sheet 1 of 10, and you will see a 40' wide ROW area, narrowing to approx. 20', along the lot's Lowell Rd. frontage. This existing ROW area, in all likelihood, will provide sufficient width for any future Lowell Rd. widening project along the frontage of the subject site. In regard to the lot's Wason Rd frontage, a 12 ft. in-width future road widening easement already exists and will continue with this project. This easement runs along the lot's entire frontage on Wason Rd. and ties into and includes 12' of the lot's Lowell Rd. frontage.

3. In regard to the two driveway entrances on Wason Rd., the one closest to Lowell Rd. includes a transition lane on Wason Rd., and is designed for Wason Rd. eastbound ingress only. Note: there is a solid double-yellow line running down Wason Rd, in front of the subject lot, and a left-turn queuing lane on the eastbound side of Wason Rd. in front of the aforementioned ingress only driveway. As such, this particular driveway is effectively barricaded from anyone (i.e., except for the worst traffic violators and they are out there) thinking about entering the site from the westbound side of Wason Rd. In any event, and besides, there is a well designed ingress/egress driveway associated with the site, located approximately 250 ft. east of said ingress only driveway.

4. Relative to the onsite parking, loading spaces and travel lanes, the proposed reduction in the number of parking spaces will provide for enhanced landscaping, which is proposed (see Landscape Plan, Sheet 7 of 10). The proposed number of parking spaces, together with the required number of loading spaces correspond with Planning Board Site Plan regulation requirements. Please refer to Notes 7 & 8 on the Master Plan Sheet 1 of 10 and said regulations, §275-8(26)(p), (27, (28) & (29)).

   The onsite travel lanes, however, need to be amended. Specifically, the loading area, located at the southwest corner of the building. Here, the two proposed travel lanes should be designated as one-way only, and the loading area, should be widened. Also, pavement surface directional arrows should be added throughout the site, relative to providing for safer flow of onsite travel.

5. Presently, the plans do not include a typical exterior lighting plan. However, Note 14, of the "Master Plan" addresses this issue, and the "Site Layout Plan", Sheet 4 of 10, shows the existing and relocated existing exterior site lighting locations.

6. In regard to onsite signage, Sheet 8 of 10 shows a photo of the existing freestanding sign pylon, with the Goodwill sign replacing the former business. The sign's dimensions are also provided on said sheet, next to the photo. All other site and wall signs will comply with the Zoning Ordinance sign requirements, and if any variation from same is proposed, ZBA action will be required.

7. Please read through CLD's attached Initial Comments Report – "E" – for the status of additional outstanding issues.

RECOMMENDATION: Taking the abovementioned outstanding issues/comments into consideration, and that this application is ready for application acceptance, for Wednesday night's initial public hearing staff recommends:

(i) Board vote for application acceptance;
(ii) Open and conduct the public hearing;
(iii) Allow the applicant to present the project and address all of the issues involved in this application, including those cited-above and in CLD's Initial Comments Report "**E**".
(iv) Hear any pro/con public input, and

(v) Defer further review of this site plan, date specific to the April 23d or May 14th meeting.

(vi) If the board moves to approve the waivers and/or the application, staff has provided below the appropriate DRAFT MOTIONS.

APPLICATION TRACKING:

- 03/07/2014 – Site Plan application submitted;
- 04/09/2014 - Initial public hearing scheduled.

DRAFT MOTIONS:

I move to accept the Site Plan application for Goodwill Industries, 9 Wason Rd., Map 222/Lot 041.

Motion by: _____Second: _____Carried/Failed: _____.

I move to defer further review of the Goodwill Industries Site Plan application, 9 Wason Rd., Map 222/Lot 041date specific, to the May 14, 2014 meeting.

Motion by: _____Second: _____Carried/Failed: _____.

REQUESTED WAIVERS:

1. HTC 275-9(C) -- Noise Study
2. HTC 275-9(D) -- Fiscal/Environmental Impact Study

1) HTC 275-9C – Noise Study

I move to grant the requested waiver: HTC 275-9C - Noise Study - because such a study is unnecessary, taking into consideration that the majority of the commercial activities associated with the proposed use shall be conducted inside the subject building, thus reducing the noise impact upon abutting properties, which are primarily existing commercial uses, and as such, 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) HTC 275-9D – Fiscal Impact Study

I move to grant the requested waiver: HTC 275-9D - Fiscal/Environmental Impact Study - because in addition to the submitted plans and submitted application documents said study is unnecessary in order to evaluate the fiscal/environmental impact of this development, and as such, the granting of this waiver is not contrary to the spirit and intent of the Site Plan Review regulations.

Motion by: _____Second: _____Carried/Failed: _____

MOTION to APPROVE:

I move to grant approval for the Site Plan entitled: : Amended Site Plan Goodwill Industries Map 222 Lot 41, 9 Wason Road, Hudson, NH, prepared by Keach-Nordstrom Associates, Inc., dated: Feb. 5, 2014, no revision date, consisting of Sheets 1 - 10 and Notes 1 – 25 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 easements along Lowell Rd and Wason Rd. shall be favorably reviewed and recommended on by Town Counsel.

3) All improvements shown on the Plan, including Notes 1-25, shall be completed in their entirety and at the expense of the Applicant or his assigns.

4) After the issuance of the foundation permit and prior to the issuance of the framing permit, 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) 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.

6) Onsite landscaping shall be provided for in accordance with the plant and tree species specified on Sheet 7 of 10 of the Plan.

7) 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.

8) This approval shall be subject to final engineering review.

Motion by: _____Second: _____Carried/Failed: _____

KNA KEACH-NORDSTROM ASSOCIATES, INC.

"A"

Goodwill Industries of Northern New England
Hudson Facility

Project Narrative

The proposed project entails converting the existing Stop & Shop supermarket facility into a Goodwill retail sales and shipping/receiving facility. The property is located at 9 Wason Road, at the corner of Lowell Road and Wason Road. The Goodwill – Hudson facility will consist of four main elements. There will be a retail store with an attended donation center on the far west end of the building. Next to the retail store will be a retail outlet store, where irregular or "B" quality products are sold for a discount. The majority of the building space will be occupied by the "back room" where processing, shipping and receiving will take place. Back room activities include sorting, grading, and preparing product to be sold in both the retail and the retail outlet stores. The sorting process will include deeming some product to be discarded. Discarded product is sorted by type, and hauled away by an outside contractor. The back room is a continuous stream of product flow. Products are not stored in this facility. Traditional shipping and receiving activities will take place at this facility. Goods arrive for the retail stores, and goods are returned to the Goodwill Warehouse facility in Gorham, Maine.

The existing site includes parking accommodations for a large grocery store, far exceeding the parking demand for the proposed use. The site plan amendment entails limited construction in two locations on the existing property. The first location is right in front of the building, where the applicants propose to remove an area of existing pavement, curbing, and associated site appurtenances, and reconfigure the area to accommodate daily deliveries to and from the site. The parking in this area is greatly reduced, leading to a significant increase in internal green space. Work in front of the building includes construction of a building addition, totaling 1,380 square feet, to house four additional loading dock bays. Along the westerly edge of the building, the applicants propose installation of a new entrance, to accommodate the attended donation center. Work along the west side of the building entails removal of existing pavement and curbing, making way for an extended canopy over a concrete pad. Visitors wishing to donate goods for sale will stop under the canopy and unload their goods into the facility for processing. Traffic is restricted to one-way in this location to accommodate two vehicles under the canopy at one time.

The proposed use is permitted within the Business Zone, pursuant to a Zoning Determination issued by the Hudson Zoning Administrator. The applicants believe it is an opportune site to retrofit to meet their needs, and are excited to move Goodwill into Hudson.

10 Commerce Park North, Suite 3B Bedford, NH 03110 Phone (603) 627-2881 Fax (603) 627-2915

"A" Cont.

HUDSON MAR 07 2014 COMMUNITY DEVELOPMENT

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

Date of Application: March 06, 2014 Tax Map # 222 Lot # 41

Name of Project: Goodwill-Hudson

Zoning District: B-Business (For Town Use) General SP# 03-14 (For Town Use)

ZBA Action: N/A

PROPERTY OWNER:	DEVELOPER:/APPLICANT
Name: Manuel D. Sousa Et. Al.	Goodwill Industries of Northern New England
Address: 46 Lowell Road	75 Washington Avenue
Address: Hudson, NH 03051	Portland, ME 04101
Telephone # 603-880-7799	207-774-6323
Fax # N/A	N/A
Email: N/A	mvjsweeney@gmail.com

PROJECT ENGINEER	SURVEYOR
Name: Keach-Nordstrom Assoc., Inc.	Keach-Nordstrom Assoc., Inc.
Address: 10 Commerce Park No., Unit 3	10 Commerce Park No., Unit 3
Address: Bedford, NH 03110	Bedford, NH 03110
Telephone # 603-627-2881	603-627-2881
Fax # 603-627-2915	603-627-2915
Email: abasso@keachnordstrom.com	abasso@keachnordstrom.com

PURPOSE OF PLAN:

To convert the existing Stop & Shop Supermarket facility into a Goodwill Retail Store and shipping/receiving center.

For Town Use mtg.

Plan Routing Date: 3-12-14 ~~Sub/Site~~ Date: 4-9-14

_____ I have no comments _____ I have comments (attach to form)

_____ Title: _____ Date: _____
(Initials)

DEPT:
_____ Zoning _____ Engineering _____ Assessor _____ Police _____ Fire _____ Planning
_____ Consultant _____ Highway Department

Fees Paid: _____

SITE DATA SHEET

PLAN NAME: Goodwill-Hudson

PLAN TYPE: SITE PLAN

LEGAL DESCRIPTION: MAP 222 LOT 41

DATE: March 06, 2014

Location by Street	Lowell Road and Wason Road
Zoning:	B-Business
Proposed Land Use:	Retail
Existing Use:	Retail
Surrounding Land Use(s):	Residential/Retail
Number of Lots Occupied:	1
Existing Area Covered by Building:	64,406 sf
Existing Buildings to be removed:	0
Proposed Area Covered by Building:	65,786 sf
Open Space Proposed:	43.3% (39.8% existing)
Open Space Required:	35%
Total Area:	S.F.: 370.702 Acres: 8.510
Area in Wetland:	37,476 sf Area Steep Slopes: 0
Required Lot Size:	30,000 sf
Existing Frontage:	414.7' (Lowell Road) 682.29' (Wason Road)
Required Frontage:	150'

Building Setbacks:	Required*	Proposed
Front:	50'	50'
Side:	15'	15'
Rear:	15'	15'

SITE PLAN DATA SHEET
(Continued)

Flood Zone Reference: 33011CO656D Panel 656 (not in flood zone)

Width of Driveways: 20'-West 72'-East

Number of Curb Cuts: 2

Proposed Parking Spaces: 246 (10-HC)

Required Parking Spaces: 193

Basis of Required Parking (Use): 15 Space/200 sf-Retail-132.49
1 Space/600 sf-Processing-60.14

Dates/Case #/Description/Stipulations of ZBA, Conservation Commission, NH Wetlands Board Actions: N/A
(Attach stipulations on separate sheet)

Waivers Requested:	Hudson Town Code Reference	Regulation Description
	1. 275-9(C)	Noise Study
	2. 275-9(D)	Fiscal/Environmental Impact
	3.	
	4.	
	5.	
	6.	
	7.	
	8.	

(Left column for Town Use)

Impact Fees:
C.A.P Fee:

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 site plan 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
PK	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.	
PK	b)	A Site Plan narrative, describing the purpose, locations, long-range plans, impacts on traffic, schools, and utilities	
PK	c)	Plan scale at not less the one inch equals fifty feet (1" = 50')	
PK	d)	Locus plan with 1,000' minimum radius of site to surrounding area	
PK	e)	Plan date by day/month/year	
PK	f)	Revision block inscribed on the plan	
PK	g)	Planning Board approval block inscribed on the plan	
PK	h)	Title of project inscribed on the plan	
PK	i)	Names and addresses of property owners and their signatures inscribed on the plan	
PK	j)	North point inscribed on the plan	
PK	k)	Property lines: exact locations and dimensions	
PK	l)	Square feet and acreage of site	
PK	m)	Square feet of each building (existing and proposed)	
PK	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
MC	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	
MC	p) Locations of existing and proposed permanent monuments and bench marks within 200 feet of the development tract	
MC	q) Pertinent highway projects	
MC	r) Assessor's Map and Lot number(s)	
MC	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	
MC	t) Delineate zoning district on the plan	
MC	u) Storm water drainage plan	
MC	v) Topographical elevations at 2-foot intervals contours: existing and proposed	
MC	w) Utilities: existing and proposed	
MC	x) Parking: existing and proposed	
MC	y) Parking space: length and width	
MC	z) Aisle width/maneuvering space	
MC	aa) Landscaping: existing and proposed	
MC	ab) Building and wetland setback lines	
MC	ac) Curb cuts	
MC	ad) Rights of way: existing and proposed	
MC	ae) Sidewalks: existing and proposed	
N/A	af) Exterior lighting plan	
MC	ag) Sign locations: size and design	
MC	ah) Water mains and sewerage lines	
N/A	ai) Location of dumpsters on concrete pads	
MC	aj) All notes from plats	

Applicant Initials		Staff Initials
ak)	Buffer as required by site plan regulations	
al)	Green and open space requirements met with both types of spaces inscribed on the plan	
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 performed by a State of New Hampshire Certified Soil Scientist, who shall affix his/her stamp and signature shall be inscribed on the plan.	
an)	Wetlands (and poorly-drained and very poorly-drained soils, 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.	
ao)	"Valid for one year after approval" statement inscribed on the plan.	
ap)	Loading bays/docks	
aq)	State of New Hampshire engineer's stamp, signature, surveyor's stamp, and signature	
ar)	Error of closure (1 in 10,000 or better)	
as)	Drafting errors/omissions	
at)	Developer names, addresses, telephone numbers and signatures	
au)	Photographs, electronic/digital display or video of site and area	
av)	Attach one (1) copy of the building elevations	N/A EXISTING
aw)	Fiscal impact study	
ax)	Traffic study	
ay)	Noise study	

Applicant Initials		Staff Initials
AK az)	Copies of any proposed or existing easements, covenants, deed restrictions, right of way agreements or other similar documents	DC
AK ba)	Copy of applicable Town, State, Federal approval/permits to include but not limited to the following:	JC

- 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.

AK bb)	Presentation plan (colored, with color-coded bar chart)	JC
AK bc)	Fees paid to clerk	JC
AK 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.	JC

*Under the purview of the Planning Board, any and all items may be waived.

APPLICATION FOR SITE PLAN REVIEW
TOWN OF HUDSON, NEW HAMPSHIRE

I hereby apply for Site 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 Site 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 given 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 to 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/or inspections conducted on his/her (their) property in connection with this applications.

Signature of Owner: Manuel D. Sousa

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

Signature of Developer: [signature]

- 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 Code Enforcement Officer/Building Inspector must be notified within two (2) working days of any change by the individual in charge of the project.

APPLICATION IS DUE AT NOON 21 days prior to the Planning Board Meeting. (The date the Agenda is CLOSED.) Any applications received after that time will be deferred until the next available meeting.

SUBDIVISION/SITE PLAN WAIVER REQUEST FORM

Name of Subdivision/Site Plan: **Goodwill - Hudson**

Street Address: **9 Wason Road, Hudson, New Hampshire 03051**

I **Anthony Basso** hereby request that the Planning Board waive the requirements of item **HTC 275-9C** of the Subdivision/Site Plan Checklist in reference to a plan presented by **Keach-Nordstrom Associates, Inc.** (name of surveyor and engineer) dated **February 5, 2014** for property Tax Map(s) **222** and Lot(s) **41** 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. The existing supermarket use is retail in nature, and similar to the proposed use. It is not expected that the Goodwill facility will bring any increased noise pollution to the site and to the residential and retail uses surrounding it, therefore granting of the waiver is in keeping with the spirit and intent of the ordinance.

Signed: _____

Applicant or Authorized Agent

Planning Board Action:

Waiver Granted: _____

Waiver Not Granted: _____

SUBDIVISION/SITE PLAN WAIVER REQUEST FORM

Name of Subdivision/Site Plan: **Goodwill - Hudson**

Street Address: **9 Wason Road, Hudson, New Hampshire 03051**

I **Anthony Basso** hereby request that the Planning Board waive the requirements of item **HTC 275-9D** of the Subdivision/Site Plan Checklist in reference to a plan presented by **Keach-Nordstrom Associates, Inc.** (name of surveyor and engineer) dated **February 5, 2014** for property Tax Map(s) **222** and Lot(s) **41** 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 with the CAP fee that this previously paid to 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 site is currently developed and the proposed construction will only improve the Best Management Practices onsite. Fiscally, the site was previously subject to a substantial CAP fee.

Signed: _____

Applicant or Authorized Agent

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:
____1.	Application incomplete	_____
✓ 2.	Application complete. Include any applicable requested waivers, fees paid, routing sheet returned	3.7.14
____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:	

GOODWILL – HUDSON
TAX MAP 222; LOT 41
KNA Project No. 13-1216
KNA PROJECT NO. 13-1216-2

KNA KEACH-NORDSTROM ASSOCIATES, INC.

"B"

March 4, 2014

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

Subject: **Traffic Impact Analysis**
Goodwill – Hudson: Tax Map 222; Lot 41
KNA Project No. 13-1216-2

Dear Mr. Cashell:

As you are aware, Goodwill Industries of Northern New England is preparing plans to retrofit the existing Stop & Shop Supermarket site (now vacant) with a Goodwill retail sales and shipping/receiving center. The purpose of this brief Traffic Impact Analysis is to illustrate the fact that the traffic generated by previous use of the site far exceeds that from the proposed Goodwill facility. In order to compare traffic generated from the two uses, we relied upon information presented within the 8th Edition *Trip Generation,* published by the Institute of Transportation Engineers. Within this document, trip generation rates are presented for a wide variety of "typical" uses. To prepare traffic estimates for the uses, we relied upon rates within Land Use Code 850 (Supermarkets), Land Use Code 820 (Shopping Centers), and Land Use Code 110 (General Light Industrial).

The previous supermarket use and the proposed retail use are common land uses easy to ascertain within the ITE manual. However, the processing, shipping and receiving uses associated with the proposed Goodwill is a bit more difficult to fit within the listed land use codes. General Light Industrial is described to "have an emphasis on activities other than manufacturing and typically have minimal office space." This is in keeping with the description of the "back room" use described by the applicant, which includes sorting, grading, and preparing product to be sold in the retail store. The sorting process will result in some product being discarded. Discarded product is sorted by type and hauled away. The back room is not a warehouse storage facility, rather, it operates with a continuous stream of product flow. According to the applicant, this facility is anticipated to see eight trips per day from large tractor trailer delivery trucks and waste recyclers, above and beyond the passenger vehicle trips estimated below.

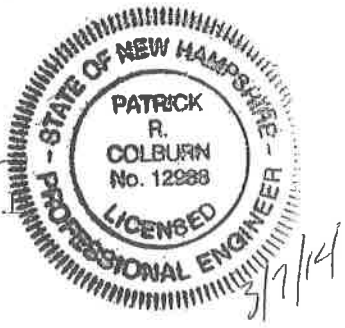
A comparison of the existing supermarket trip generation versus the proposed Goodwill trip generation is presented in the table below.

			Avg. Trips Per 1,000 sf GFA			Total Trips		
	Land Use Code	Building Area (square feet)	AM Peak	PM Peak	Saturday Mid-Day	AM Peak	PM Peak	Saturday Mid-Day
Stop & Shop	850 (Supermarket)	61,200	3.59	10.50	10.85	219.71	642.60	664.02
Goodwill	820 (Shopping Center)	26,497	N/A	3.73	4.89	N/A	98.83	129.57
	110 (General Light Industrial)	36083	0.92	0.97	0.14	33.20	35.00	5.05
	Goodwill Totals		0.92	4.70	5.03	33.20	133.83	134.62

As the table above illustrates, the anticipated vehicle trips to and from the proposed Goodwill facility will be just a fraction of the trips resulting from the previous supermarket use. The AM peak hour is not a concern at all, given the stores hours of operation. The only traffic to the site during the AM peak hour will be employee and truck traffic, which is limited and not anticipated to have any adverse impacts on existing traffic flow. The PM peak hour traffic and the Saturday mid-day peak hour traffic for the proposed use is just 20% of that of the previous use.

We trust the above information is self-explanatory and in keeping with your requirement for a traffic analysis. Should you have any questions or require further information, please do not hesitate to contact this office.

Respectfully,



Patrick Colburn, P.E.
Project Manager

Owner Affidavit

I, the undersigned, owner of the property referenced as Tax Map 222, Lot 41, located in Hudson, New Hampshire, hereby verify that I have authorized Keach-Nordstrom Associates Inc., to submit on my behalf, a Non-Residential Site Plan Application to the Hudson Planning Board, and all applicable state and local permit applications. Additionally, I authorize Keach-Nordstrom Associates Inc., to aid in the representation of these applications throughout the approval process.

Signature of Owner: Manuel D. Sousa

Address of Owner: 46 Lowell Road
Hudson, NH 03051

Date: 3/7/2014

KNA KEACH-NORDSTROM ASSOCIATES, INC.

Goodwill Industries of Northern New England
Hudson Facility

Project Narrative

The proposed project entails converting the existing Stop & Shop supermarket facility into a Goodwill retail sales and shipping/receiving facility. The property is located at 9 Wason Road, at the corner of Lowell Road and Wason Road. The Goodwill – Hudson facility will consist of four main elements. There will be a retail store with an attended donation center on the far west end of the building. Next to the retail store will be a retail outlet store, where irregular or "B" quality products are sold for a discount. The majority of the building space will be occupied by the "back room" where processing, shipping and receiving will take place. Back room activities include sorting, grading, and preparing product to be sold in both the retail and the retail outlet stores. The sorting process will include deeming some product to be discarded. Discarded product is sorted by type, and hauled away by an outside contractor. The back room is a continuous stream of product flow. Products are not stored in this facility. Traditional shipping and receiving activities will take place at this facility. Goods arrive for the retail stores, and goods are returned to the Goodwill Warehouse facility in Gorham, Maine.

The existing site includes parking accommodations for a large grocery store, far exceeding the parking demand for the proposed use. The site plan amendment entails limited construction in two locations on the existing property. The first location is right in front of the building, where the applicants propose to remove an area of existing pavement, curbing, and associated site appurtenances, and reconfigure the area to accommodate daily deliveries to and from the site. The parking in this area is greatly reduced, leading to a significant increase in internal green space. Work in front of the building includes construction of a building addition, totaling 1,380 square feet, to house four additional loading dock bays. Along the westerly edge of the building, the applicants propose installation of a new entrance, to accommodate the attended donation center. Work along the west side of the building entails removal of existing pavement and curbing, making way for an extended canopy over a concrete pad. Visitors wishing to donate goods for sale will stop under the canopy and unload their goods into the facility for processing. Traffic is restricted to one-way in this location to accommodate two vehicles under the canopy at one time.

The proposed use is permitted within the Business Zone, pursuant to a Zoning Determination issued by the Hudson Zoning Administrator. The applicants believe it is an opportune site to retrofit to meet their needs, and are excited to move Goodwill into Hudson.

10 Commerce Park North, Suite 3B Bedford, NH 03110 Phone (603) 627-2881 Fax (603) 627-2915

KNA KEACH-NORDSTROM ASSOCIATES, INC.

"C"

March 3, 2014

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

Subject: **Stormwater Management Analysis**
Goodwill – Hudson; Tax Map 222; Lot 41
KNA Project No. 13-1216-2

Dear Mr. Cashell:

I am writing this letter in place of a formal Stormwater Management Report due to the limited nature of the proposed site plan amendment and its negligible impact on the existing stormwater treatment and mitigation system on the subject site. As you are aware, the proposed project entails converting the existing Stop & Shop Supermarket facility into a Goodwill retail outlet and processing center. The existing structure will be divided into three separate rooms. Customers will shop within either the general retail store, or the outlet retail store. Together, these areas occupy 26,497 square feet of the existing structure. The remaining building area (34,703 square feet), along with a small proposed addition, will be utilized for warehouse storage and processing space.

The existing supermarket site includes 323 parking spaces and three loading spaces. The loading spaces provide access to three loading docks situated at the southeast corner of the existing building. The proposed facility requires only 193 parking spaces, due to the greatly reduced retail space. The proposed building addition (30'x65') will accommodate four additional loading docks. Due to the reduced parking demand, the proposed site plan adds considerable internal green space to the existing site, thereby benefiting the existing stormwater treatment and mitigation systems. Presented in the paragraphs that follow are specific details about the proposed site plan amendments that support this letter report's conclusion.

The existing stormwater management system onsite consists of both above ground and subsurface structures. A portion of the existing parking lot is graded to drain toward two double grate catch basins (CB#3433 and CB#3672), which outlet into an above ground sediment forebay and detention pond. The rest of the property drains to a series of other double grate and single grate catch basins, which all drain via closed pipe into a large subsurface detention pond located northwest of the building beneath existing parking spaces. Discharge from the above ground pond is directed via closed pipe into the subsurface pond. All of the onsite stormwater, following treatment and mitigation, is discharged into the municipal separate storm sewer system (MS4) under Lowell Road. Stormwater treatment is achieved above ground in the sediment forebay and detention pond, and subsurface within two Vortecnics hydrodynamic separators, all prior to discharge within the closed pipe subsurface pond.

Attached under this cover are two Figures which depict the pre-construction and post-construction sub delineation of affected drainage areas. In the pre-construction scenario, stormwater within the limits of work is directed either toward existing CB#3176 or CB#3085. During the design of proposed site improvements, care was taken to ensure that major drainage patterns within the limits of work were maintained. To the extent practicable, this is the case. You will note within subarea 1S that a large area of pavement is removed and replaced with landscaped green area. The area of 1S is slightly reduced in the post-construction scenario, with approximately 975 square feet of new roof area and approximately 4,000 square feet of new grass area directed toward existing CB#3433, outside the view of the attached Drainage Area Plans. The area of 1S is further reduced by approximately 2,000 square feet, along with 3,400 square feet reduced from area 2S due to the construction of a trench drain along and parallel to the proposed building addition. The area removed from 1S and 2S creates subarea 3S, which is connected to existing closed drainage running along and parallel to the front of the existing building. There is no doubt that stormwater flow directed toward CB#3176 and CB#3085 is reduced in the post-construction scenario. The result, however, is increased area contributing to CB#3433 and to the closed drainage system along and parallel to the front of the existing structure. The increase to the closed system in front of the existing building is greatly offset by removal of impervious surface and installation of new landscape area in its place along the westerly end of the building where additional site improvements are proposed. The increase in contributing area in either direction is very small and is not expected to cause any adverse impacts to the downstream treatment and mitigation systems.

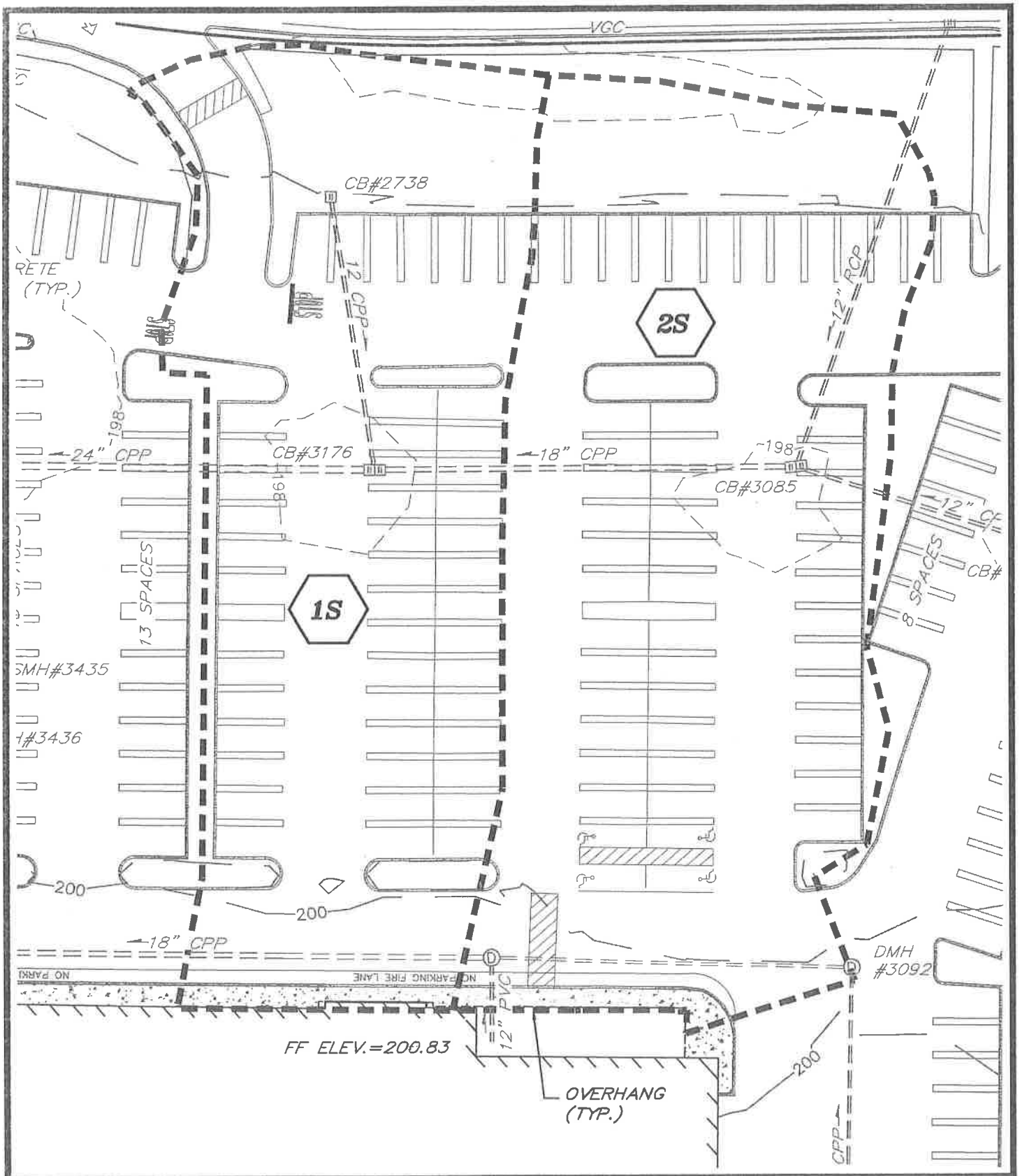
Understanding that the stormwater for the entire property all flows to the same subsurface pond and further into the MS4 makes understanding the impact of the proposed site improvements upon said system much easier. Overall, the proposed site improvements reduce the area of impervious surface onsite, and therefore will cause an overall decrease in the stormwater discharged offsite. The acreage and composition of the individual subareas onsite will change slightly. The resulting changes in stormwater flows to the individual catch basins, drain manholes, and treatment devices will not be measureable.

I trust the content of this brief letter report will serve to address the requirements for stormwater analysis associated with the subject site plan amendment. Should you have any questions or require further information, please do not hesitate to contact our office.

Respectfully,

STATE OF NEW HAMPSHIRE
PATRICK R. COLBURN No. 12988
LICENSED PROFESSIONAL ENGINEER

Patrick Colburn, P.E.
Project Manager

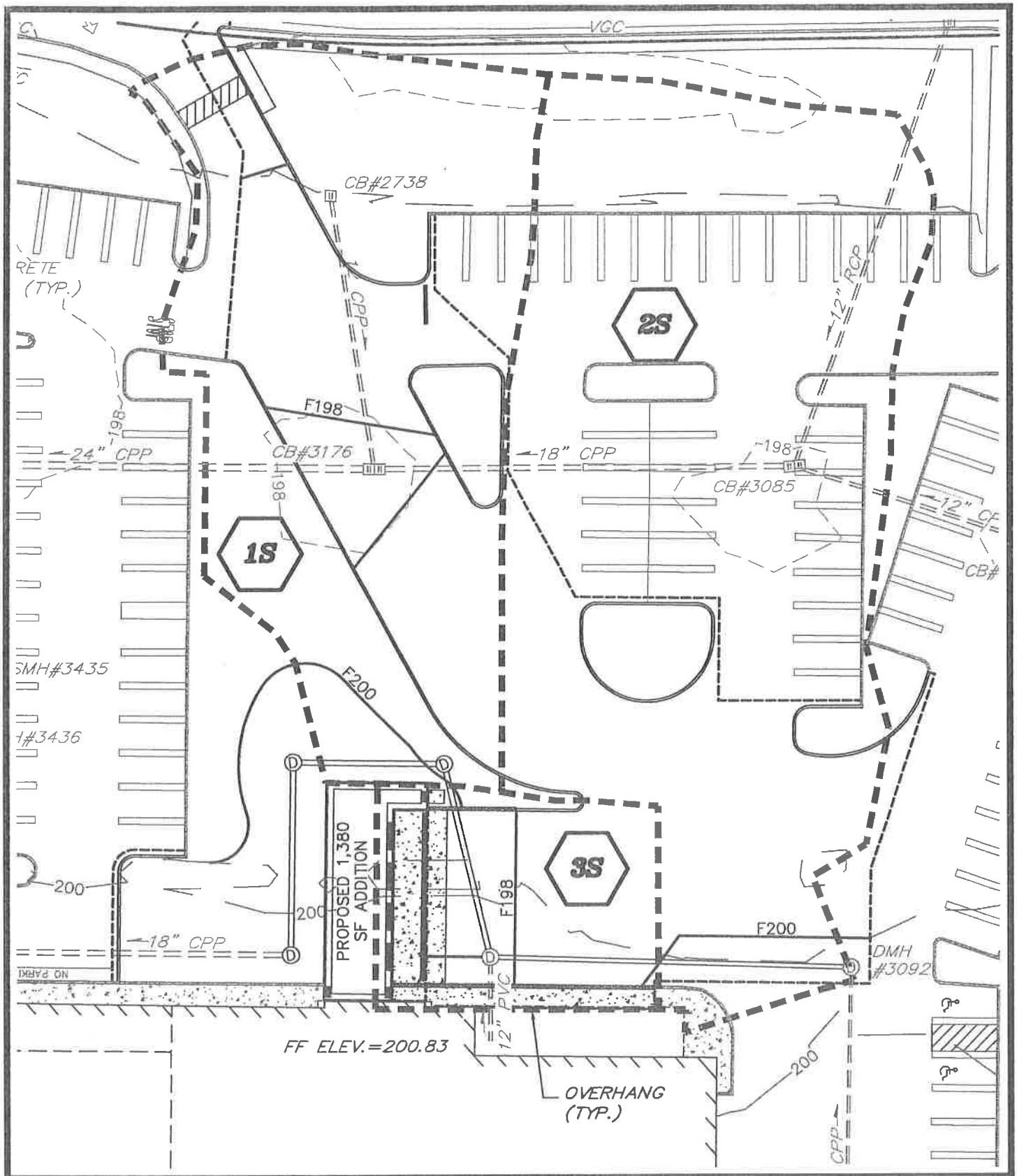


KEACH–NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110
Phone (603) 627-2881

TITLE: PRE-CONSTRUCTION DRAINAGE AREAS EXHIBIT PLAN
GOODWILL - HUDSON
MAP 222; LOT 41 - LOWELL ROAD AND WASON ROAD - HUDSON, NH

DRAWN BY: PRC DATE: 03/04/2014 JOB. NO. 13-1216-2

CHECKED BY: PRC SCALE: 1" = 40' FIGURE 1



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

TITLE: POST-CONSTRUCTION DRAINAGE AREAS EXHIBIT PLAN
GOODWILL - HUDSON
MAP 222; LOT 41 - LOWELL ROAD AND WASON ROAD - HUDSON, NH

DRAWN BY: PRC DATE: 03/04/2014 JOB. NO.13-1216-2

CHECKED BY: PRC SCALE: 1" = 40' FIGURE 2

HUDSON MAR 07 2014 COMMUNITY DEVELOPMENT

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

Date of Application: March 06, 2014 Tax Map # 222 Lot # 41

Name of Project: Goodwill-Hudson

Zoning District: B-Business (For Town Use) General SP# 03-14 (For Town Use)

ZBA Action: N/A

PROPERTY OWNER:	DEVELOPER:/APPLICANT
Name: Manuel D. Sousa Et. Al.	Goodwill Industries of Northern New England
Address: 46 Lowell Road	75 Washington Avenue
Address: Hudson, NH 03051	Portland, ME 04101
Telephone # 603-880-7799	207-774-6323
Fax # N/A	N/A
Email: N/A	mvjsweeney@gmail.com

PROJECT ENGINEER	SURVEYOR
Name: Keach-Nordstrom Assoc., Inc.	Keach-Nordstrom Assoc., Inc.
Address: 10 Commerce Park No., Unit 3	10 Commerce Park No., Unit 3
Address: Bedford, NH 03110	Bedford, NH 03110
Telephone # 603-627-2881	603-627-2881
Fax # 603-627-2915	603-627-2915
Email: abasso@keachnordstrom.com	abasso@keachnordstrom.com

PURPOSE OF PLAN:

To convert the existing Stop & Shop Supermarket facility into a Goodwill Retail Store and shipping/receiving center.

For Town Use

Plan Routing Date: 3-12-14 Sub/Site Date: _____

✓ I have no comments _____ I have comments (attach to form)

MM (Initials) Title: Z.A. Date: _____

DEPT: ✓ Zoning _____ Engineering _____ Assessor _____ Police _____ Fire _____ Planning _____ Consultant _____ Highway Department

Fees Paid: _____

TOWN OF HUDSON

COMMUNITY DEVELOPMENT DEPARTMENT

14-04

ZONING DETERMINATION

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

HUDSON
MAR 07 2014
COMMUNITY DEVELOPMENT

February 21, 2014

Tony Basso
Keach-Nordstrom Associates, Inc.
10 Commerce Park North, Suite 3B
Bedford, NH 03110

Re: 9 Wason Road – (Map 222, Lot 041) Proposed Goodwill Retail Store for Hudson

Dear Tony:

After the site tour of Goodwill Industries Retail Operation, I now understand the total process. The operation proposed for the vacant Stop and Shop Store by Goodwill would be no different than what was originally there. There would be the retail store, the retail outlet store, the processing section, receiving and shipping departments. This would be an excellent use for this site.

This Zoning Determination may be appealed within thirty (30) days. If you have any further questions, please contact me at 886-6008.

Sincerely,

COMMUNITY DEVELOPMENT DEPARTMENT

William Oleksak

William Oleksak
Zoning Administrator

cc: Zoning Board of Adjustment

HUDSON MAR 07 2014 COMMUNITY DEVELOPMENT

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

Date of Application: March 06, 2014 Tax Map # 222 Lot # 41

Name of Project: Goodwill-Hudson

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ZBA Action: N/A

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Address: 46 Lowell Road	75 Washington Avenue
Address: Hudson, NH 03051	Portland, ME 04101
Telephone # 603-880-7799	207-774-6323
Fax # N/A	N/A
Email: N/A	mvjsweeney@gmail.com

PROJECT ENGINEER	SURVEYOR
Name: Keach-Nordstrom Assoc., Inc.	Keach-Nordstrom Assoc., Inc.
Address: 10 Commerce Park No., Unit 3	10 Commerce Park No., Unit 3
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Email: abasso@keachnordstrom.com	abasso@keachnordstrom.com

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For Town Use

Plan Routing Date: 3-12-14 Sub/Site Date: _____

✓ I have no comments _____ I have comments (attach to form)

JoB (Initials) Title: Deputy Fire Chief Date: 3/17/2014

DEPT:

_____ Zoning _____ Engineering _____ Assessor ____ Police ✓ Fire ____ Planning

_____ Consultant _____ Highway Department

Fees Paid: _____

RECEIVED MAR 12 2014 BY: [signature]

HUDSON
MAR 07 2014
COMMUNITY DEVELOPMENT

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

Date of Application: March 06, 2014 Tax Map # 222 Lot # 41

Name of Project: Goodwill-Hudson

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ZBA Action: N/A

PROPERTY OWNER:	DEVELOPER:/APPLICANT
Name: Manuel D. Sousa Et. Al.	Goodwill Industries of Northern New England
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Email: abasso@keachnordstrom.com	abasso@keachnordstrom.com

PURPOSE OF PLAN:

To convert the existing Stop & Shop Supermarket facility into a Goodwill Retail Store and shipping/receiving center.

For Town Use

Plan Routing Date: 3-12-14 Sub/Site Date: _____

X I have no comments _____ I have comments (attach to form)

_____ Title: Asst. Assessor Date: 3-12-14
(Initials)

DEPT:
_____ Zoning _____ Engineering ✓ Assessor _____ Police _____ Fire _____ Planning
_____ Consultant _____ Highway Department

Fees Paid: _____

E

April 3, 2014

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

Re: Town of Hudson Planning Board Review
Goodwill (9 Wason Road)
Tax Map 222, Lot 41, PO #1350-832
CLD Reference No. 03-0249.1350

Dear Mr. Cashell:

CLD Consulting Engineers, Inc. (CLD) has reviewed the first submission of the materials received on March 24, 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 note that several items could not be verified by CLD and require action by the Town.

The project consists of converting the existing Stop and Shop Supermarket facility into a Goodwill Retail Center, a 1,380-square-foot shipping and receiving loading dock bays addition with associated site improvements on the previously developed site. The site is currently serviced by existing Municipal water and sewer.

The following items are noted:

1. **Site Plan Review Codes**
   a. Hudson Regulations (HR) 275-8.B. (17) The applicant has shown one temporary benchmark on the plan set. Reference to a USGS benchmark was not provided. The applicant has noted the horizontal datum as Magnetic 2008 and the vertical datum as NGVD29.
   b. HR 275-9.A. See comments below.
   c. HR 275-9.B. 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.
   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. Copies of deeds or easements were not received for review. The applicant has shown several existing easements on the plans including an existing sewer easement, an existing "100' Buffer" easement, an existing drainage easement and an existing "R.O.W." easement.

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

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

a. HR 275-9.B. The applicant has provided a Traffic Impact Analysis Letter (TIAL) dated March 4, 2014. The TIAL concludes that the traffic generation from the previous supermarket use far exceeds what the expected generation from the proposed Goodwill use will be. While we may not necessarily agree that the ITE land use codes used in the analysis are representative of the proposed uses, intuitively, the differences in total trips are likely of a similar order-of-magnitude to the information presented. As such, we concur with that finding of the TIAL. No further CLD comment.

b. HR 193-10.E. We were unable to find sight distance information on the plan set for the driveways.

c. The applicant has noted that the angle of the existing right turn in 'slip' ramp is being altered to facilitate truck traffic to the new loading area on the east side of the building. This will likely encourage higher entry speeds for all traffic, including trucks. The applicant states in the TIAL that only eight tractor trailer trips per day are expected to enter and exit the site on a daily basis. Given that the passenger car traffic will far exceed the amount of truck traffic, the applicant should reconsider altering this entry angle to accommodate only eight entering trucks. The previous supermarket use likely had a comparable amount, if not more, of daily truck traffic yet these vehicles used the main entry drive to access their loading area.

d. It is unclear what the intended traffic pattern is for the new truck entry drive. A 40-foot-wide area is provided with a 26-foot lane and a 14-foot lane separated by a solid white line. This solid line is aligned with the edge of the travel way from the slip ramp, which implies it is an edge line. In that case, what is the proposed use of the 14-foot lane? Is this section intended for 2-way traffic?

e. All Stop bars, words and symbols should be repainted. This includes the Stop bars/symbols on either side of the slip ramp drive, the stop condition at the east end of the site near the exit, as well as the lane markings at the main exit drive.

f. Two 'Do Not Enter' signs should be provided at the end of the slip ramp facing the parking field so that vehicles do not try to use this ramp as an exit.

g. The proposed Directory sign is providing a lot of information right at the decision point for the driver at the end of the slip ramp. A detail should be provided in the plans

NEW HAMPSHIRE VERMONT MAINE

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showing the size of the sign as well as proposed lettering, should the truck lane be approved as currently shown.

h. The EB Stop sign (and Stop bar) at the slip ramp is positioned so as to not obscure the visibility of the proposed directory sign. However, it should be noted that if a car is stopped there, they could interfere with the circulation within the adjacent parking aisle.

i. A 'No Left Turn' sign should be considered on Wason Road facing WB traffic near the slip ramp.

j. The applicant should clarify as to why the crosswalk from the handicapped-accessible parking spaces at the front of the building is aligned at an angle. We are unable to tell if the intent is to match to an existing curb ramp. We strongly recommend that the crosswalk be provided at an angle to give the shortest crossing path.

k. The applicant should clarify the existing and proposed grading schematic/spot grades at the westerly drive to be reconstructed.

l. The applicant should confirm that the existing guardrail is in satisfactory condition, approximately located and is adequately protective based upon 2014 standards.

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

a. The applicant has not shown how electric or telephone services are connected to the building, but has shown the electric meter on the building.

b. Although we believe that the proposed use is less intensive than the former use, we did not find proposed water or sewer usage calculations in the packages received for review.

c. The applicant should demonstrate that appropriate vertical separation exists between the existing water and sewer crossings.

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

a. HR 275-9.A. (1) and (4) and HR 290-4.A. (10) The applicant has not supplied stormwater engineering calculations for relevant design storms as required by the Regulations. We suggest that the applicant request waivers from all appropriate Stormwater Regulations. The applicant's Stormwater Management Analysis utilizes the concept of "reduce impervious and increase green-space" but according to Town of Hudson Regulations, drainage calculations are required to illustrate, "all drainage shall be designed to achieve a zero increase in runoff for both peak and volume." Since the applicant has indicated that the pond adjacent to Wason Road will receive some additional area, we do recommend that the applicant provide a basic calculation demonstrating that water levels in the pond will not increase and that additional erosion protection (e.g. riprap) is not necessary.

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b. HR 290-4.C. (1) and (2) (m) The applicant should further analyze the need for additional erosion control BMPs including, but not limited to, a construction entrance and protective measures for the southwest corner of the site. The operation and maintenance schedule of all proposed BMPs should also be provided within the submission.

c. HR 290-5B. (1) (u) and (v) The applicant has shown a very small snow storage area on an interior landscaped island and has noted that excess snow will be removed from the site. We suggest that the note be expanded to emphasize that snow will not be stored in the wetlands buffer or where it will block sight distance.

5. Erosion Control/Wetland Impacts

- HR 290-5.B. (1) (m) The applicant should show a temporary stockpile area and detail for pavement to be removed.

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

- HR 275-8.B.(31)(d) The applicant has met (exceeded) the tree requirement. The applicant has noted that the existing shrubs are covered by snow. We suggest that a note be added to the plan indicating a commitment from the applicant to provide a definitive number of shrubs through either all existing or to be supplemented if necessary.

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

- Additional local permitting may be required.

8. Other

a. HR 275-8.B. (35) The applicant should expand the note regarding American with Disabilities Act (ADA) compliance to include the date of the Regulations used and remove the limitation that the compliance evaluation is solely limited to dimension and grade. An ADA sidewalk ramp detail should be provided for the sidewalk modification at the westerly entrance driveway. Lastly, the applicant should provide additional detail for the westerly building entrance, showing clearly the intent or not for a flush entrance.

b. A lighting plan was not provided. Two light poles are proposed to be relocated. No lighting details were provided.

c. The applicant should provide additional detail for the proposed cast-in-place retaining walls to be designed by others. At a minimum, top and bottom of wall elevations should be more clearly labeled, and the intent or not to have "behind the wall" drainage should be shown or labeled.

Please feel free to call if you have any questions.

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

NEW HAMPSHIRE VERMONT MAINE

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CONSULTING ENGINEERS
540 Commercial Street Manchester, NH 03101
(603) 668-8223 • Fax: (603) 668-8802
cld@cldengineers.com • www.cldengineers.com
New Hampshire • Vermont • Maine

TO: File

FROM: Kelsey M. Gagnon KMG

DATE: April 3, 2014

RE: Town of Hudson Planning Board Review
Goodwill (9 Wason Road)
Tax Map 222, Lot 41, PO #1350-832
CLD Reference No. 03-0249.1350

The following list itemizes the documents reviewed related to the current Goodwill Plan Review comments.

- Various emails between Town of Hudson and CLD, between March18 and March 25, 2014.
- Letter of Transmittal from Keach-Nordstrom Associates, Inc., dated and received March 25, 2014, including the following:
  1. Copy of *Preliminary and Final Site Plan Application for Plan Review*, dated March 6, 2014.
  2. Copy of *Owner Affidavit*, dated March 7, 2014.
  3. Copy of *Zoning Determination Letter*, dated February 21, 2014.
  4. Stormwater Management Analysis letter dated March 3, 2014, including Figures 1 and 2.
  5. Traffic Impact Analysis letter, dated March 4, 2014.
- Package from the Town of Hudson, dated March 7, 2014, received March 24, 2014 including:
  1. Copy of *Site Plan, Amended Site Plan, 9 Wason Road, Hudson, New Hampshire* Plan Set, prepared by Keach-Nordstrom Associates, Inc. dated February 5, 2014, unless otherwise noted, with no revisions noted, including the following:
     a. Cover Sheet.
     b. *Master Site Plan*, Sheet 1 of 10.
     c. *Existing Conditions Plan*, Sheet 2 of 10.
     d. *Removals/Demolition Plan*, Sheet 3 of 10.
     e. *Non-Residential Site Layout Plan*, Sheet 4 of 10.
     f. *Grading, Drainage and Erosion Control Plan*, Sheet 5 of 10.
     g. *Utility Plan*, Sheet 6 of 10.
     h. *Landscape Plan*, Sheet 7 of 10.
     i. *Construction Details*, Sheets 8 through 10 of 10.
  2. Copy of *Project Narrative*, not dated.
  3. Copy of Preliminary and Final Site Plan Application Cover Sheet, dated March 6, 2014.

KMG:jt

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

APPLICATION FOR SITE PLAN REVIEW
TOWN OF HUDSON, NEW HAMPSHIRE

Goodwill, 9 Watson Road
Town of Hudson
CLD Reference No. 03-0249.1350
Reviewed April 3, 2014

Thirty (30) days prior to Planning Board Meeting, a complete site plan 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	
_____	a) 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 A.M. Tuesday the week prior to the scheduled public hearing/conceptual review date.	_____	
_____	b) A Site Plan narrative, describing the purpose, locations, long range plans, impacts on traffic, schools, and utilities	CLD/KMG	b) Traffic/School/Utility impacts not noted in narrative.
_____	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 surrounding area	CLD/KMG	
_____	e) Plan date by day/month/year	_____	e) Plan date by month/day/year.
_____	f) Revision block inscribed on the plan	CLD/KMG	
_____	g) Planning Board approval block inscribed on the plan	_____	g) Language does not exactly match Regulation. Size doesn't match (Regulation states 2"x6"; plan shows 2"x5.5")
_____	h) Title of project inscribed on the plan	CLD/KMG	
_____	i) Names and addresses of property owners and their signatures inscribed on the plan	CLD/KMG	
_____	j) North point inscribed on the plan	CLD/KMG	
_____	k) Property lines: exact locations and dimensions	CLD/KMG	
_____	l) Square feet and acreage of site	CLD/KMG	
_____	m) Square feet of each building (existing & proposed)	CLD/KMG	
_____	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	_____	n) Abutters' names and addresses are shown on plan.

Applicant Initials		Staff Initials
_____ 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	CLD/KMG
_____ p)	Locations of existing and proposed permanent monuments and bench marks within 200 feet of the development tract	CLD/KMG
_____ q)	Pertinent highway projects HR 275-8.B. (23)	
_____ r)	Assessor's Map and Lot number(s)	CLD/KMG
_____ 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	CLD/KMG
_____ t)	Delineate zoning district on the plan	CLD/KMG
_____ u)	Stormwater drainage plan	CLD/KMG
_____ v)	Topographical elevations at 2-foot intervals contours: existing and proposed	CLD/KMG
_____ w)	Utilities: existing and proposed	CLD/KMG
_____ x)	Parking: existing and proposed	CLD/KMG
_____ y)	Parking space: length and width	CLD/KMG
_____ z)	Aisle width/maneuvering space	CLD/KMG
_____ aa)	Landscaping: existing and proposed	CLD/KMG
_____ ab)	Building and wetland setback lines	CLD/KMG
_____ ac)	Curb cuts	CLD/KMG
_____ ad)	Rights of way: existing and proposed	CLD/KMG
_____ ae)	Sidewalks: existing and proposed	CLD/KMG
_____ af)	Exterior lighting plan	CLD/KMG
_____ ag)	Sign locations: size and design	CLD/KMG
_____ ah)	Water mains and sewerage lines	CLD/KMG
_____ ai)	Location of dumpsters on concrete pads	CLD/KMG
_____ aj)	All notes from plats	CLD/KMG

p) One temporary benchmark is shown on the plans.

LOWELL RD INTERSECTION IS KNOWN BY APPLICANT. THAT PROJECT DOES NOT APPLY TO THIS PROJECT

q) No highway projects noted.

aa) Applicant noted on the plan that existing shrub totals are not known due to snow cover. 65 new shrubs proposed.

ad) No change from existing.

af) Relocate 2 poles. No details provided.

ag) "Goodwill Retail Center" sign detail provided. Proposed to be installed on existing store sign structure at intersection.

ai) No dumpsters proposed, discarded items to be hauled away by contractor.

Applicant Initials		Staff Initials	
_____	ak) Buffer as required by site plan regulations	EXISTING	ak) Pavement setback only 20 feet at southwest corner of site and just under 35 feet at northwest corner of site (existing).
_____	al) Green and open space requirements met with percentages of both types of spaces inscribed on the plan.	CLD/KMG	
_____	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 performed by a State of New Hampshire certified Soil Scientist, who shall affix his/her stamp and signature shall be inscribed on the plan.	N/A	am) Regulation was repealed in 2010. Soil types indicated.
_____	an) Wetlands (and poorly-drained and very poorly-drained soils, 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.	N/A	an) Adjacent wetlands are shown on the plan; however, a New Hampshire certified wetland or soil scientist has not affixed his stamp and signature to the plan.
_____	ao) "Valid for one year after approval" statement inscribed on the plan	CLD/KMG	
_____	ap) Loading bays/docks	CLD/KMG	ap) Height not provided for canopy above loading spaces.
_____	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	CLD/KMG	
_____	au) Photographs, electronic/digital display or video of site and area	CLD/KMG	
_____	av) Attach one (1) copy of the building elevations	CLD/KMG W	aw) Not received, waiver requested.
_____	aw) Fiscal impact study		
_____	ax) Traffic study	CLD/KMG W	ay) Not received, waiver requested.
_____	ay) Noise study		

Applicant Initials		Staff Initials	
_____ az)	Copies of any proposed or existing easements, covenants, deed restrictions, right of way agreements or other similar documents		az) Easements shown on plan, no deeds or easements received for review.
_____ 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 ▪ shoreland 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.		ba) No permits received in package for review.
_____ bb)	Presentation plan (colored, with color coded bar chart)		bb) No presentation plan received, requires a Town action.
_____ bc)	Fees paid to clerk		bc) Requires Town action.
_____ 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.		bd) Requires Town action.

*Under the purview of the Planning Board any and all items may be waived. _____

Goodwill Industries of Northern N.E. Site Plan

STAFF REPORT
April 9, 2014

SITE: Lowell/Wason Road -- Map 222/Lot 041 -- SP# 03-14

ZONING: Business (B)

PURPOSE OF PLAN: to convert the existing Stop & Shop Supermarket facility into a Goodwill Retail Store and shipping/receiving center. Application Acceptance & Hearing.

PLAN UNDER REVIEW ENTITLED: Amended Site Plan Goodwill Industries Map 222 Lot 41, 9 Wason Road, Hudson, NH, prepared by Keach-Nordstrom Associates, Inc., dated: Feb. 5, 2014, no revision date, consisting of Sheets 1 - 10 and Notes 1 – 25 (said plans are attached hereto).

ATTACHMENTS:

1) Project Narrative, Site Plan Application, Checklist and Waiver Forms, including an aerial site photo date stamped Mar. 07, 2014 – Attachment "**A**".
2) Keach-Nordstrom's Traffic Impact Analysis, dated March 4, 2014 – "**B**".
3) Keach-Nordstrom's Stormwater Management Analysis, dated March 3, 2014 – "**C**".
4) Comments/Memos from Zoning Administrator, Bill Oleksak, HFD Deputy Fire Chief, John O'Brien, and Asst. Assessor, Jim Michaud - ps – **"D".**
5) CLD's Initial Comments Report, dated Apr. 3, 2014 – "**E**".

REQUESTED WAIVERS:

1. HTC 275-9(C) -- Noise Study
2. HTC 275-9(D) -- Fiscal/Environmental Impact Study

STAFF COMMENTS/OUTSTANDING ISSUES:

1. The proposed new use, as depicted in Bill Oleksak's letter, dated Feb. 21, 2014, is allowed in the B district, and although it's not a supermarket, the business activities included in the new use are very similar to that of a supermarket. That is, products are delivered, sold and refuse/unused products are removed/distributed offsite. One important difference, as described in the traffic analysis, the amount of traffic associated with the new use, as opposed to the former supermarket, is a fraction of the latter. This is not to say that Stop & Shop ever came close to generating the amount of traffic that was professionally analyzed, and the basis for paid CAP Fee and offsite improvement costs associated with the former use. NOTE: in regard to a CAP Fee involving the new proposed use, with less P.M. Peak Hr. traffic associated with the site, and the fact that the new use is projected to create far less traffic to and from the site, no CAP Fee applies.

2. In regard to the possible future widening of both Lowell Rd. and Wason Rd., please refer to the "Master Plan" Sheet 1 of 10, and you will see a 40' wide ROW area, narrowing to approx. 20', along the lot's Lowell Rd. frontage. This existing ROW area, in all likelihood, will provide sufficient width for any future Lowell Rd. widening project along the frontage of the subject site. In regard to the lot's Wason Rd frontage, a 12 ft. in-width future road widening easement already exists and will continue with this project. This easement runs along the lot's entire frontage on Wason Rd. and ties into and includes 12' of the lot's Lowell Rd. frontage.

3. In regard to the two driveway entrances on Wason Rd., the one closest to Lowell Rd. includes a transition lane on Wason Rd., and is designed for Wason Rd. eastbound ingress only. Note: there is a solid double-yellow line running down Wason Rd, in front of the subject lot, and a left-turn queuing lane on the eastbound side of Wason Rd. in front of the aforementioned ingress only driveway. As such, this particular driveway is effectively barricaded from anyone (i.e., except for the worst traffic violators and they are out there) thinking about entering the site from the westbound side of Wason Rd. In any event, and besides, there is a well designed ingress/egress driveway associated with the site, located approximately 250 ft. east of said ingress only driveway.

4. Relative to the onsite parking, loading spaces and travel lanes, the proposed reduction in the number of parking spaces will provide for enhanced landscaping, which is proposed (see Landscape Plan, Sheet 7 of 10). The proposed number of parking spaces, together with the required number of loading spaces correspond with Planning Board Site Plan regulation requirements. Please refer to Notes 7 & 8 on the Master Plan Sheet 1 of 10 and said regulations, §275-8(26)(p), (27, (28) & (29)).

   The onsite travel lanes, however, need to be amended. Specifically, the loading area, located at the southwest corner of the building. Here, the two proposed travel lanes should be designated as one-way only, and the loading area, should be widened. Also, pavement surface directional arrows should be added throughout the site, relative to providing for safer flow of onsite travel.

5. Presently, the plans do not include a typical exterior lighting plan. However, Note 14, of the "Master Plan" addresses this issue, and the "Site Layout Plan", Sheet 4 of 10, shows the existing and relocated existing exterior site lighting locations.

6. In regard to onsite signage, Sheet 8 of 10 shows a photo of the existing freestanding sign pylon, with the Goodwill sign replacing the former business. The sign's dimensions are also provided on said sheet, next to the photo. All other site and wall signs will comply with the Zoning Ordinance sign requirements, and if any variation from same is proposed, ZBA action will be required.

7. Please read through CLD's attached Initial Comments Report – "E" – for the status of additional outstanding issues.

RECOMMENDATION: Taking the abovementioned outstanding issues/comments into consideration, and that this application is ready for application acceptance, for Wednesday night's initial public hearing staff recommends:

(i) Board vote for application acceptance;
(ii) Open and conduct the public hearing;
(iii) Allow the applicant to present the project and address all of the issues involved in this application, including those cited-above and in CLD's Initial Comments Report "**E**".
(iv) Hear any pro/con public input, and

(v) Defer further review of this site plan, date specific to the April 23d or May 14th meeting.

(vi) If the board moves to approve the waivers and/or the application, staff has provided below the appropriate DRAFT MOTIONS.

APPLICATION TRACKING:

- 03/07/2014 – Site Plan application submitted;
- 04/09/2014 - Initial public hearing scheduled.

DRAFT MOTIONS:

I move to accept the Site Plan application for Goodwill Industries, 9 Wason Rd., Map 222/Lot 041.

Motion by: _____Second: _____Carried/Failed: _____.

I move to defer further review of the Goodwill Industries Site Plan application, 9 Wason Rd., Map 222/Lot 041date specific, to the May 14, 2014 meeting.

Motion by: _____Second: _____Carried/Failed: _____.

REQUESTED WAIVERS:

1. HTC 275-9(C) -- Noise Study
2. HTC 275-9(D) -- Fiscal/Environmental Impact Study

1) HTC 275-9C – Noise Study

I move to grant the requested waiver: HTC 275-9C - Noise Study - because such a study is unnecessary, taking into consideration that the majority of the commercial activities associated with the proposed use shall be conducted inside the subject building, thus reducing the noise impact upon abutting properties, which are primarily existing commercial uses, and as such, 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) HTC 275-9D – Fiscal Impact Study

I move to grant the requested waiver: HTC 275-9D - Fiscal/Environmental Impact Study - because in addition to the submitted plans and submitted application documents said study is unnecessary in order to evaluate the fiscal/environmental impact of this development, and as such, the granting of this waiver is not contrary to the spirit and intent of the Site Plan Review regulations.

Motion by: _____Second: _____Carried/Failed: _____

MOTION to APPROVE:

I move to grant approval for the Site Plan entitled: : Amended Site Plan Goodwill Industries Map 222 Lot 41, 9 Wason Road, Hudson, NH, prepared by Keach-Nordstrom Associates, Inc., dated: Feb. 5, 2014, no revision date, consisting of Sheets 1 - 10 and Notes 1 – 25 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 easements along Lowell Rd and Wason Rd. shall be favorably reviewed and recommended on by Town Counsel.

3) All improvements shown on the Plan, including Notes 1-25, shall be completed in their entirety and at the expense of the Applicant or his assigns.

4) After the issuance of the foundation permit and prior to the issuance of the framing permit, 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) 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.

6) Onsite landscaping shall be provided for in accordance with the plant and tree species specified on Sheet 7 of 10 of the Plan.

7) 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.

8) This approval shall be subject to final engineering review.

Motion by: _____Second: _____Carried/Failed: _____

KNA KEACH-NORDSTROM ASSOCIATES, INC.

"A"

Goodwill Industries of Northern New England
Hudson Facility

Project Narrative

The proposed project entails converting the existing Stop & Shop supermarket facility into a Goodwill retail sales and shipping/receiving facility. The property is located at 9 Wason Road, at the corner of Lowell Road and Wason Road. The Goodwill – Hudson facility will consist of four main elements. There will be a retail store with an attended donation center on the far west end of the building. Next to the retail store will be a retail outlet store, where irregular or "B" quality products are sold for a discount. The majority of the building space will be occupied by the "back room" where processing, shipping and receiving will take place. Back room activities include sorting, grading, and preparing product to be sold in both the retail and the retail outlet stores. The sorting process will include deeming some product to be discarded. Discarded product is sorted by type, and hauled away by an outside contractor. The back room is a continuous stream of product flow. Products are not stored in this facility. Traditional shipping and receiving activities will take place at this facility. Goods arrive for the retail stores, and goods are returned to the Goodwill Warehouse facility in Gorham, Maine.

The existing site includes parking accommodations for a large grocery store, far exceeding the parking demand for the proposed use. The site plan amendment entails limited construction in two locations on the existing property. The first location is right in front of the building, where the applicants propose to remove an area of existing pavement, curbing, and associated site appurtenances, and reconfigure the area to accommodate daily deliveries to and from the site. The parking in this area is greatly reduced, leading to a significant increase in internal green space. Work in front of the building includes construction of a building addition, totaling 1,380 square feet, to house four additional loading dock bays. Along the westerly edge of the building, the applicants propose installation of a new entrance, to accommodate the attended donation center. Work along the west side of the building entails removal of existing pavement and curbing, making way for an extended canopy over a concrete pad. Visitors wishing to donate goods for sale will stop under the canopy and unload their goods into the facility for processing. Traffic is restricted to one-way in this location to accommodate two vehicles under the canopy at one time.

The proposed use is permitted within the Business Zone, pursuant to a Zoning Determination issued by the Hudson Zoning Administrator. The applicants believe it is an opportune site to retrofit to meet their needs, and are excited to move Goodwill into Hudson.

10 Commerce Park North, Suite 3B Bedford, NH 03110 Phone (603) 627-2881 Fax (603) 627-2915

"A" Cont.

HUDSON MAR 07 2014 COMMUNITY DEVELOPMENT

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

Date of Application: March 06, 2014 Tax Map # 222 Lot # 41

Name of Project: Goodwill-Hudson

Zoning District: B-Business (For Town Use) General SP# 03-14 (For Town Use)

ZBA Action: N/A

PROPERTY OWNER:	DEVELOPER:/APPLICANT
Name: Manuel D. Sousa Et. Al.	Goodwill Industries of Northern New England
Address: 46 Lowell Road	75 Washington Avenue
Address: Hudson, NH 03051	Portland, ME 04101
Telephone # 603-880-7799	207-774-6323
Fax # N/A	N/A
Email: N/A	mvjsweeney@gmail.com

PROJECT ENGINEER	SURVEYOR
Name: Keach-Nordstrom Assoc., Inc.	Keach-Nordstrom Assoc., Inc.
Address: 10 Commerce Park No., Unit 3	10 Commerce Park No., Unit 3
Address: Bedford, NH 03110	Bedford, NH 03110
Telephone # 603-627-2881	603-627-2881
Fax # 603-627-2915	603-627-2915
Email: abasso@keachnordstrom.com	abasso@keachnordstrom.com

PURPOSE OF PLAN:

To convert the existing Stop & Shop Supermarket facility into a Goodwill Retail Store and shipping/receiving center.

For Town Use mtg.

Plan Routing Date: 3-12-14 ~~Sub/Site~~ Date: 4-9-14

_____ I have no comments _____ I have comments (attach to form)

_____ Title: _____ Date: _____
(Initials)

DEPT:
_____ Zoning _____ Engineering _____ Assessor _____ Police _____ Fire _____ Planning
_____ Consultant _____ Highway Department

Fees Paid: _____

SITE DATA SHEET

PLAN NAME: Goodwill-Hudson

PLAN TYPE: SITE PLAN

LEGAL DESCRIPTION: MAP 222 LOT 41

DATE: March 06, 2014

Location by Street	Lowell Road and Wason Road
Zoning:	B-Business
Proposed Land Use:	Retail
Existing Use:	Retail
Surrounding Land Use(s):	Residential/Retail
Number of Lots Occupied:	1
Existing Area Covered by Building:	64,406 sf
Existing Buildings to be removed:	0
Proposed Area Covered by Building:	65,786 sf
Open Space Proposed:	43.3% (39.8% existing)
Open Space Required:	35%
Total Area:	S.F.: 370.702 Acres: 8.510
Area in Wetland:	37,476 sf Area Steep Slopes: 0
Required Lot Size:	30,000 sf
Existing Frontage:	414.7' (Lowell Road) 682.29' (Wason Road)
Required Frontage:	150'

Building Setbacks:	Required*	Proposed
Front:	50'	50'
Side:	15'	15'
Rear:	15'	15'

SITE PLAN DATA SHEET
(Continued)

Flood Zone Reference: 33011CO656D Panel 656 (not in flood zone)

Width of Driveways: 20'-West 72'-East

Number of Curb Cuts: 2

Proposed Parking Spaces: 246 (10-HC)

Required Parking Spaces: 193

Basis of Required Parking (Use): 15 Space/200 sf-Retail-132.49
1 Space/600 sf-Processing-60.14

Dates/Case #/Description/Stipulations of ZBA, Conservation Commission, NH Wetlands Board Actions: N/A
(Attach stipulations on separate sheet)

Waivers Requested:	Hudson Town Code Reference	Regulation Description
	1. 275-9(C)	Noise Study
	2. 275-9(D)	Fiscal/Environmental Impact
	3.	
	4.	
	5.	
	6.	
	7.	
	8.	

(Left column for Town Use)

Impact Fees:
C.A.P Fee:

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 site plan 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
PK	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.	
PK	b)	A Site Plan narrative, describing the purpose, locations, long-range plans, impacts on traffic, schools, and utilities	
PK	c)	Plan scale at not less the one inch equals fifty feet (1" = 50')	
PK	d)	Locus plan with 1,000' minimum radius of site to surrounding area	
PK	e)	Plan date by day/month/year	
PK	f)	Revision block inscribed on the plan	
PK	g)	Planning Board approval block inscribed on the plan	
PK	h)	Title of project inscribed on the plan	
PK	i)	Names and addresses of property owners and their signatures inscribed on the plan	
PK	j)	North point inscribed on the plan	
PK	k)	Property lines: exact locations and dimensions	
PK	l)	Square feet and acreage of site	
PK	m)	Square feet of each building (existing and proposed)	
PK	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
MC	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	
MC	p) Locations of existing and proposed permanent monuments and bench marks within 200 feet of the development tract	
MC	q) Pertinent highway projects	
MC	r) Assessor's Map and Lot number(s)	
MC	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	
MC	t) Delineate zoning district on the plan	
MC	u) Storm water drainage plan	
MC	v) Topographical elevations at 2-foot intervals contours: existing and proposed	
MC	w) Utilities: existing and proposed	
MC	x) Parking: existing and proposed	
MC	y) Parking space: length and width	
MC	z) Aisle width/maneuvering space	
MC	aa) Landscaping: existing and proposed	
MC	ab) Building and wetland setback lines	
MC	ac) Curb cuts	
MC	ad) Rights of way: existing and proposed	
MC	ae) Sidewalks: existing and proposed	
N/A	af) Exterior lighting plan	
MC	ag) Sign locations: size and design	
MC	ah) Water mains and sewerage lines	
N/A	ai) Location of dumpsters on concrete pads	
MC	aj) All notes from plats	

Applicant Initials		Staff Initials
ak)	Buffer as required by site plan regulations	
al)	Green and open space requirements met with both types of spaces inscribed on the plan	
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 performed by a State of New Hampshire Certified Soil Scientist, who shall affix his/her stamp and signature shall be inscribed on the plan.	
an)	Wetlands (and poorly-drained and very poorly-drained soils, 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.	
ao)	"Valid for one year after approval" statement inscribed on the plan.	
ap)	Loading bays/docks	
aq)	State of New Hampshire engineer's stamp, signature, surveyor's stamp, and signature	
ar)	Error of closure (1 in 10,000 or better)	
as)	Drafting errors/omissions	
at)	Developer names, addresses, telephone numbers and signatures	
au)	Photographs, electronic/digital display or video of site and area	
av)	Attach one (1) copy of the building elevations	N/A EXISTING
aw)	Fiscal impact study	
ax)	Traffic study	
ay)	Noise study	

Applicant Initials		Staff Initials
AK az)	Copies of any proposed or existing easements, covenants, deed restrictions, right of way agreements or other similar documents	DC
AK ba)	Copy of applicable Town, State, Federal approval/permits to include but not limited to the following:	JC

- 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.

AK bb)	Presentation plan (colored, with color-coded bar chart)	JC
AK bc)	Fees paid to clerk	JC
AK 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.	JC

*Under the purview of the Planning Board, any and all items may be waived.

APPLICATION FOR SITE PLAN REVIEW
TOWN OF HUDSON, NEW HAMPSHIRE

I hereby apply for Site 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 Site 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 given 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 to 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/or inspections conducted on his/her (their) property in connection with this applications.

Signature of Owner: Manuel D. Sousa

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

Signature of Developer: [signature]

- 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 Code Enforcement Officer/Building Inspector must be notified within two (2) working days of any change by the individual in charge of the project.

APPLICATION IS DUE AT NOON 21 days prior to the Planning Board Meeting. (The date the Agenda is CLOSED.) Any applications received after that time will be deferred until the next available meeting.

SUBDIVISION/SITE PLAN WAIVER REQUEST FORM

Name of Subdivision/Site Plan: **Goodwill - Hudson**

Street Address: **9 Wason Road, Hudson, New Hampshire 03051**

I **Anthony Basso** hereby request that the Planning Board waive the requirements of item **HTC 275-9C** of the Subdivision/Site Plan Checklist in reference to a plan presented by **Keach-Nordstrom Associates, Inc.** (name of surveyor and engineer) dated **February 5, 2014** for property Tax Map(s) **222** and Lot(s) **41** 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. The existing supermarket use is retail in nature, and similar to the proposed use. It is not expected that the Goodwill facility will bring any increased noise pollution to the site and to the residential and retail uses surrounding it, therefore granting of the waiver is in keeping with the spirit and intent of the ordinance.

Signed: _____

Applicant or Authorized Agent

Planning Board Action:

Waiver Granted: _____

Waiver Not Granted: _____

SUBDIVISION/SITE PLAN WAIVER REQUEST FORM

Name of Subdivision/Site Plan: **Goodwill - Hudson**

Street Address: **9 Wason Road, Hudson, New Hampshire 03051**

I **Anthony Basso** hereby request that the Planning Board waive the requirements of item **HTC 275-9D** of the Subdivision/Site Plan Checklist in reference to a plan presented by **Keach-Nordstrom Associates, Inc.** (name of surveyor and engineer) dated **February 5, 2014** for property Tax Map(s) **222** and Lot(s) **41** 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 with the CAP fee that this previously paid to 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 site is currently developed and the proposed construction will only improve the Best Management Practices onsite. Fiscally, the site was previously subject to a substantial CAP fee.

Signed: _____

Applicant or Authorized Agent

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:
____1.	Application incomplete	_____
✓ 2.	Application complete. Include any applicable requested waivers, fees paid, routing sheet returned	3.7.14
____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:	

GOODWILL – HUDSON
TAX MAP 222; LOT 41
KNA Project No. 13-1216
KNA PROJECT NO. 13-1216-2

KNA KEACH-NORDSTROM ASSOCIATES, INC.

"B"

March 4, 2014

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

Subject: **Traffic Impact Analysis**
Goodwill – Hudson: Tax Map 222; Lot 41
KNA Project No. 13-1216-2

Dear Mr. Cashell:

As you are aware, Goodwill Industries of Northern New England is preparing plans to retrofit the existing Stop & Shop Supermarket site (now vacant) with a Goodwill retail sales and shipping/receiving center. The purpose of this brief Traffic Impact Analysis is to illustrate the fact that the traffic generated by previous use of the site far exceeds that from the proposed Goodwill facility. In order to compare traffic generated from the two uses, we relied upon information presented within the 8th Edition *Trip Generation,* published by the Institute of Transportation Engineers. Within this document, trip generation rates are presented for a wide variety of "typical" uses. To prepare traffic estimates for the uses, we relied upon rates within Land Use Code 850 (Supermarkets), Land Use Code 820 (Shopping Centers), and Land Use Code 110 (General Light Industrial).

The previous supermarket use and the proposed retail use are common land uses easy to ascertain within the ITE manual. However, the processing, shipping and receiving uses associated with the proposed Goodwill is a bit more difficult to fit within the listed land use codes. General Light Industrial is described to "have an emphasis on activities other than manufacturing and typically have minimal office space." This is in keeping with the description of the "back room" use described by the applicant, which includes sorting, grading, and preparing product to be sold in the retail store. The sorting process will result in some product being discarded. Discarded product is sorted by type and hauled away. The back room is not a warehouse storage facility, rather, it operates with a continuous stream of product flow. According to the applicant, this facility is anticipated to see eight trips per day from large tractor trailer delivery trucks and waste recyclers, above and beyond the passenger vehicle trips estimated below.

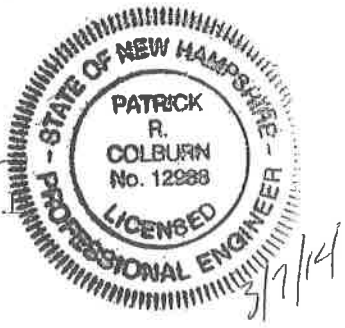
A comparison of the existing supermarket trip generation versus the proposed Goodwill trip generation is presented in the table below.

			Avg. Trips Per 1,000 sf GFA			Total Trips		
	Land Use Code	Building Area (square feet)	AM Peak	PM Peak	Saturday Mid-Day	AM Peak	PM Peak	Saturday Mid-Day
Stop & Shop	850 (Supermarket)	61,200	3.59	10.50	10.85	219.71	642.60	664.02
Goodwill	820 (Shopping Center)	26,497	N/A	3.73	4.89	N/A	98.83	129.57
	110 (General Light Industrial)	36083	0.92	0.97	0.14	33.20	35.00	5.05
	Goodwill Totals		0.92	4.70	5.03	33.20	133.83	134.62

As the table above illustrates, the anticipated vehicle trips to and from the proposed Goodwill facility will be just a fraction of the trips resulting from the previous supermarket use. The AM peak hour is not a concern at all, given the stores hours of operation. The only traffic to the site during the AM peak hour will be employee and truck traffic, which is limited and not anticipated to have any adverse impacts on existing traffic flow. The PM peak hour traffic and the Saturday mid-day peak hour traffic for the proposed use is just 20% of that of the previous use.

We trust the above information is self-explanatory and in keeping with your requirement for a traffic analysis. Should you have any questions or require further information, please do not hesitate to contact this office.

Respectfully,



Patrick Colburn, P.E.
Project Manager

Owner Affidavit

I, the undersigned, owner of the property referenced as Tax Map 222, Lot 41, located in Hudson, New Hampshire, hereby verify that I have authorized Keach-Nordstrom Associates Inc., to submit on my behalf, a Non-Residential Site Plan Application to the Hudson Planning Board, and all applicable state and local permit applications. Additionally, I authorize Keach-Nordstrom Associates Inc., to aid in the representation of these applications throughout the approval process.

Signature of Owner: Manuel D. Sousa

Address of Owner: 46 Lowell Road
Hudson, NH 03051

Date: 3/7/2014

KNA KEACH-NORDSTROM ASSOCIATES, INC.

Goodwill Industries of Northern New England
Hudson Facility

Project Narrative

The proposed project entails converting the existing Stop & Shop supermarket facility into a Goodwill retail sales and shipping/receiving facility. The property is located at 9 Wason Road, at the corner of Lowell Road and Wason Road. The Goodwill – Hudson facility will consist of four main elements. There will be a retail store with an attended donation center on the far west end of the building. Next to the retail store will be a retail outlet store, where irregular or "B" quality products are sold for a discount. The majority of the building space will be occupied by the "back room" where processing, shipping and receiving will take place. Back room activities include sorting, grading, and preparing product to be sold in both the retail and the retail outlet stores. The sorting process will include deeming some product to be discarded. Discarded product is sorted by type, and hauled away by an outside contractor. The back room is a continuous stream of product flow. Products are not stored in this facility. Traditional shipping and receiving activities will take place at this facility. Goods arrive for the retail stores, and goods are returned to the Goodwill Warehouse facility in Gorham, Maine.

The existing site includes parking accommodations for a large grocery store, far exceeding the parking demand for the proposed use. The site plan amendment entails limited construction in two locations on the existing property. The first location is right in front of the building, where the applicants propose to remove an area of existing pavement, curbing, and associated site appurtenances, and reconfigure the area to accommodate daily deliveries to and from the site. The parking in this area is greatly reduced, leading to a significant increase in internal green space. Work in front of the building includes construction of a building addition, totaling 1,380 square feet, to house four additional loading dock bays. Along the westerly edge of the building, the applicants propose installation of a new entrance, to accommodate the attended donation center. Work along the west side of the building entails removal of existing pavement and curbing, making way for an extended canopy over a concrete pad. Visitors wishing to donate goods for sale will stop under the canopy and unload their goods into the facility for processing. Traffic is restricted to one-way in this location to accommodate two vehicles under the canopy at one time.

The proposed use is permitted within the Business Zone, pursuant to a Zoning Determination issued by the Hudson Zoning Administrator. The applicants believe it is an opportune site to retrofit to meet their needs, and are excited to move Goodwill into Hudson.

10 Commerce Park North, Suite 3B Bedford, NH 03110 Phone (603) 627-2881 Fax (603) 627-2915

KNA KEACH-NORDSTROM ASSOCIATES, INC.

"C"

March 3, 2014

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

Subject: **Stormwater Management Analysis**
Goodwill – Hudson; Tax Map 222; Lot 41
KNA Project No. 13-1216-2

Dear Mr. Cashell:

I am writing this letter in place of a formal Stormwater Management Report due to the limited nature of the proposed site plan amendment and its negligible impact on the existing stormwater treatment and mitigation system on the subject site. As you are aware, the proposed project entails converting the existing Stop & Shop Supermarket facility into a Goodwill retail outlet and processing center. The existing structure will be divided into three separate rooms. Customers will shop within either the general retail store, or the outlet retail store. Together, these areas occupy 26,497 square feet of the existing structure. The remaining building area (34,703 square feet), along with a small proposed addition, will be utilized for warehouse storage and processing space.

The existing supermarket site includes 323 parking spaces and three loading spaces. The loading spaces provide access to three loading docks situated at the southeast corner of the existing building. The proposed facility requires only 193 parking spaces, due to the greatly reduced retail space. The proposed building addition (30'x65') will accommodate four additional loading docks. Due to the reduced parking demand, the proposed site plan adds considerable internal green space to the existing site, thereby benefiting the existing stormwater treatment and mitigation systems. Presented in the paragraphs that follow are specific details about the proposed site plan amendments that support this letter report's conclusion.

The existing stormwater management system onsite consists of both above ground and subsurface structures. A portion of the existing parking lot is graded to drain toward two double grate catch basins (CB#3433 and CB#3672), which outlet into an above ground sediment forebay and detention pond. The rest of the property drains to a series of other double grate and single grate catch basins, which all drain via closed pipe into a large subsurface detention pond located northwest of the building beneath existing parking spaces. Discharge from the above ground pond is directed via closed pipe into the subsurface pond. All of the onsite stormwater, following treatment and mitigation, is discharged into the municipal separate storm sewer system (MS4) under Lowell Road. Stormwater treatment is achieved above ground in the sediment forebay and detention pond, and subsurface within two Vortecnics hydrodynamic separators, all prior to discharge within the closed pipe subsurface pond.

Attached under this cover are two Figures which depict the pre-construction and post-construction sub delineation of affected drainage areas. In the pre-construction scenario, stormwater within the limits of work is directed either toward existing CB#3176 or CB#3085. During the design of proposed site improvements, care was taken to ensure that major drainage patterns within the limits of work were maintained. To the extent practicable, this is the case. You will note within subarea 1S that a large area of pavement is removed and replaced with landscaped green area. The area of 1S is slightly reduced in the post-construction scenario, with approximately 975 square feet of new roof area and approximately 4,000 square feet of new grass area directed toward existing CB#3433, outside the view of the attached Drainage Area Plans. The area of 1S is further reduced by approximately 2,000 square feet, along with 3,400 square feet reduced from area 2S due to the construction of a trench drain along and parallel to the proposed building addition. The area removed from 1S and 2S creates subarea 3S, which is connected to existing closed drainage running along and parallel to the front of the existing building. There is no doubt that stormwater flow directed toward CB#3176 and CB#3085 is reduced in the post-construction scenario. The result, however, is increased area contributing to CB#3433 and to the closed drainage system along and parallel to the front of the existing structure. The increase to the closed system in front of the existing building is greatly offset by removal of impervious surface and installation of new landscape area in its place along the westerly end of the building where additional site improvements are proposed. The increase in contributing area in either direction is very small and is not expected to cause any adverse impacts to the downstream treatment and mitigation systems.

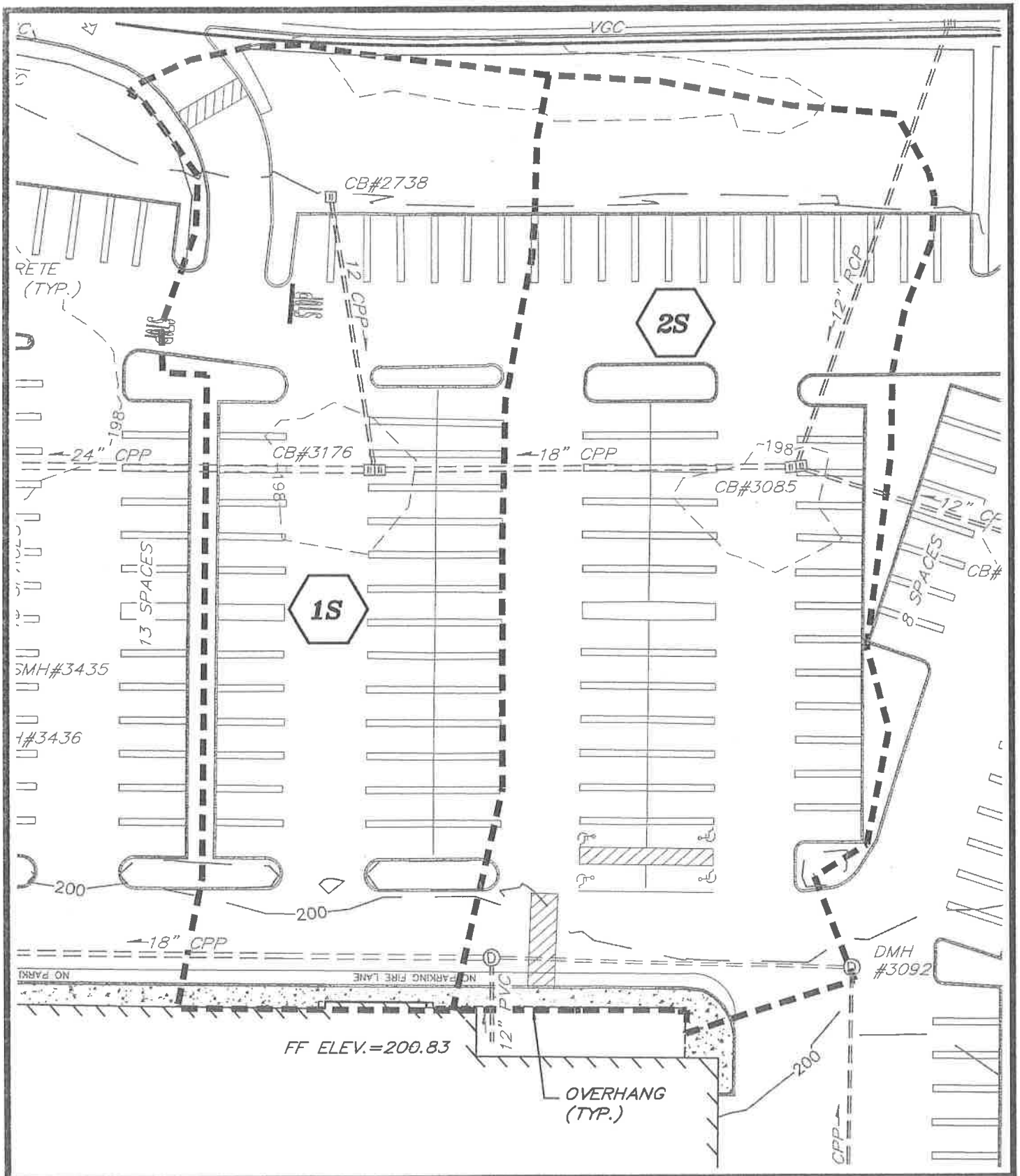
Understanding that the stormwater for the entire property all flows to the same subsurface pond and further into the MS4 makes understanding the impact of the proposed site improvements upon said system much easier. Overall, the proposed site improvements reduce the area of impervious surface onsite, and therefore will cause an overall decrease in the stormwater discharged offsite. The acreage and composition of the individual subareas onsite will change slightly. The resulting changes in stormwater flows to the individual catch basins, drain manholes, and treatment devices will not be measureable.

I trust the content of this brief letter report will serve to address the requirements for stormwater analysis associated with the subject site plan amendment. Should you have any questions or require further information, please do not hesitate to contact our office.

Respectfully,

STATE OF NEW HAMPSHIRE
PATRICK R. COLBURN No. 12988
LICENSED PROFESSIONAL ENGINEER

Patrick Colburn, P.E.
Project Manager

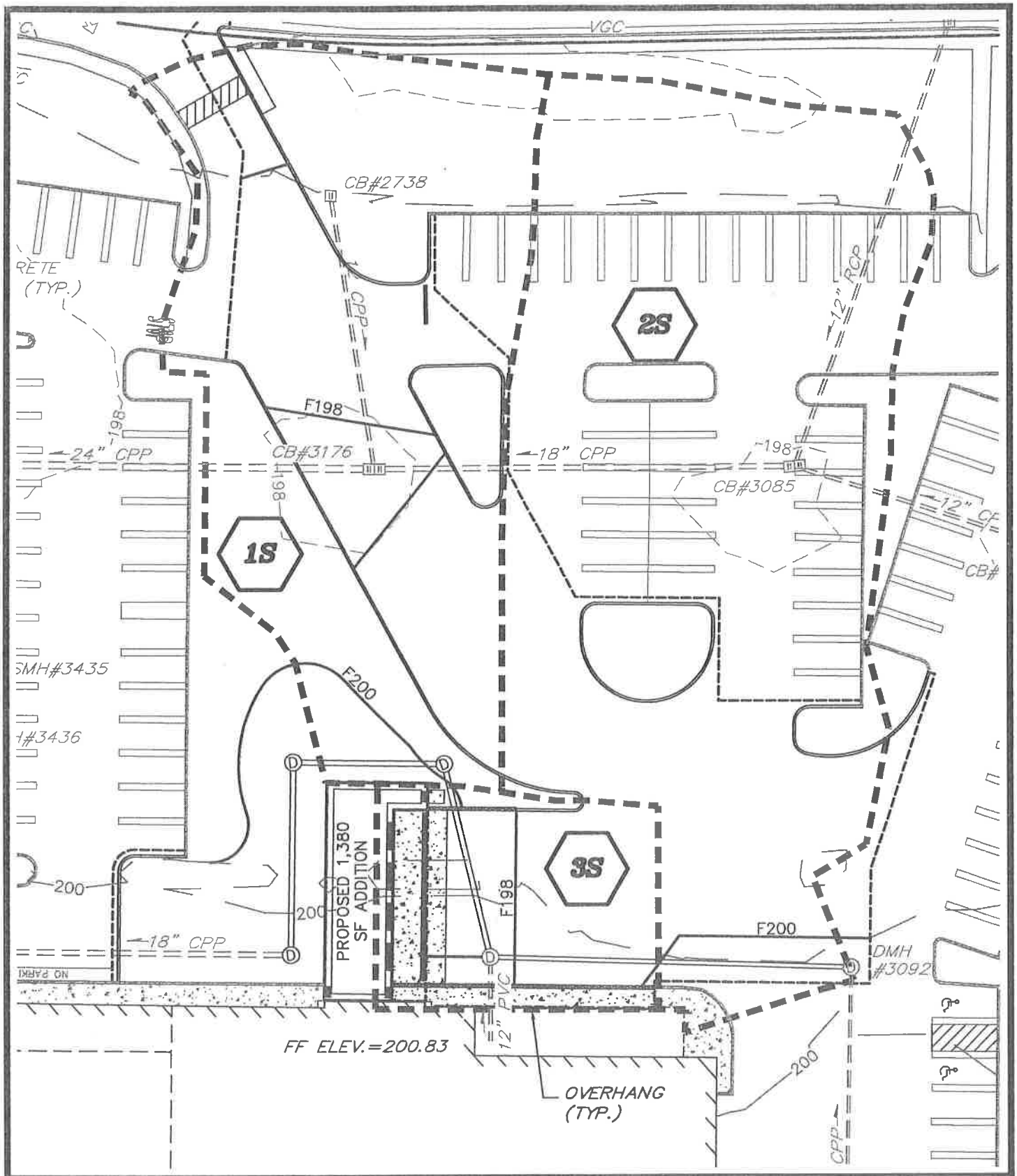


KEACH–NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110
Phone (603) 627-2881

TITLE: PRE-CONSTRUCTION DRAINAGE AREAS EXHIBIT PLAN
GOODWILL - HUDSON
MAP 222; LOT 41 - LOWELL ROAD AND WASON ROAD - HUDSON, NH

DRAWN BY: PRC DATE: 03/04/2014 JOB. NO. 13-1216-2

CHECKED BY: PRC SCALE: 1" = 40' FIGURE 1



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

TITLE: POST-CONSTRUCTION DRAINAGE AREAS EXHIBIT PLAN
GOODWILL - HUDSON
MAP 222; LOT 41 - LOWELL ROAD AND WASON ROAD - HUDSON, NH

DRAWN BY: PRC DATE: 03/04/2014 JOB. NO.13-1216-2

CHECKED BY: PRC SCALE: 1" = 40' FIGURE 2

HUDSON MAR 07 2014 COMMUNITY DEVELOPMENT

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

Date of Application: March 06, 2014 Tax Map # 222 Lot # 41

Name of Project: Goodwill-Hudson

Zoning District: B-Business (For Town Use) General SP# 03-14 (For Town Use)

ZBA Action: N/A

PROPERTY OWNER:	DEVELOPER:/APPLICANT
Name: Manuel D. Sousa Et. Al.	Goodwill Industries of Northern New England
Address: 46 Lowell Road	75 Washington Avenue
Address: Hudson, NH 03051	Portland, ME 04101
Telephone # 603-880-7799	207-774-6323
Fax # N/A	N/A
Email: N/A	mvjsweeney@gmail.com

PROJECT ENGINEER	SURVEYOR
Name: Keach-Nordstrom Assoc., Inc.	Keach-Nordstrom Assoc., Inc.
Address: 10 Commerce Park No., Unit 3	10 Commerce Park No., Unit 3
Address: Bedford, NH 03110	Bedford, NH 03110
Telephone # 603-627-2881	603-627-2881
Fax # 603-627-2915	603-627-2915
Email: abasso@keachnordstrom.com	abasso@keachnordstrom.com

PURPOSE OF PLAN:

To convert the existing Stop & Shop Supermarket facility into a Goodwill Retail Store and shipping/receiving center.

For Town Use

Plan Routing Date: 3-12-14 Sub/Site Date: _____

✓ I have no comments _____ I have comments (attach to form)

MM (Initials) Title: Z.A. Date: _____

DEPT: ✓ Zoning _____ Engineering _____ Assessor _____ Police _____ Fire _____ Planning _____ Consultant _____ Highway Department

Fees Paid: _____

TOWN OF HUDSON

COMMUNITY DEVELOPMENT DEPARTMENT

14-04

ZONING DETERMINATION

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

HUDSON
MAR 07 2014
COMMUNITY DEVELOPMENT

February 21, 2014

Tony Basso
Keach-Nordstrom Associates, Inc.
10 Commerce Park North, Suite 3B
Bedford, NH 03110

Re: 9 Wason Road – (Map 222, Lot 041) Proposed Goodwill Retail Store for Hudson

Dear Tony:

After the site tour of Goodwill Industries Retail Operation, I now understand the total process. The operation proposed for the vacant Stop and Shop Store by Goodwill would be no different than what was originally there. There would be the retail store, the retail outlet store, the processing section, receiving and shipping departments. This would be an excellent use for this site.

This Zoning Determination may be appealed within thirty (30) days. If you have any further questions, please contact me at 886-6008.

Sincerely,

COMMUNITY DEVELOPMENT DEPARTMENT

William Oleksak

William Oleksak
Zoning Administrator

cc: Zoning Board of Adjustment

HUDSON MAR 07 2014 COMMUNITY DEVELOPMENT

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

Date of Application: March 06, 2014 Tax Map # 222 Lot # 41

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Fax # 603-627-2915	603-627-2915
Email: abasso@keachnordstrom.com	abasso@keachnordstrom.com

PURPOSE OF PLAN:

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For Town Use

Plan Routing Date: 3-12-14 Sub/Site Date: _____

✓ I have no comments _____ I have comments (attach to form)

JoB (Initials) Title: Deputy Fire Chief Date: 3/17/2014

DEPT:

_____ Zoning _____ Engineering _____ Assessor ____ Police ✓ Fire ____ Planning

_____ Consultant _____ Highway Department

Fees Paid: _____

RECEIVED MAR 12 2014 BY: [signature]

HUDSON
MAR 07 2014
COMMUNITY DEVELOPMENT

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

Date of Application: March 06, 2014 Tax Map # 222 Lot # 41

Name of Project: Goodwill-Hudson

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ZBA Action: N/A

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Fax # 603-627-2915	603-627-2915
Email: abasso@keachnordstrom.com	abasso@keachnordstrom.com

PURPOSE OF PLAN:

To convert the existing Stop & Shop Supermarket facility into a Goodwill Retail Store and shipping/receiving center.

For Town Use

Plan Routing Date: 3-12-14 Sub/Site Date: _____

X I have no comments _____ I have comments (attach to form)

_____ Title: Asst. Assessor Date: 3-12-14
(Initials)

DEPT:
_____ Zoning _____ Engineering ✓ Assessor _____ Police _____ Fire _____ Planning
_____ Consultant _____ Highway Department

Fees Paid: _____

E

April 3, 2014

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

Re: Town of Hudson Planning Board Review
Goodwill (9 Wason Road)
Tax Map 222, Lot 41, PO #1350-832
CLD Reference No. 03-0249.1350

Dear Mr. Cashell:

CLD Consulting Engineers, Inc. (CLD) has reviewed the first submission of the materials received on March 24, 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 note that several items could not be verified by CLD and require action by the Town.

The project consists of converting the existing Stop and Shop Supermarket facility into a Goodwill Retail Center, a 1,380-square-foot shipping and receiving loading dock bays addition with associated site improvements on the previously developed site. The site is currently serviced by existing Municipal water and sewer.

The following items are noted:

1. **Site Plan Review Codes**
   a. Hudson Regulations (HR) 275-8.B. (17) The applicant has shown one temporary benchmark on the plan set. Reference to a USGS benchmark was not provided. The applicant has noted the horizontal datum as Magnetic 2008 and the vertical datum as NGVD29.
   b. HR 275-9.A. See comments below.
   c. HR 275-9.B. 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.
   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. Copies of deeds or easements were not received for review. The applicant has shown several existing easements on the plans including an existing sewer easement, an existing "100' Buffer" easement, an existing drainage easement and an existing "R.O.W." easement.

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

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

a. HR 275-9.B. The applicant has provided a Traffic Impact Analysis Letter (TIAL) dated March 4, 2014. The TIAL concludes that the traffic generation from the previous supermarket use far exceeds what the expected generation from the proposed Goodwill use will be. While we may not necessarily agree that the ITE land use codes used in the analysis are representative of the proposed uses, intuitively, the differences in total trips are likely of a similar order-of-magnitude to the information presented. As such, we concur with that finding of the TIAL. No further CLD comment.

b. HR 193-10.E. We were unable to find sight distance information on the plan set for the driveways.

c. The applicant has noted that the angle of the existing right turn in 'slip' ramp is being altered to facilitate truck traffic to the new loading area on the east side of the building. This will likely encourage higher entry speeds for all traffic, including trucks. The applicant states in the TIAL that only eight tractor trailer trips per day are expected to enter and exit the site on a daily basis. Given that the passenger car traffic will far exceed the amount of truck traffic, the applicant should reconsider altering this entry angle to accommodate only eight entering trucks. The previous supermarket use likely had a comparable amount, if not more, of daily truck traffic yet these vehicles used the main entry drive to access their loading area.

d. It is unclear what the intended traffic pattern is for the new truck entry drive. A 40-foot-wide area is provided with a 26-foot lane and a 14-foot lane separated by a solid white line. This solid line is aligned with the edge of the travel way from the slip ramp, which implies it is an edge line. In that case, what is the proposed use of the 14-foot lane? Is this section intended for 2-way traffic?

e. All Stop bars, words and symbols should be repainted. This includes the Stop bars/symbols on either side of the slip ramp drive, the stop condition at the east end of the site near the exit, as well as the lane markings at the main exit drive.

f. Two 'Do Not Enter' signs should be provided at the end of the slip ramp facing the parking field so that vehicles do not try to use this ramp as an exit.

g. The proposed Directory sign is providing a lot of information right at the decision point for the driver at the end of the slip ramp. A detail should be provided in the plans

NEW HAMPSHIRE VERMONT MAINE

540 Commercial Street • Manchester, NH 03101 • ph: (603) 668-8223 • fx: (603) 668-8802 • www.cldengineers.com

showing the size of the sign as well as proposed lettering, should the truck lane be approved as currently shown.

h. The EB Stop sign (and Stop bar) at the slip ramp is positioned so as to not obscure the visibility of the proposed directory sign. However, it should be noted that if a car is stopped there, they could interfere with the circulation within the adjacent parking aisle.

i. A 'No Left Turn' sign should be considered on Wason Road facing WB traffic near the slip ramp.

j. The applicant should clarify as to why the crosswalk from the handicapped-accessible parking spaces at the front of the building is aligned at an angle. We are unable to tell if the intent is to match to an existing curb ramp. We strongly recommend that the crosswalk be provided at an angle to give the shortest crossing path.

k. The applicant should clarify the existing and proposed grading schematic/spot grades at the westerly drive to be reconstructed.

l. The applicant should confirm that the existing guardrail is in satisfactory condition, approximately located and is adequately protective based upon 2014 standards.

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

a. The applicant has not shown how electric or telephone services are connected to the building, but has shown the electric meter on the building.

b. Although we believe that the proposed use is less intensive than the former use, we did not find proposed water or sewer usage calculations in the packages received for review.

c. The applicant should demonstrate that appropriate vertical separation exists between the existing water and sewer crossings.

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

a. HR 275-9.A. (1) and (4) and HR 290-4.A. (10) The applicant has not supplied stormwater engineering calculations for relevant design storms as required by the Regulations. We suggest that the applicant request waivers from all appropriate Stormwater Regulations. The applicant's Stormwater Management Analysis utilizes the concept of "reduce impervious and increase green-space" but according to Town of Hudson Regulations, drainage calculations are required to illustrate, "all drainage shall be designed to achieve a zero increase in runoff for both peak and volume." Since the applicant has indicated that the pond adjacent to Wason Road will receive some additional area, we do recommend that the applicant provide a basic calculation demonstrating that water levels in the pond will not increase and that additional erosion protection (e.g. riprap) is not necessary.

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540 Commercial Street • Manchester, NH 03101 • ph: (603) 668-8223 • fx: (603) 668-8802 • www.cldengineers.com

b. HR 290-4.C. (1) and (2) (m) The applicant should further analyze the need for additional erosion control BMPs including, but not limited to, a construction entrance and protective measures for the southwest corner of the site. The operation and maintenance schedule of all proposed BMPs should also be provided within the submission.

c. HR 290-5B. (1) (u) and (v) The applicant has shown a very small snow storage area on an interior landscaped island and has noted that excess snow will be removed from the site. We suggest that the note be expanded to emphasize that snow will not be stored in the wetlands buffer or where it will block sight distance.

5. Erosion Control/Wetland Impacts

- HR 290-5.B. (1) (m) The applicant should show a temporary stockpile area and detail for pavement to be removed.

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

- HR 275-8.B.(31)(d) The applicant has met (exceeded) the tree requirement. The applicant has noted that the existing shrubs are covered by snow. We suggest that a note be added to the plan indicating a commitment from the applicant to provide a definitive number of shrubs through either all existing or to be supplemented if necessary.

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

- Additional local permitting may be required.

8. Other

a. HR 275-8.B. (35) The applicant should expand the note regarding American with Disabilities Act (ADA) compliance to include the date of the Regulations used and remove the limitation that the compliance evaluation is solely limited to dimension and grade. An ADA sidewalk ramp detail should be provided for the sidewalk modification at the westerly entrance driveway. Lastly, the applicant should provide additional detail for the westerly building entrance, showing clearly the intent or not for a flush entrance.

b. A lighting plan was not provided. Two light poles are proposed to be relocated. No lighting details were provided.

c. The applicant should provide additional detail for the proposed cast-in-place retaining walls to be designed by others. At a minimum, top and bottom of wall elevations should be more clearly labeled, and the intent or not to have "behind the wall" drainage should be shown or labeled.

Please feel free to call if you have any questions.

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

NEW HAMPSHIRE VERMONT MAINE

540 Commercial Street • Manchester, NH 03101 • ph: (603) 668-8223 • fx: (603) 668-8802 • www.cldengineers.com

CONSULTING ENGINEERS
540 Commercial Street Manchester, NH 03101
(603) 668-8223 • Fax: (603) 668-8802
cld@cldengineers.com • www.cldengineers.com
New Hampshire • Vermont • Maine

TO: File

FROM: Kelsey M. Gagnon KMG

DATE: April 3, 2014

RE: Town of Hudson Planning Board Review
Goodwill (9 Wason Road)
Tax Map 222, Lot 41, PO #1350-832
CLD Reference No. 03-0249.1350

The following list itemizes the documents reviewed related to the current Goodwill Plan Review comments.

- Various emails between Town of Hudson and CLD, between March18 and March 25, 2014.
- Letter of Transmittal from Keach-Nordstrom Associates, Inc., dated and received March 25, 2014, including the following:
  1. Copy of *Preliminary and Final Site Plan Application for Plan Review*, dated March 6, 2014.
  2. Copy of *Owner Affidavit*, dated March 7, 2014.
  3. Copy of *Zoning Determination Letter*, dated February 21, 2014.
  4. Stormwater Management Analysis letter dated March 3, 2014, including Figures 1 and 2.
  5. Traffic Impact Analysis letter, dated March 4, 2014.
- Package from the Town of Hudson, dated March 7, 2014, received March 24, 2014 including:
  1. Copy of *Site Plan, Amended Site Plan, 9 Wason Road, Hudson, New Hampshire* Plan Set, prepared by Keach-Nordstrom Associates, Inc. dated February 5, 2014, unless otherwise noted, with no revisions noted, including the following:
     a. Cover Sheet.
     b. *Master Site Plan*, Sheet 1 of 10.
     c. *Existing Conditions Plan*, Sheet 2 of 10.
     d. *Removals/Demolition Plan*, Sheet 3 of 10.
     e. *Non-Residential Site Layout Plan*, Sheet 4 of 10.
     f. *Grading, Drainage and Erosion Control Plan*, Sheet 5 of 10.
     g. *Utility Plan*, Sheet 6 of 10.
     h. *Landscape Plan*, Sheet 7 of 10.
     i. *Construction Details*, Sheets 8 through 10 of 10.
  2. Copy of *Project Narrative*, not dated.
  3. Copy of Preliminary and Final Site Plan Application Cover Sheet, dated March 6, 2014.

KMG:jt

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

APPLICATION FOR SITE PLAN REVIEW
TOWN OF HUDSON, NEW HAMPSHIRE

Goodwill, 9 Watson Road
Town of Hudson
CLD Reference No. 03-0249.1350
Reviewed April 3, 2014

Thirty (30) days prior to Planning Board Meeting, a complete site plan 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	
_____	a) 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 A.M. Tuesday the week prior to the scheduled public hearing/conceptual review date.	_____	
_____	b) A Site Plan narrative, describing the purpose, locations, long range plans, impacts on traffic, schools, and utilities	CLD/KMG	b) Traffic/School/Utility impacts not noted in narrative.
_____	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 surrounding area	CLD/KMG	
_____	e) Plan date by day/month/year	_____	e) Plan date by month/day/year.
_____	f) Revision block inscribed on the plan	CLD/KMG	
_____	g) Planning Board approval block inscribed on the plan	_____	g) Language does not exactly match Regulation. Size doesn't match (Regulation states 2"x6"; plan shows 2"x5.5")
_____	h) Title of project inscribed on the plan	CLD/KMG	
_____	i) Names and addresses of property owners and their signatures inscribed on the plan	CLD/KMG	
_____	j) North point inscribed on the plan	CLD/KMG	
_____	k) Property lines: exact locations and dimensions	CLD/KMG	
_____	l) Square feet and acreage of site	CLD/KMG	
_____	m) Square feet of each building (existing & proposed)	CLD/KMG	
_____	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	_____	n) Abutters' names and addresses are shown on plan.

Applicant Initials		Staff Initials
_____ 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	CLD/KMG
_____ p)	Locations of existing and proposed permanent monuments and bench marks within 200 feet of the development tract	CLD/KMG
_____ q)	Pertinent highway projects HR 275-8.B. (23)	
_____ r)	Assessor's Map and Lot number(s)	CLD/KMG
_____ 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	CLD/KMG
_____ t)	Delineate zoning district on the plan	CLD/KMG
_____ u)	Stormwater drainage plan	CLD/KMG
_____ v)	Topographical elevations at 2-foot intervals contours: existing and proposed	CLD/KMG
_____ w)	Utilities: existing and proposed	CLD/KMG
_____ x)	Parking: existing and proposed	CLD/KMG
_____ y)	Parking space: length and width	CLD/KMG
_____ z)	Aisle width/maneuvering space	CLD/KMG
_____ aa)	Landscaping: existing and proposed	CLD/KMG
_____ ab)	Building and wetland setback lines	CLD/KMG
_____ ac)	Curb cuts	CLD/KMG
_____ ad)	Rights of way: existing and proposed	CLD/KMG
_____ ae)	Sidewalks: existing and proposed	CLD/KMG
_____ af)	Exterior lighting plan	CLD/KMG
_____ ag)	Sign locations: size and design	CLD/KMG
_____ ah)	Water mains and sewerage lines	CLD/KMG
_____ ai)	Location of dumpsters on concrete pads	CLD/KMG
_____ aj)	All notes from plats	CLD/KMG

p) One temporary benchmark is shown on the plans.

LOWELL RD INTERSECTION IS KNOWN BY APPLICANT. THAT PROJECT DOES NOT APPLY TO THIS PROJECT

q) No highway projects noted.

aa) Applicant noted on the plan that existing shrub totals are not known due to snow cover. 65 new shrubs proposed.

ad) No change from existing.

af) Relocate 2 poles. No details provided.

ag) "Goodwill Retail Center" sign detail provided. Proposed to be installed on existing store sign structure at intersection.

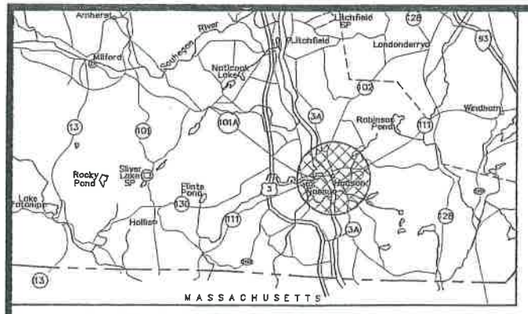
ai) No dumpsters proposed, discarded items to be hauled away by contractor.

Applicant Initials		Staff Initials	
_____	ak) Buffer as required by site plan regulations	EXISTING	ak) Pavement setback only 20 feet at southwest corner of site and just under 35 feet at northwest corner of site (existing).
_____	al) Green and open space requirements met with percentages of both types of spaces inscribed on the plan.	CLD/KMG	
_____	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 performed by a State of New Hampshire certified Soil Scientist, who shall affix his/her stamp and signature shall be inscribed on the plan.	N/A	am) Regulation was repealed in 2010. Soil types indicated.
_____	an) Wetlands (and poorly-drained and very poorly-drained soils, 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.	N/A	an) Adjacent wetlands are shown on the plan; however, a New Hampshire certified wetland or soil scientist has not affixed his stamp and signature to the plan.
_____	ao) "Valid for one year after approval" statement inscribed on the plan	CLD/KMG	
_____	ap) Loading bays/docks	CLD/KMG	ap) Height not provided for canopy above loading spaces.
_____	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	CLD/KMG	
_____	au) Photographs, electronic/digital display or video of site and area	CLD/KMG	
_____	av) Attach one (1) copy of the building elevations	CLD/KMG W	aw) Not received, waiver requested.
_____	aw) Fiscal impact study		
_____	ax) Traffic study	CLD/KMG W	ay) Not received, waiver requested.
_____	ay) Noise study		

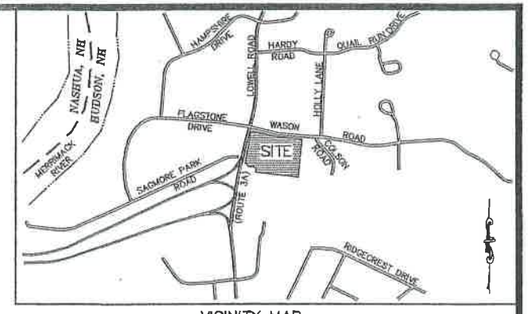
Applicant Initials		Staff Initials	
_____ az)	Copies of any proposed or existing easements, covenants, deed restrictions, right of way agreements or other similar documents		az) Easements shown on plan, no deeds or easements received for review.
_____ ba)	Copy of applicable Town, State, Federal approval/ 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 ▪ shoreland 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.		ba) No permits received in package for review.
_____ bb)	Presentation plan (colored, with color coded bar chart)		bb) No presentation plan received, requires a Town action.
_____ bc)	Fees paid to clerk		bc) Requires Town action.
_____ 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.		bd) Requires Town action.

*Under the purview of the Planning Board any and all items may be waived. _____

PACKET 4/9/14



VICINITY PLAN
NOT TO SCALE



VICINITY MAP
SCALE: 1" = 1,000'

AMENDED SITE PLAN
GOODWILL INDUSTRIES
MAP 222; LOT 41
9 WASON ROAD
HUDSON, NEW HAMPSHIRE

HUDSON
APR 01 2014
COMMUNITY DEVELOPMENT

OWNER:
MANUEL D. SOUSA ET AL
c/o STOP & SHOP SUPERMARKET CO.
1385 HANCOCK STREET
QUINCY, MASSACHUSETTS 02169

APPLICANT:
GOODWILL INDUSTRIES OF NORTHERN NEW ENGLAND
75 WASHINGTON AVENUE
PORTLAND, MAINE 04101

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

STATE OF NEW HAMPSHIRE
038
ANTHONY M. MASSO
3/7/14

DIG SAFE
811
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM

STATE OF NEW HAMPSHIRE
PATRICK R. COLBURN
No. 12298
LICENSED PROFESSIONAL ENGINEER
3/7/14

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

FEBRUARY 5, 2014

PROJECT NO. 13-1216-2

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

SHEET TITLE	SHEET No.
MASTER PLAN	1
EXISTING CONDITIONS PLAN	2
REMOVALS/DEMOLITION PLAN	3
NON-RESIDENTIAL SITE LAYOUT PLAN	4
GRADING, DRAINAGE, AND EROSION CONTROL PLAN	5
UTILITY PLAN	6
LANDSCAPE PLAN	7
CONSTRUCTION DETAILS	8 - 10

P:_Projects\13-1216\13-1216 dwg\13-1216-DETAILS.dwg, 3/7/2014 9:33:52 AM, mf

PLAN REFERENCES:

1. "EASEMENT PLAN, LOWELL ROAD AND WASON ROAD, HUDSON, NEW HAMPSHIRE," SCALE: 1"=40', DATED: SEPT. 10, 2004, PREPARED BY VANASSE HANGEN BRUSTLIN, INC. H.C.R.D. PLAN NO. 33436.
2. "AS BUILT, CONDITIONS PLAN, SUPER STOP & SHOP, STORE #202, WASON ROAD/LOWELL ROAD (NH RTE. 3A), HUDSON, NEW HAMPSHIRE," SCALE: 1"=50', DATED: OCTOBER 4, 2004, PREPARED BY VANASSE HANGEN BRUSTLIN, INC.
3. "MAP 10, LOTS 43, 45 AND 46, CONSOLIDATION AND, LOT LINE RELOCATION PLAN, LOWELL ROAD AND WASON ROAD, HUDSON, NEW HAMPSHIRE," SCALE: 1"=50', DATED: MARCH 22, 2002 WITH REVISIONS THROUGH MAY 1, 2002, PREPARED BY VANASSE HANGEN BRUSTLIN, INC.

VICINITY MAP
SCALE: 1" = 1,000'

GENERAL NOTES:

1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE CONVERSION OF AN EXISTING STOP & SHOP SUPERMARKET INTO A GOODWILL RETAIL STORE WITH ASSOCIATED SITE IMPROVEMENTS ON LOT 41 ON THE TOWN OF HUDSON TAX MAP 222.
2. TOTAL SITE AREA: 370,702 SF, OR 8.510 ACRES
3. MAP 222; LOT 41 INDICATES TOWN OF HUDSON TAX ASSESSORS MAP AND LOT NUMBER.
4. PRESENT OWNER OF RECORD:
   MANUEL D. SOUSA ET. AL.
   c/o STOP & SHOP SUPERMARKET
   1385 HANCOCK STREET
   QUINCY, MA 02169
   H.C.R.D. BK. 7178; PG. 233
5. PRESENT ZONING: BUSINESS (B)
   MINIMUM LOT REQUIREMENTS:
   - LOT AREA 30,000 SF (WITH TOWN WATER AND SEWER)
   - LOT FRONTAGE 150 FT (ARTERIAL/COLLECTOR)
   MINIMUM BUILDING SETBACKS: (ARTERIAL/COLLECTOR)
   - FRONT 50 FT
   - SIDE 15 FT
   - REAR 15 FT
6. SITE IS SERVICED BY MUNICIPAL WATER AND SEWER.
7. PARKING:
   SORTING/PROCESSING/SHIPPING/RECEIVING:
   1 SPACE/600 SF = 36,083 SF/600 = 60.1 SPACES REQUIRED
   RETAIL: 1 SPACE/200 SF = 26,497 SF/200 = 132.5 SPACES REQUIRED
   TOTAL SPACES REQUIRED = 192.6 = 193 SPACES REQUIRED
   TOTAL SPACES PROVIDED = 246 SPACES (INCLUDES 10 HANDICAP SPACES)
8. LOADING:
   REQUIRED: 1 SPACE FOR FIRST 5,000 SF + 1 SPACE FOR EACH ADDITIONAL 10,000 SF (62,580 SF) = 1 + 5.76 = 7 SPACES REQUIRED
   PROVIDED: 3 EXISTING AND 4 PROPOSED = 7 TOTAL LOADING SPACES PROVIDED
8. OPEN SPACE:
   REQUIRED: 35%
   EXISTING: 39.8%
   PROPOSED: 42.7%
10. BOUNDARY AND TOPOGRAPHIC INFORMATION DEPICTED ON THIS PLAN IS BASED ON A FIELD SURVEY PERFORMED BY THIS OFFICE BETWEEN JANUARY AND FEBRUARY 2014.
11. DUE TO HEAVY SNOW COVER DURING ONSITE SURVEY EFFORTS, WETLANDS WERE TAKEN FROM PLAN REFERENCE #2. ONCE THE SNOW MELTS, THE WETLAND MAPPING WILL BE UPDATED BUT IS NOT EXPECTED TO IMPACT THE PROJECT.
12. EXAMINATION OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAPS (FIRM) FOR THE TOWN OF HUDSON, NEW HAMPSHIRE, HILLSBOROUGH COUNTY, MAP NUMBER 33011C0656D, PANEL NUMBER 656 OF 701, EFFECTIVE DATE: SEPTEMBER 25, 2009 INDICATES THAT THE SUBJECT PREMISES IS NOT LOCATED WITHIN A FLOOD HAZARD AREA.
13. THE LOCATION OF ANY UNDERGROUND UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. KEACH-NORDSTROM ASSOCIATES, INC. MAKES NO CLAIM TO THE ACCURACY OR COMPLETENESS OF UTILITIES SHOWN. PRIOR TO ANY EXCAVATION ON SITE THE CONTRACTOR SHALL CONTACT DIG SAFE AT 811.
14. SITE LIGHTING SHALL BE AS SHOWN ON THE PLAN, DIRECTED ONTO SITE, AND SHALL CONFORM WITH ALL APPLICABLE TOWN OF HUDSON ZONING REGULATIONS.
15. SITE IMPROVEMENTS DEPICTED ON THE PLAN SHALL CONFORM WITH TITLE III OF THE AMERICANS WITH DISABILITIES ACT WITH REGARD TO DIMENSION AND GRADE.
16. IT SHALL BE UNLAWFUL TO MODIFY, CHANGE, OR ALTER ANY STRUCTURE OR USE SHOWN ON THIS SITE PLAN IN ANYWAY WHATSOEVER, OR CONVERT OR ALTER ANY STRUCTURE OR USE SHOWN ON THIS SITE PLAN, OR CHANGE THE ABOVE USE INDICATED ON THE PLAN WITHOUT RECEIVING APPROVAL FROM THE TOWN OF HUDSON PLANNING BOARD.
17. GOODWILL'S BUSINESS MODEL IS SUCH THAT ALL OF THEIR DONATIONS ARE SOLD EITHER FOR RETAIL PRICES, OUTLET PRICES, OR COMMODITY. THEREFORE, THEY DO NOT USE TRADITIONAL DUMPSTERS. ALL GOODS AND WASTE IS RECYCLED AND HAULED AWAY BY CASELLA WASTE IN CONTAINERS.
18. THE RETAIL STORE WILL BE OPEN MONDAY THROUGH SATURDAY 8AM-9PM AND SUNDAY 8AM-6PM.
19. EXTERIOR CONSTRUCTION ACTIVITIES ON THE SITE SHALL BE LIMITED TO BETWEEN 7:00 AM AND 7:00 PM MONDAY THROUGH SATURDAY. NO CONSTRUCTION ACTIVITIES SHALL OCCUR ON SUNDAYS.
20. WAIVERS REQUESTED:
    275-9(C) – NOISE STUDY
    275-9(D) – FISCAL/ENVIRONMENTAL IMPACT
21. PLOWED SNOW FROM THE FACILITIES, DRIVEWAY, PARKING LOTS AND SIDEWALK SHALL BE STORED IN THE DESIGNATED AREAS SHOWN IN THIS PLAN SET. WHEN THE SNOW STORAGE AREAS ARE AT CAPACITY, SUBSEQUENT SNOW SHALL BE HAULED OFF-SITE AND DISPOSED OF IN AN ENVIRONMENTALLY SOUND FASHION AND IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
22. IF LOT DEVELOPMENT INVOLVES BLASTING AND/OR RAMMING OF BEDROCK MATERIALS, SAID ACTIVITIES SHALL BE LIMITED TO THE HOURS BETWEEN 7:00 AM AND 5:00 PM MONDAY THROUGH FRIDAY ONLY. SAID BLASTING/RAMMING ACTIVITIES SHALL BE PROHIBITED ON WEEKENDS.

LEGEND

- STONE BOUND FOUND
- IRON PIN FOUND
- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- SLOPED GRANITE CURB
- CONCRETE CURB
- BUFFER EASEMENT
- DRAINAGE EASEMENT
- SLOPE EASEMENT
- ABUTTER LINE
- PROPERTY LINE
- WETLAND
- CHAIN LINK FENCE
- STOCKADE FENCE
- GUARDRAIL
- TREELINE
- RETAINING WALL
- BUILDING SETBACK
- ZONE LINE

DIG SAFE
811 CALL TOLL FREE
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM

UTILITY NOTE

THE UNDERGROUND UTILITIES DEPICTED HEREON HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND PLOTTED FROM EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES DEPICTED COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND PORTIONS OF THE UTILITIES.

ZONING NOTE

THE ZONING/BUILDING SETBACKS DEPICTED ON THIS PLAN ARE THOSE WE HAVE INTERPRETED FROM THE LATEST ZONING ORDINANCE OF THE MUNICIPALITY AND, AS SUCH, ARE ONLY OPINIONS EXPRESSED BY KEACH-NORDSTROM ASSOCIATES, INC. THE FINAL INTERPRETATION OF THE ORDINANCE CAN ONLY BE MADE BY THE APPROPRIATE ZONING AUTHORITY. SINCE BUILDING ORIENTATION, PROPOSED USES, AND OTHER FACTORS CAN AFFECT THE SETBACKS, PRIOR TO ANY DEVELOPMENT OF THIS PROPERTY. THE BUILDER/OWNER MUST CONSULT WITH THE TOWN/CITY TO INSURE THE CORRECT APPLICATION OF THE ZONING ORDINANCE.

GENERAL NOTES (CONTINUED):

23. ONSITE DRAINAGE SYSTEM SHALL BE CONSTRUCTED AND MAINTAINED IN COMPLIANCE WITH NHDES REQUIREMENTS FOR SUCH SYSTEMS.
24. THE APPLICANT'S ENGINEER AND/OR CONTRACTOR SHALL CONTACT THE TOWN OF HUDSON TO SCHEDULE A PRECONSTRUCTION MEETING, WHICH WILL BE HELD WITH STAFF PRIOR TO STARTING CONSTRUCTION.
25. ALL IMPROVEMENTS SHOWN ON THE SITE PLAN-OF-RECORD, INCLUDING NOTES 1-25, SHALL BE COMPLETED IN THEIR ENTIRETY AND AT THE EXPENSE OF THE APPLICANT OR HIS ASSIGNS.

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

OWNER OF MAP 222; LOT 41
SIGNATURE: Manuel D'Sousa
DATE: 3/7/14

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

THIS PLAN AND THE SURVEY UPON WHICH IT IS BASED WAS MADE ON THE GROUND UNDER MY DIRECTION AND SUPERVISION BETWEEN JANUARY AND FEBRUARY OF 2014 IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE STATE OF NEW HAMPSHIRE AND THE CITY/TOWN WITHIN WHICH IT IS LOCATED WITH A TRAVERSE ERROR OF CLOSURE BETTER THAN 1 PART IN 10,000. THE SURVEY PERFORMED IS CLASSIFIED AS AN URBAN STANDARD SURVEY, (CATEGORY 1, CONDITION 1) AS DEFINED IN THE NEW HAMPSHIRE LAND SURVEYORS ASSOCIATION ETHICS AND STANDARDS.

3/7/14
DATE

STATE OF NEW HAMPSHIRE – PATRICK R. COLBURN No. 12705 – LICENSED PROFESSIONAL ENGINEER

STATE OF NEW HAMPSHIRE – ANTHONY M. BASSO – LICENSED LAND SURVEYOR

MASTER PLAN
GOODWILL
MAP 222; LOT 41
9 WASON ROAD
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

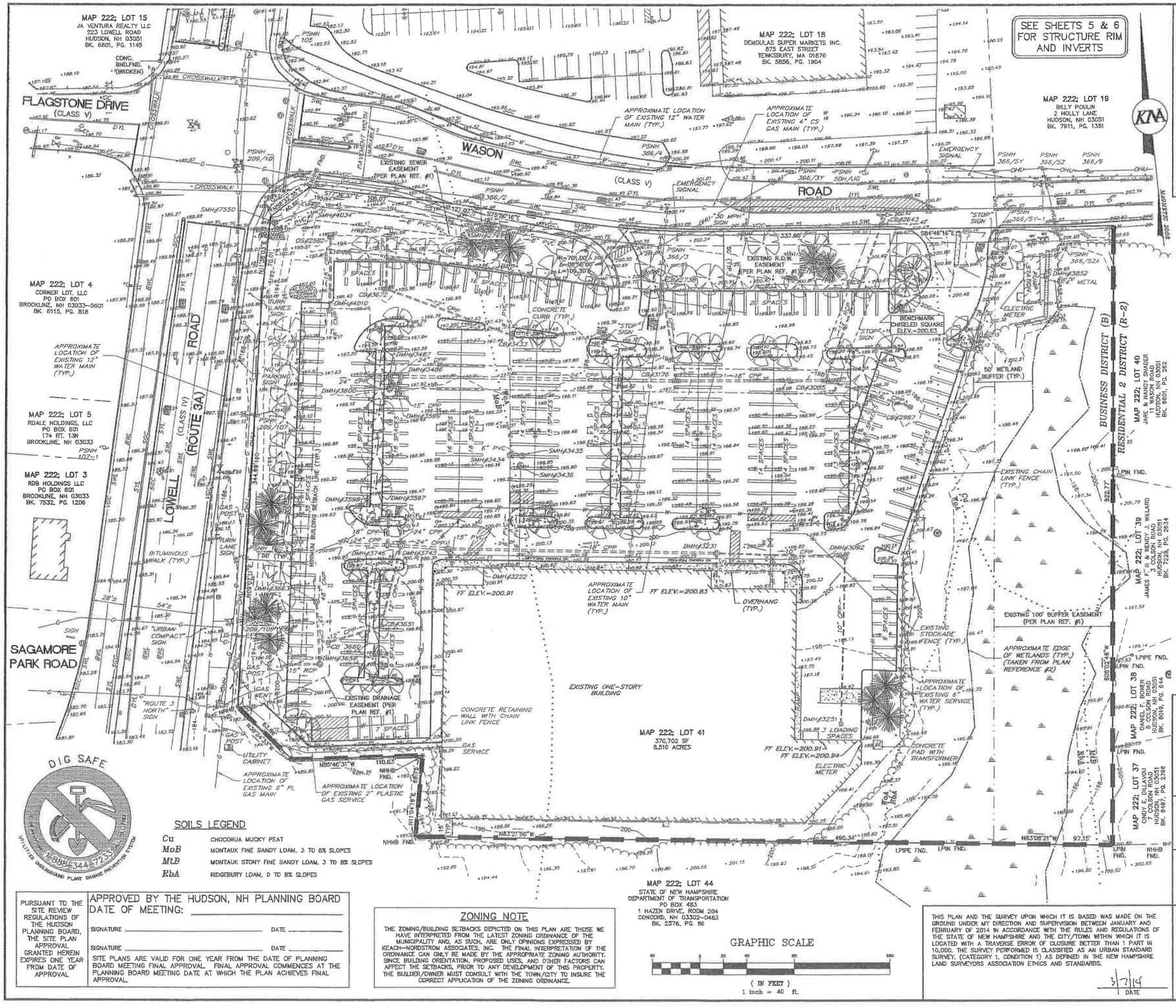
OWNER OF RECORD:	APPLICANT:
MANUEL D. SOUSA ET. AL. c/o STOP & SHOP SUPERMARKET 1385 HANCOCK STREET QUINCY, MA 02169 H.C.R.D. BK. 7178; PG. 233	GOODWILL INDUSTRIES OF NORTHERN NEW ENGLAND 75 WASHINGTON AVENUE PORTLAND, ME 04101

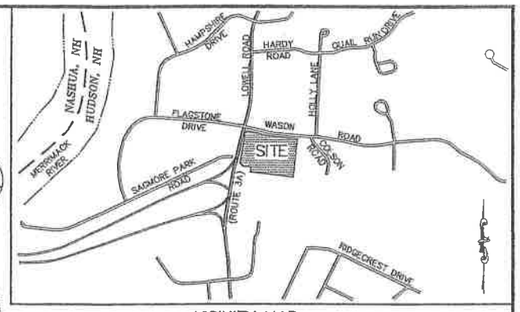
KNA KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

REVISIONS

No.	DATE	DESCRIPTION	BY

DATE: FEBRUARY 5, 2014	SCALE: 1" = 50'
PROJECT NO: 13-1216-2	SHEET 1 OF 10





VICINITY MAP
SCALE: 1" = 1,000'

PLAN REFERENCES:

1. "EASEMENT PLAN, LOWELL ROAD AND WASON ROAD, HUDSON, NEW HAMPSHIRE," SCALE: 1"=40', DATED: SEPT. 10, 2004, PREPARED BY VANASSE HANGEN BRUSTLIN, INC. H.C.R.D. PLAN NO. 33436.
2. "AS BUILT, CONDITIONS PLAN, SUPER STOP & SHOP, STORE #202, WASON ROAD/LOWELL ROAD (NH RTE. 3A), HUDSON, NEW HAMPSHIRE," SCALE: 1"=50', DATED: OCTOBER 4, 2004, PREPARED BY VANASSE HANGEN BRUSTLIN, INC.
3. "MAP 10, LOTS 43, 45 AND 46, CONSOLIDATION AND, LOT LINE RELOCATION PLAN, LOWELL ROAD AND WASON ROAD, HUDSON, NEW HAMPSHIRE," SCALE: 1"=50', DATED: MARCH 22, 2002 WITH REVISIONS THROUGH MAY 1, 2002, PREPARED BY VANASSE HANGEN BRUSTLIN, INC.

NOTES:

1. THE PURPOSE OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS OF LOT 41 ON THE TOWN OF HUDSON TAX MAP 222.
2. TOTAL SITE AREA: 370,702 SF, OR 8.510 ACRES
3. MAP 222; LOT 41 INDICATES TOWN OF HUDSON TAX ASSESSORS MAP AND LOT NUMBER.
4. PRESENT OWNER OF RECORD:
   MANUEL D. SOUSA ET. AL.
   c/o STOP & SHOP SUPERMARKET
   1385 HANCOCK STREET
   QUINCY, MA 02169
   H.C.R.D. BK. 7178; PG. 233
5. PRESENT ZONING: BUSINESS (B)
   MINIMUM LOT REQUIREMENTS:
   - LOT AREA 30,000 SF (WITH TOWN WATER AND SEWER)
   - LOT FRONTAGE 150 FT (ARTERIAL/COLLECTOR)
   MINIMUM BUILDING SETBACKS: (ARTERIAL/COLLECTOR)
   - FRONT 50 FT
   - SIDE 15 FT
   - REAR 15 FT
6. BOUNDARY AND TOPOGRAPHIC INFORMATION DEPICTED ON THIS PLAN IS BASED ON A FIELD SURVEY PERFORMED BY THIS OFFICE BETWEEN JANUARY AND FEBRUARY 2014.
7. HORIZONTAL DATUM IS MAGNETIC 2008. VERTICAL DATUM IS NGVD 29.
8. WETLANDS WERE TAKEN FROM PLAN REFERENCE #2.
9. EXAMINATION OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAPS (FIRM) FOR THE TOWN OF HUDSON, NEW HAMPSHIRE, HILLSBOROUGH COUNTY, MAP NUMBER 33011C0656D, PANEL NUMBER 656 OF 701, EFFECTIVE DATE: SEPTEMBER 25, 2009 INDICATES THAT THE SUBJECT PREMISES IS NOT LOCATED WITHIN A FLOOD HAZARD AREA.
10. THE LOCATION OF ANY UNDERGROUND UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. KEACH-NORDSTROM ASSOCIATES, INC. MAKES NO CLAIM TO THE ACCURACY OR COMPLETENESS OF UTILITIES SHOWN. PRIOR TO ANY EXCAVATION ON SITE THE CONTRACTOR SHALL CONTACT DIG SAFE AT 811.

LEGEND

■	STONE BOUND FOUND		ABUTTER LINE
●	IRON PIN FOUND		PROPERTY LINE
⊕	UTILITY POLE		WETLAND
⊙	SIGN		CHAIN LINK FENCE
☼	LIGHT		STOCKADE FENCE
⋈	GAS VALVE		GUARDRAIL
⋈	WATER VALVE	OHU	OVERHEAD UTILITIES
⊕	HYDRANT	G	GAS LINE
⋈	WATER SHUT OFF	W	WATER LINE
Ⓢ	SEWER MANHOLE	S	SEWER LINE
Ⓓ	DRAINAGE MANHOLE		DRAINAGE LINE
⊞	CATCH BASIN		TREELINE
	EDGE OF PAVEMENT		RETAINING WALL
	VERTICAL GRANITE CURB		10' CONTOUR
	SLOPED GRANITE CURB		2' CONTOUR
	CONCRETE CURB		SCS SOIL LINE
	BUFFER EASEMENT		BUILDING SETBACK
	DRAINAGE EASEMENT		ZONE LINE
	SLOPE EASEMENT		

SOILS LEGEND

Cu	CHOCORUA MUCKY PEAT
MoB	MONTAUK FINE SANDY LOAM, 3 TO 8% SLOPES
MtB	MONTAUK STONY FINE SANDY LOAM, 3 TO 8% SLOPES
RbA	RIDGEBURY LOAM, 0 TO 8% SLOPES

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

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____

SIGNATURE _____ DATE _____

SIGNATURE _____ DATE _____

SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN ACHIEVES FINAL APPROVAL.

ZONING NOTE

THE ZONING/BUILDING SETBACKS DEPICTED ON THIS PLAN ARE THOSE WE HAVE INTERPRETED FROM THE LATEST ZONING ORDINANCE OF THE MUNICIPALITY AND, AS SUCH, ARE ONLY OPINIONS EXPRESSED BY KEACH-NORDSTROM ASSOCIATES, INC. THE FINAL INTERPRETATION OF THE ORDINANCE CAN ONLY BE MADE BY THE APPROPRIATE ZONING AUTHORITY. SINCE BUILDING ORIENTATION, PROPOSED USES, AND OTHER FACTORS CAN AFFECT THE SETBACKS, PRIOR TO ANY DEVELOPMENT OF THIS PROPERTY, THE BUILDER/OWNER MUST CONSULT WITH THE TOWN/CITY TO INSURE THE CORRECT APPLICATION OF THE ZONING ORDINANCE.

GRAPHIC SCALE
40 0 20 40 80 120
(IN FEET)
1 inch = 40 ft.

THIS PLAN AND THE SURVEY UPON WHICH IT IS BASED WAS MADE ON THE GROUND UNDER MY DIRECTION AND SUPERVISION BETWEEN JANUARY AND FEBRUARY OF 2014 IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE STATE OF NEW HAMPSHIRE AND THE CITY/TOWN WITHIN WHICH IT IS LOCATED WITH A TRAVERSE ERROR OF CLOSURE BETTER THAN 1 PART IN 10,000. THE SURVEY PERFORMED IS CLASSIFIED AS AN URBAN STANDARD SURVEY, (CATEGORY 1, CONDITION 1) AS DEFINED IN THE NEW HAMPSHIRE LAND SURVEYORS ASSOCIATION ETHICS AND STANDARDS.

3/7/14
DATE

EXISTING CONDITIONS PLAN
GOODWILL
MAP 222; LOT 41
9 WASON ROAD
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:
MANUEL D. SOUSA ET. AL
c/o STOP & SHOP SUPERMARKET
1385 HANCOCK STREET
QUINCY, MA 02169
H.C.R.D. BK. 7178; PG. 233

APPLICANT:
GOODWILL INDUSTRIES OF NORTHERN NEW ENGLAND
75 WASHINGTON AVENUE
PORTLAND, ME 04101

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

NEW HAMPSHIRE LICENSED LAND SURVEYOR ANTHONY M. BASSO

REVISIONS			
No.	DATE	DESCRIPTION	BY

DATE: FEBRUARY 5, 2014 | SCALE: 1" = 40'
PROJECT NO: 13-1216-2 | SHEET 2 OF 10

P:_projects\13\1216\13121652\dwg\13121652-EXCON.dwg, 3/7/2014 8:46:35 AM, rnl

GENERAL NOTES:

1. THE PURPOSE OF THIS PLAN IS TO SHOW EXISTING FEATURES ON SITE TO BE REMOVED, SALVAGED, OR REPLACED.
2. BOUNDARY AND TOPOGRAPHIC INFORMATION DEPICTED ON THIS PLAN IS BASED ON A FIELD SURVEY PERFORMED BY THIS OFFICE BETWEEN JANUARY AND FEBRUARY 2014.
3. ITEMS TO BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH THE TOWN OF HUDSON REQUIREMENTS, UNLESS OTHERWISE SHOWN HEREON OR DIRECTED BY OWNER.
4. ALL EXISTING PAVEMENT AND GRAVEL WITHIN THE CROSS HATCHED AREA IS TO BE REMOVED DURING THE DEMOLITION PHASE OF THE PROJECT. EXCESS MATERIAL FROM THESE AREAS SHALL BE APPROPRIATELY DISPOSED OF OFFSITE.
5. REMOVE AND SALVAGE ALL STREET SIGNS, POSTS, AND LIGHT POLES WITHIN THE WORK AREA. INSTALL NEW SIGNS ON NEW POSTS AS SPECIFIED HEREON.
6. THE CONTRACTOR SHALL CONTROL ALL DUST GENERATED DURING THE REMOVAL PHASE AND CONSTRUCTION PHASE SO THAT NO DUST LEAVES THE SITE.
7. ANY MONUMENTS DISTURBED DURING CONSTRUCTION SHALL BE RESET BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR AT THE SITE CONTRACTORS EXPENSE.

LEGEND

- STONE BOUND FOUND
- IRON PIN FOUND
- UTILITY POLE
- SIGN
- LIGHT
- GAS VALVE
- WATER VALVE
- HYDRANT
- WATER SHUT OFF
- SEWER MANHOLE
- DRAINAGE MANHOLE
- CATCH BASIN
- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- SLOPED GRANITE CURB
- CONCRETE CURB
- BUFFER EASEMENT
- DRAINAGE EASEMENT
- SLOPE EASEMENT
- ABUTTER LINE
- PROPERTY LINE
- WETLAND
- CHAIN LINK FENCE
- STOCKADE FENCE
- GUARDRAIL
- OHU — OVERHEAD UTILITIES
- G — G — GAS LINE
- W — W — WATER LINE
- S — S — SEWER LINE
- DRAINAGE LINE
- TREELINE
- RETAINING WALL
- BUILDING SETBACK
- SAWCUT LINE
- PAVEMENT & GRAVEL TO BE REMOVED

DIG SAFE — CALL 811 — UTILITY UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM

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

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

REMOVALS/DEMOLITION PLAN
GOODWILL
MAP 222; LOT 41
9 WASON ROAD
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:	APPLICANT:
MANUEL D. SOUSA ET. AL. c/o STOP & SHOP SUPERMARKET 1385 HANCOCK STREET QUINCY, MA 02169 H.C.R.D. BK. 7178; PG. 233	GOODWILL INDUSTRIES OF NORTHERN NEW ENGLAND 75 WASHINGTON AVENUE PORTLAND, ME 04101

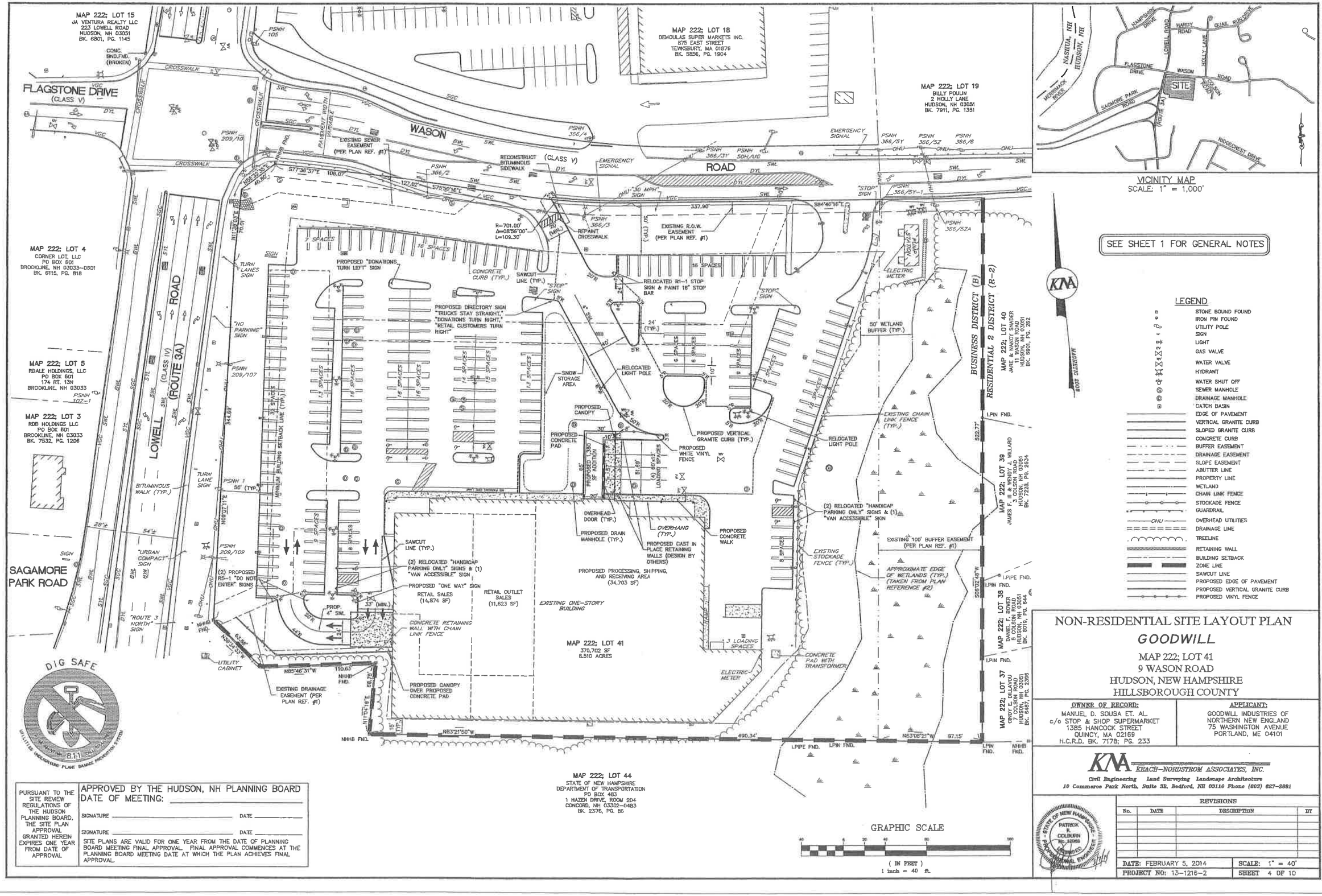
KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

PATRICK R. COLBURN No. 12388 — STATE OF NEW HAMPSHIRE — PROFESSIONAL ENGINEER — 3/17/14

REVISIONS			
No.	DATE	DESCRIPTION	BY

DATE: FEBRUARY 5, 2014 | SCALE: 1" = 40'
PROJECT NO: 13-1216-2 | SHEET 3 OF 10

P:_projects\13121613121613\dwg\13121653-SITEPLAN.dwg, 3/7/2014 8:30:40 AM, rnl



VICINITY MAP
SCALE: 1" = 1,000'

SEE SHEET 1 FOR GENERAL NOTES

KNA

LEGEND

- STONE BOUND FOUND
- IRON PIN FOUND
- UTILITY POLE
- SIGN
- LIGHT
- GAS VALVE
- WATER VALVE
- HYDRANT
- WATER SHUT OFF
- SEWER MANHOLE
- DRAINAGE MANHOLE
- CATCH BASIN
- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- SLOPED GRANITE CURB
- CONCRETE CURB
- BUFFER EASEMENT
- DRAINAGE EASEMENT
- SLOPE EASEMENT
- ABUTTER LINE
- PROPERTY LINE
- WETLAND
- CHAIN LINK FENCE
- STOCKADE FENCE
- GUARDRAIL
- OHU — OVERHEAD UTILITIES
- DRAINAGE LINE
- TREELINE
- RETAINING WALL
- BUILDING SETBACK
- ZONE LINE
- SAWCUT LINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED VERTICAL GRANITE CURB
- PROPOSED VINYL FENCE

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

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

NON-RESIDENTIAL SITE LAYOUT PLAN

GOODWILL

MAP 222; LOT 41
9 WASON ROAD
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:	APPLICANT:
MANUEL D. SOUSA ET. AL. c/o STOP & SHOP SUPERMARKET 1385 HANCOCK STREET QUINCY, MA 02169 H.C.R.D. BK. 7178; PG. 233	GOODWILL INDUSTRIES OF NORTHERN NEW ENGLAND 75 WASHINGTON AVENUE PORTLAND, ME 04101

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

REVISIONS

No.	DATE	DESCRIPTION	BY

PATRICK R. COLBURN No. 12055 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE

DATE: FEBRUARY 5, 2014 | SCALE: 1" = 40'
PROJECT NO: 13-1216-2 | SHEET 4 OF 10

P:_projects\13121621\13121621dwg\13121621-SITEPLAN.dwg, 3/7/2014 8:31:04 AM, mll

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 ROAD AND BRIDGE CONSTRUCTION, STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION, APPROVED AND ADOPTED 2010 ARE HEREBY INCORPORATED BY REFERENCE.
2. 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 HDPEP. CATCH BASINS SHALL BE TYPE B, AND HAVE 3' SUMPS UNLESS OTHERWISE NOTED.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION. THE ENGINEER 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 CONTACTING "DIG SAFE" AT 811 AT LEAST 72 HOURS BEFORE DIGGING.
4. ALL DRAINAGE PIPE SHALL BE INSTALLED FOLLOWING MANUFACTURER'S INSTALLATION INSTRUCTIONS.
5. SEE CONSTRUCTION DETAILS FOR SPECIFIC CONSTRUCTION INFORMATION.
6. CONTRACTOR TO CONFIRM CONSTRUCTABLITY OF NEW DMH#3231 AND RELAY 12" PVC ROOF DRAIN IF NECESSARY.

EROSION CONTROL NOTES:

1. ALL MEASURES IN THE PLAN SHALL MEET AS A MINIMUM THE BEST MANAGEMENT PRACTICES SET FORTH IN VOLUME 3 OF THE NEW HAMPSHIRE STORMWATER MANUEL TITLED "EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION," DATED DECEMBER 2008, AS AMENDED FROM TIME TO TIME.
2. WHENEVER PRACTICAL, NATURAL VEGETATION SHALL BE RETAINED, PROTECTED OR SUPPLEMENTED. THE STRIPPING OF VEGETATION SHALL BE DONE IN A MANNER THAT MINIMIZES SOIL EROSION.
3. APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO LAND DISTURBANCE.
4. THE AREA OF DISTURBANCE SHALL BE KEPT TO A MINIMUM. DISTURBED AREAS REMAINING IDLE FOR MORE THAN 30 DAYS SHALL BE STABILIZED.
5. MEASURES SHALL BE TAKEN TO CONTROL EROSION WITHIN THE PROJECT AREA. SEDIMENT IN RUNOFF WATER SHALL BE TRAPPED AND RETAINED WITHIN THE PROJECT AREA USING APPROVED MEASURES. WETLAND AREAS AND SURFACE WATERS SHALL BE PROTECTED FROM SEDIMENT.
6. OFFSITE SURFACE WATER AND RUNOFF FROM UNDISTURBED AREAS SHALL BE DIVERTED AWAY FROM DISTURBED AREAS WHERE FEASIBLE OR CARRIED NON-EROSIVELY THROUGH THE PROJECT AREA. INTEGRITY OF DOWNSTREAM DRAINAGE SYSTEMS SHALL BE MAINTAINED.
7. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN FUNCTIONING CONDITION UNTIL FINAL SITE STABILIZATION IS ACCOMPLISHED.
8. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED AFTER FINAL SITE STABILIZATION. TRAPPED SEDIMENT AND OTHER DISTURBED SOIL AREAS RESULTING FROM THE REMOVAL OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED WITHIN 30 DAYS UNLESS CONDITIONS DICTATE OTHERWISE.
9. THE TOWN OF HUDSON SHALL RESERVE THE RIGHT TO REQUIRE FURTHER EROSION CONTROL PRACTICES DURING CONSTRUCTION SHOULD THEY FIND IT NECESSARY.

LOAM & SEED ALL DISTURBED AREAS (TYP.)

DRAINAGE INVERT TABLE

CB#3651 RIM=199.29 INV.IN=193.85 INV.OUT=193.85

DMH#3659 RIM=199.46 INV.IN=182.65 INV.OUT=182.86

CB#3660 RIM=199.02 INV.OUT=194.24

DMH#3663 RIM=199.52 INV.IN=185.18 INV.OUT=185.18

DMH#3746 RIM=200.13 INV.IN=188.12(N) INV.IN=187.86(E) INV.OUT=187.86

DMH#3745 RIM=200.30 INV.IN=188.61(N) INV.IN=188.52(E) INV.IN=193.69(S) INV.OUT=188.43

DMH#3598 RIM=199.83 INV.OUT=188.16

DMH#3597 RIM=199.72 INV.OUT=TOO DEEP

DMH#3222 RIM=200.18 INV.IN=188.90(E) INV.IN=194.93(S) INV.OUT=188.81

DMH#3231 RIM=200.19 INV.IN=190.50(E) INV.IN=194.45(S) INV.OUT=190.26

DMH#3092 RIM=200.09 INV.IN=191.66 INV.OUT=191.64

DMH#3251 RIM=196.52 INV.OUT=TOO DEEP

CB#2987 RIM=197.77 INV.OUT=193.85

DMH#3852 RIM=199.85 INV.OUT=196.62

CB#3085 RIM=197.71 INV.IN=193.11(N) INV.IN=193.18(E) INV.OUT=193.11

CB#2643 RIM=200.08 INV.OUT=195.23

CB#2738 RIM=199.45 INV.OUT=TOO DEEP

CB#3176 RIM=197.68 INV.IN=192.85(N) INV.IN=192.76(E) INV.OUT=192.06

CB#3433 RIM=197.02 INV.OUT=193.33

DMH#3486 RIM=197.69 INV.IN=189.57(E) INV.IN=189.85(S) INV.OUT=189.47

DMH#3487 RIM=197.72 INV.IN=189.00(E) INV.IN=189.13(S) INV.OUT=187.51

DMH#3599 RIM=198.02 INV.OUT=TOO DEEP

DMH#3600 RIM=197.98 INV.OUT=189.78

CB#3672 RIM=195.62 INV.IN=191.94 INV.OUT=191.82

DMH#4010 RIM=196.44 INV.IN=TOO DEEP INV.OUT=185.53

OS#2582 RIM=194.17 INV.OUT=189.37

HW#2587 INV.=191.08

GRADING, DRAINAGE, AND EROSION CONTROL PLAN
GOODWILL
MAP 222; LOT 41
9 WASON ROAD
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:
MANUEL D. SOUSA ET. AL.
c/o STOP & SHOP SUPERMARKET
1385 HANCOCK STREET
QUINCY, MA 02169
H.C.R.D. BK. 7178; PG. 233

APPLICANT:
GOODWILL INDUSTRIES OF NORTHERN NEW ENGLAND
75 WASHINGTON AVENUE
PORTLAND, ME 04101

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

STATE OF NEW HAMPSHIRE — PATRICK R. COLBURN No. 12536 LICENSED PROFESSIONAL ENGINEER — 3/7/14

REVISIONS			
No.	DATE	DESCRIPTION	BY

DATE: FEBRUARY 5, 2014 | SCALE: 1" = 40'
PROJECT NO: 13-1216-2 | SHEET 5 OF 10

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

SOILS LEGEND

Cu	CHOCORUA MUCKY PEAT
MoB	MONTAUK FINE SANDY LOAM, 3 TO 8% SLOPES
MtB	MONTAUK STONY FINE SANDY LOAM, 3 TO 8% SLOPES
RbA	RIDGEBURY LOAM, 0 TO 8% SLOPES

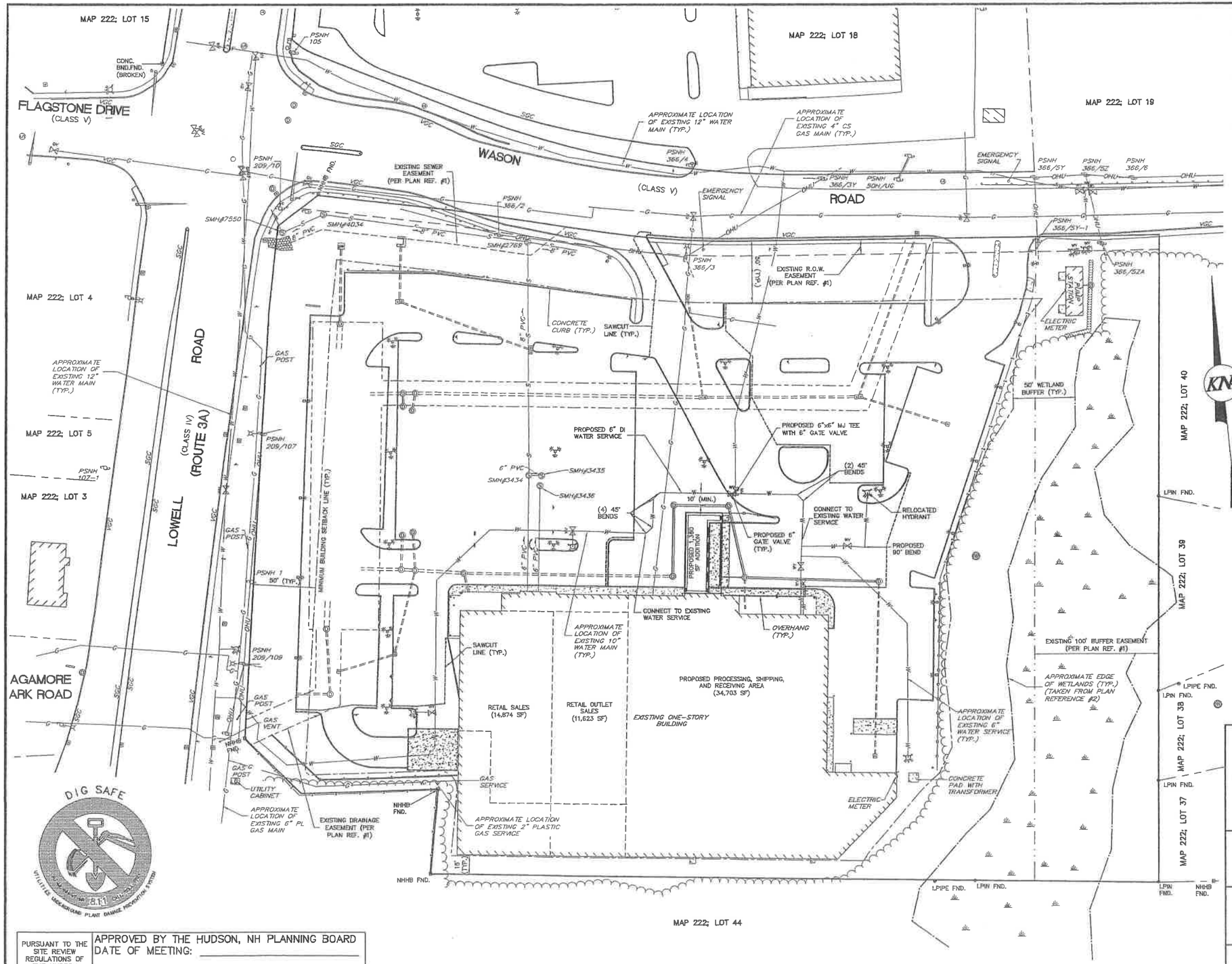
LEGEND

- STONE BOUND FOUND
- IRON PIN FOUND
- UTILITY POLE
- SIGN
- LIGHT
- SEWER MANHOLE
- DRAINAGE MANHOLE
- CATCH BASIN
- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- SLOPED GRANITE CURB
- CONCRETE CURB
- BUFFER EASEMENT
- DRAINAGE EASEMENT
- SLOPE EASEMENT
- TEMPORARY DANDY BAG AT ALL CATCH BASINS
- ABUTTER LINE
- PROPERTY LINE
- WETLAND
- CHAIN LINK FENCE
- STOCKADE FENCE
- GUARDRAIL
- DRAINAGE LINE
- TREELINE
- RETAINING WALL
- 10' CONTOUR
- 2' CONTOUR
- SCS SOIL LINE
- BUILDING SETBACK
- SAWCUT LINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED VERTICAL GRANITE CURB
- PROPOSED DRAIN LINE
- PROPOSED CONTOUR LINE

DIG SAFE 811

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

P:_project\1312162\1312162\dwg\1312162-SITEPLAN.dwg, 3/7/2014 8:31:29 AM, ml



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 ROAD AND BRIDGE CONSTRUCTION, STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION, APPROVED AND ADOPTED 2010 ARE HEREBY INCORPORATED BY REFERENCE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION. THE ENGINEER 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 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. EMERGENCY CONTACTS:
   HUDSON WATER UTILITY
   c/o PENNICHUCK WATER WORKS
   (603)882-5191
   HUDSON HIGHWAY DEPARTMENT
   (603)886-6018

INVERT TABLE

SMH#7550
RIM=191.09
INV.IN=183.74
INV.OUT=183.65

SMH#3434
RIM=198.70
INV.IN=189.54(S)
INV.IN=189.99(E)
INV.OUT=189.56

SMH#3436
RIM=198.82
INV.IN=191.64

SMH#3435
RIM=198.73
INV.OUT=TOO DEEP

SMH#2769
RIM=198.34
INV.IN=187.46(S)
INV.IN=187.47(E)
INV.OUT=187.28

SMH#4034
RIM=195.17
INV.IN=182.93
INV.OUT=184.81

LEGEND

- STONE BOUND FOUND
- IRON PIN FOUND
- UTILITY POLE
- SIGN
- LIGHT
- GAS VALVE
- WATER VALVE
- HYDRANT
- WATER SHUT OFF
- SEWER MANHOLE
- DRAINAGE MANHOLE
- CATCH BASIN
- ABUTTER LINE
- PROPERTY LINE
- WETLAND
- CHAIN LINK FENCE
- STOCKADE FENCE
- GUARDRAIL
- OVERHEAD UTILITIES
- GAS LINE
- WATER LINE
- SEWER LINE
- DRAINAGE LINE
- TREELINE
- RETAINING WALL
- BUILDING SETBACK
- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- SLOPED GRANITE CURB
- CONCRETE CURB
- BUFFER EASEMENT
- DRAINAGE EASEMENT
- SLOPE EASEMENT
- SAWCUT LINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED VERTICAL GRANITE CURB
- PROPOSED DRAIN LINE
- PROPOSED WATER LINE

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

UTILITY PLAN
GOODWILL
MAP 222; LOT 41
9 WASON ROAD
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:
MANUEL D. SOUSA ET. AL.
c/o STOP & SHOP SUPERMARKET
1385 HANCOCK STREET
QUINCY, MA 02169
H.C.R.D. BK. 7178; PG. 233

APPLICANT:
GOODWILL INDUSTRIES OF NORTHERN NEW ENGLAND
75 WASHINGTON AVENUE
PORTLAND, ME 04101

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

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

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____
SIGNATURE _____ DATE _____
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STATE OF NEW HAMPSHIRE
PATRICK H. COLBURN
No. 12608
LICENSED PROFESSIONAL ENGINEER
3/7/14

REVISIONS

No.	DATE	DESCRIPTION	BY

DATE: FEBRUARY 5, 2014 | SCALE: 1" = 40'
PROJECT NO: 13-1216-2 | SHEET 6 OF 10

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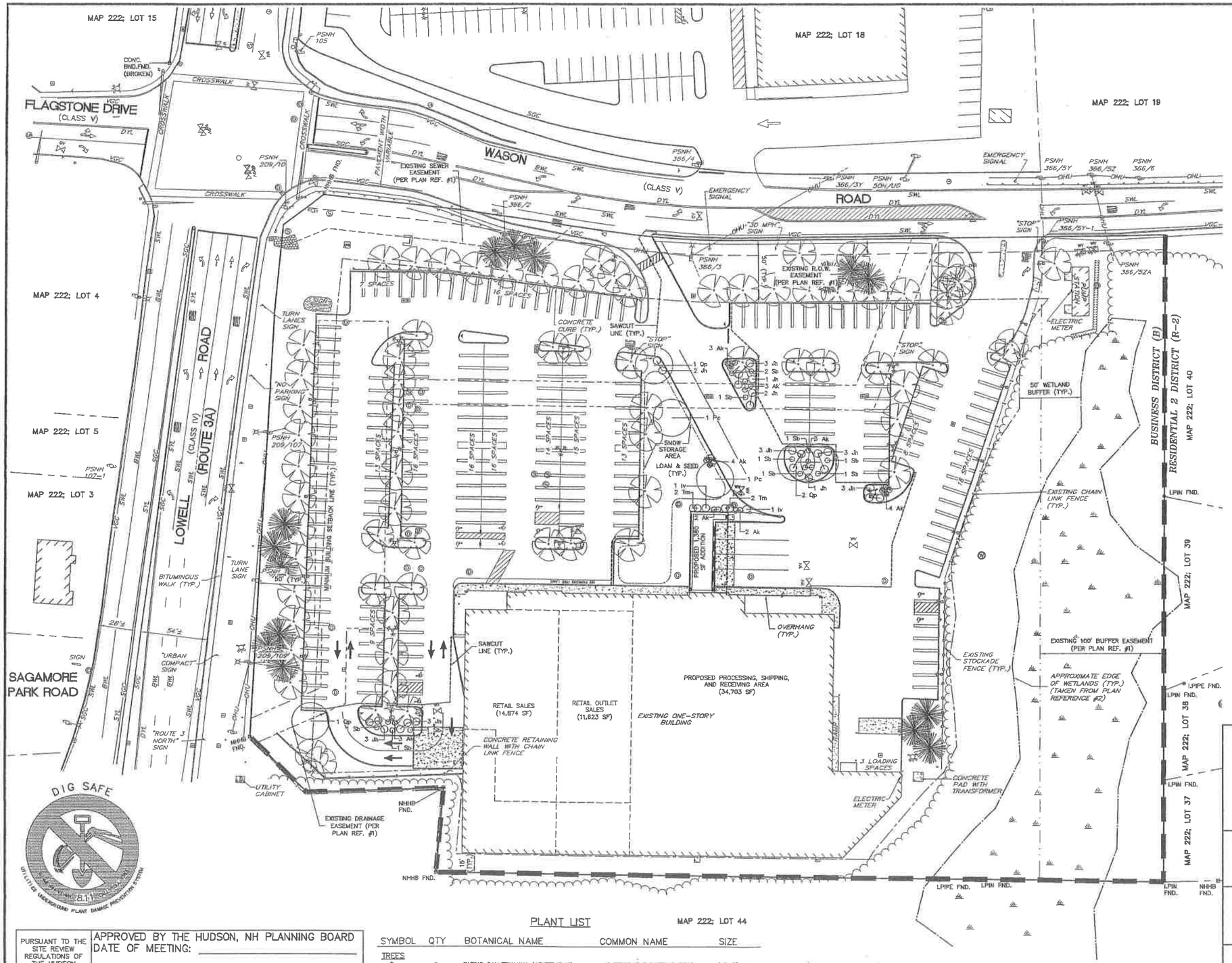

LANDSCAPE NOTES:

1. THE PURPOSE OF THIS PLAN IS TO SHOW THE PROPOSED SITE LANDSCAPE WHICH PROVIDES CLIMATIC RELIEF AND AESTHETIC APPEAL.
2. ALL PLANT MATERIALS USED SHALL BE NURSERY STOCK AND SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM DATE OF INSTALLATION. ANY MATERIAL WHICH DIES OR DOES NOT SHOWN HEALTHY APPEARANCE WITHIN THIS TIME SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE; WITH SAME WARRANTY REQUIREMENTS AS THE ORIGINAL. WARRANTIES TYPICALLY DO NOT COVER LOSS DUE TO INSECT INFESTATION OR MECHANICAL DAMAGE (I.E. SNOW STORAGE).
3. IF THE SOIL CONDITIONS ARE EXTREMELY SANDY, ALL TREES SHALL HAVE A 6" LAYER OF COMPACTED TOPSOIL PLACED IN THE BASE OF THE PLANT PIT AS A MOISTURE RETENTION LAYER. THE PLANT PIT SIDEWALLS SHALL BE OVER EXCAVATED BY AN ADDITIONAL 12" BEYOND THE NORMAL OUTSIDE RADIUS OF THE HOLE. A TOPSOIL MIXTURE SHALL BE USED TO BACKFILL THE HOLE AS FOLLOWED; ORGANIC TOPSOIL AMENDED WITH 10% WOOD ASH, 10% MANURE, 30% COMPOST AND A GRANULAR HYDROGEL TO ABSORB AND RETAIN WATER.
4. PLANTING BEDS AND SAUCERS SHALL RECEIVE A 4" MINIMUM THICKNESS OF PINE/HEMLOCK BARK MULCH OVER A 5oz. POLYPROPYLENE WEED CONTROL FABRIC.
5. PAVEMENT AND ROAD BASE MATERIAL ENCOUNTERED IN ANY LAWN OR PLANTING BED SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SUITABLE AMENDED SOIL INSTALLED AS SPECIFIED IN THE TURF ESTABLISHMENT SCHEDULE.

LANDSCAPE CALCULATIONS

EXISTING PARKING LOT INTERIOR LANDSCAPE AREA

EXISTING PARKING AREA PAVED:	118,841 SF
10% REQUIRED LANDSCAPE AREA:	11,884 SF
EXISTING LANDSCAPE AREA:	11,000 SF

REQUIRED PARKING LOT INTERIOR LANDSCAPE AREA

PROPOSED PARKING AREA PAVED:	92,602 SF
10% REQUIRED LANDSCAPE AREA:	9,260 SF
PROVIDED LANDSCAPE AREA:	19,338 SF

REQUIRED PARKING LOT SHADE TREES AND SHRUBS

PROPOSED PAVED AREA:	92,602 SF
SHADE TREES REQUIRED (92,602/1,600):	58 TREES REQUIRED
(OR 1 TREE/5 PARKING SPACES x 246)	49 TREES REQUIRED
SHADE TREES PROVIDED:	95 TREES TOTAL (69 EXISTING + 8 PROPOSED)
SHRUBS REQUIRED (92,602/200):	463 SHRUBS, OR
(OR 1.5 x 246 PROP. PARKING SPACES)	394 SHRUBS REQUIRED
SHRUBS PROVIDED:	BURRIED BY SNOW

LEGEND

- STONE BOUND FOUND
- IRON PIN FOUND
- UTILITY POLE
- SIGN
- LIGHT
- GAS VALVE
- WATER VALVE
- HYDRANT
- WATER SHUT OFF
- SEWER MANHOLE
- DRAINAGE MANHOLE
- CATCH BASIN
- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- SLOPED GRANITE CURB
- CONCRETE CURB
- BUFFER EASEMENT
- DRAINAGE EASEMENT
- SLOPE EASEMENT
- ABUTTER LINE
- PROPERTY LINE
- WETLAND
- CHAIN LINK FENCE
- STOCKADE FENCE
- GUARDRAIL
- OHU — OVERHEAD UTILITIES
- DRAINAGE LINE
- TREELINE
- RETAINING WALL
- BUILDING SETBACK
- ZONE LINE
- SAWCUT LINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED VERTICAL GRANITE CURB

PLANT LIST

MAP 222; LOT 44

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE
TREES				
Pc	2	PYRUS CALLERYANNA 'ARISTOCRAT'	ARISTOCRAT FLOWERING PEAR	2.5–3" CAL.
Qp	4	QUERCUS PALUSTRIS	PIN OAK	2.5–3" CAL.
SHRUBS				
Ak	24	AZALEA 'KAREN'	KAREN AZALEA	18–24"
Iv	2	ILEX VERTICILLATA 'MARYLAND BEAUTY'	MARYLAND BEAUTY WINTERBERRY	2–2.5'
Jh	24	JUNIPERUS HORIZONTALIS 'BAR HARBOR'	BAR HARBOR JUNIPER	#3
Sb	11	SPIRAEA BUMALDA 'FROEBELII'	FROEBEL SPIREA	18–24"
Tm	4	TAXUS MEDIA 'TAUNTONII'	TAUNTONI YEW	18–24" B&B

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

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LANDSCAPE PLAN

GOODWILL

MAP 222; LOT 41
9 WASON ROAD
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

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REVISIONS

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DATE: FEBRUARY 5, 2014 | SCALE: 1" = 40'
PROJECT NO: 13-1216-2 | SHEET 7 OF 10

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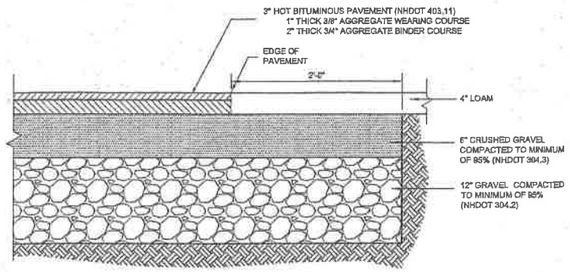
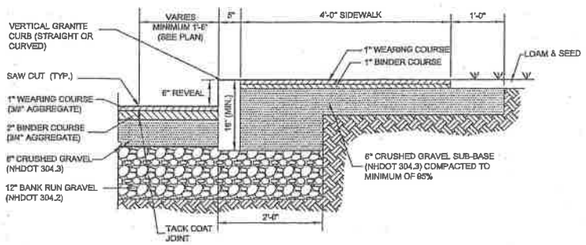


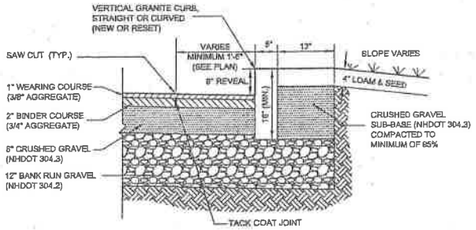
DRIVEWAY AND PARKING LOT SECTION

NOT TO SCALE
(MARCH 2008)



VERTICAL GRANITE CURB WITH BITUMINOUS SIDEWALK

NOT TO SCALE
(MARCH 2008)



VERTICAL GRANITE CURB DETAIL

NOT TO SCALE
(MARCH 2008)

TURF ESTABLISHMENT SCHEDULE

PURPOSE:

TO ESTABLISH AND MAINTAIN PERMANENT AND TEMPORARY TURF AREAS, RESTORE GROWTH TO EXISTING TURF AREAS DISTURBED DURING CONSTRUCTION AND CONTROL SOIL EROSION.

PREPARATION AND EXECUTION:

1. RAKE THE SUBGRADE OF ALL AREAS TO BE LOAMED AND SEEDED TO REMOVE RUBBISH, STICKS, ROOTS AND STONES LARGER THAN 1 INCH.
2. PLACE LOAM OVER AREAS TO BE SEEDED AND SPREAD.
3. FINE GRADE SURFACE AND SUPPLEMENT WITH SUITABLE LOAM WHERE NEEDED TO CREATE A UNIFORM SURFACE ACCORDING TO THE FINISH GRADES INDICATED; TOP AND BOTTOM OF SLOPES SHALL BE ROUNDED. NO LOAM SHALL BE SPREAD IF THE SUBGRADE IS EXCESSIVELY WET OR FROZEN.
4. 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 MIXTURE FOR AREA TO BE SEEDED BASED ON EXAMINATION OF PROJECT PLANS. UNIFORMLY SPREAD THE SEED BY BROADCASTING OR HYDROSEEDING. IF BROADCASTING, LIGHTLY RAKE INTO THE PREPARED SURFACE AND ROLL. IF, HYDROSEEDING, USE 4 TIMES THE RECOMMENDED RATE OF INOCULANT. AFTER SEED IS SPREAD, WATER THOROUGHLY WITH A FINE SPRAY.
7. 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 UNTILLABLE.
8. WITHIN 24 HOURS AFTER SEEDING OPERATION, UNIFORMLY MULCH THE AREA WITH HAY. ANCHOR MULCH ON ALL SLOPES EXCEEDING 3 : 1 USING MULCH NETTING INSTALLED IN ACCORDANCE WITH THE MANUFACTURER.
9. PROTECT AND PREVENT AGAINST WASHOUTS, ANY WASHOUTS WHICH OCCUR SHALL BE PROMPTLY REGRADED AND RESEEDED.
10. WHEN IT IS IMPRACTICAL TO ESTABLISH PERMANENT GROWTH ON DISTURBED EARTH BY 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:

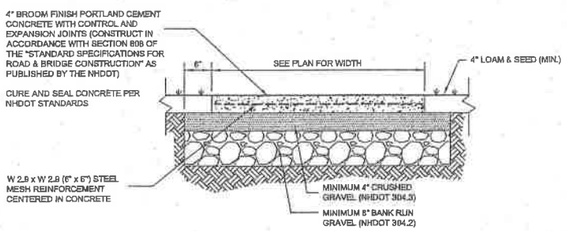
ALL SEEDED AREAS SHALL BE KEPT WATERED AND IN GOOD CONDITION. RESEED AS NECESSARY TO ESTABLISH HEALTHY UNIFORM GROWTH OVER THE ENTIRE SEEDED AREA. MAINTAIN SEEDED AREAS IN AN APPROVED CONDITION UNTIL FINAL ACCEPTANCE. MAINTENANCE SHALL INCLUDE REPAIRS FOR DAMAGE CAUSED BY EROSION.

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 POUNDS PER 1,000 S.F.
3. FERTILIZER SHALL BE APPLIED AT A RATE OF 30 POUNDS PER 1,000 S.F.
4. 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.
6. SEED MIXTURE FOR SLOPE AREAS SHALL BE APPLIED AT A RATE OF 80 POUNDS PER ACRE OR 2 POUNDS PER 1,000 S.F.
7. SEED MIXTURE FOR STORMWATER MANAGEMENT AREAS SHALL BE APPLIED AT A RATE OF 70 POUNDS PER ACRE OR 1.6 POUNDS PER 1,000 S.F.
8. MULCH SHALL BE APPLIED AT A RATE OF 90 POUNDS PER 1,000 S.F.

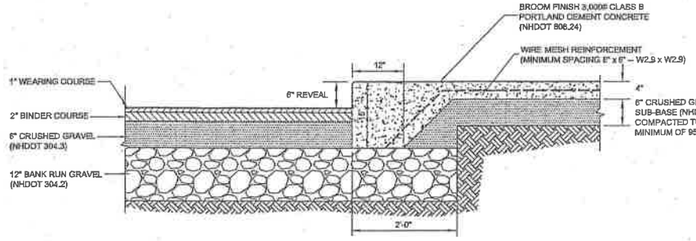
MATERIALS:

1. LOAM USED FOR TOPSOIL SHALL BE FRIABLE, FERTILE, NATURAL FREE-DRAINING LOAM; FREE OF ROOTS, GRASS, STICKS, WEEDS, CLAY, SOD LUMPS, DEBRIS AND STONES LARGER THAN 1 INCH IN ANY DIMENSION. SOIL SHALL NOT BE EXCESSIVELY ACID OR ALKALINE AND CONTAIN NO TOXIC MATERIALS.
2. LIME SHALL BE GROUND LIMESTONE CONTAINING NO LESS THAN 85% CALCIUM AND MAGNESIUM CARBONATES.
3. FERTILIZER SHALL BE 10-20-20 COMMERCIAL GRADE.
4. SEED MIXTURE FOR LAWN AREAS SHALL BE 99% PURE LIVE SEED AND CONSIST OF THE FOLLOWING:
   - 25% CREEPING RED FESCUE
   - 25% KENTUCKY BLUEGRASS
   - 25% REDTOP
   - 25% MANHATTAN PERENNIAL RYEGRASS
5. TEMPORARY SEEDING MIXTURE SHALL BE AN APPROVED CONSERVATION MIX OR CONSIST OF THE FOLLOWING:
   - 15% BLACKWELL OR SHELTER SWITCHGRASS
   - 20% NIAGRA OR KAW BIG BLUESTEM
   - 20% CAMPER OR BLAZE LITTLESTEM
   - 15% NE-27 OR BLAZE SAND LOVEGRASS
   - 10% VIKING BIRDSFOOT TREFOIL
   - INOCULUM SPECIFIC TO BIRDSFOOT TREFOIL MUST BE USED WITH THIS MIXTURE. IF SEEDING BY HAND, A STICKING AGENT SHALL BE USED. IF SEEDING WITH A HYDROSEEDER, USE FOUR TIMES THE RECOMMENDED AMOUNT OF INOCULUM.
6. SEED MIXTURE FOR SLOPE AREAS SHALL BE 99% PURE LIVE SEED AND SHALL CONSIST OF THE FOLLOWING:
   - 30% CREEPING RED FESCUE
   - 40% PERENNIAL RYE GRASS
   - 15% REDTOP
   - 15% BIRDSFOOT TREFOIL
   - *IN ADDITION TO THE MIX SPECIFIED ABOVE, CROWN 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.
7. SEED MIXTURE FOR STORMWATER MANAGEMENT AREAS, INCLUDING DETENTION BASINS AND VEGETATED TREATMENT SWALES SHALL CONSIST OF THE FOLLOWING:
   - 25% CREEPING RED FESCUE
   - 15% SWITCH GRASS
   - 15% FOX SEDGE
   - 15% CREEPING BENTGRASS
   - 10% FLATPEA
   - 20% WILDFLOWER VARIETY
8. 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.



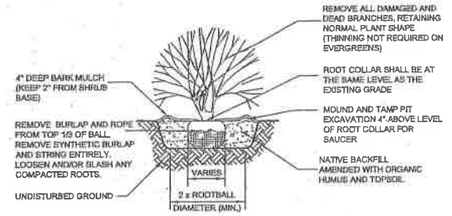
CONCRETE PAD DETAIL

NOT TO SCALE
(MARCH 2008)



INTEGRAL CURB AND WALK DETAIL

NOT TO SCALE
(MARCH 2008)

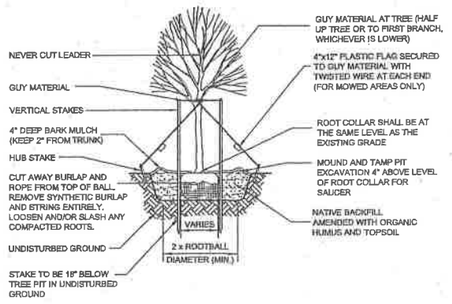


BALLED & BURLAP SHRUB PLANTING DETAIL

NOT TO SCALE
(JANUARY 2012)

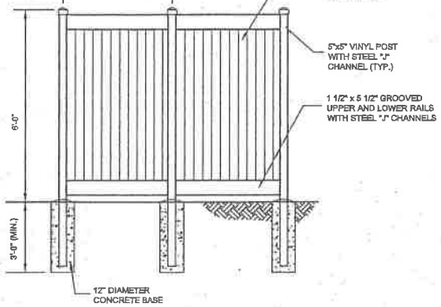
NOTE:

GUYING AND STAKING TO BE DETERMINED IN THE FIELD BY THE LANDSCAPE ARCHITECT. LOCAL FIELD CONDITIONS AS WELL AS PLANT CHARACTERISTICS WILL DETERMINE THE NECESSITY OF GUYING AND STAKING.



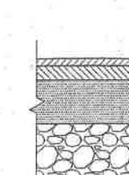
DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE
(JANUARY 2012)



VINYL FENCE DETAIL

NOT TO SCALE
(MARCH 2008)



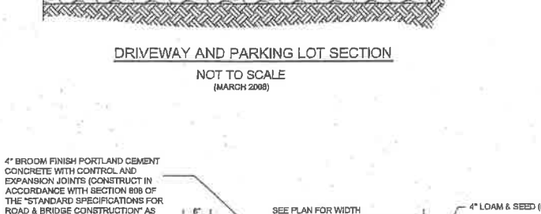
THROUGH (STRAIGHT) ARROW

PEDESTRIAN WALK & CROSSING STRIPING

STOP BAR

STRIPING NOTES:

1. ALL PAVEMENT MARKINGS SHALL BE IN CONFORMANCE WITH THESE STANDARDS AND THE CURRENT EDITION OF MUTCD.
2. WIDTH OF LINES SHALL VARY NO MORE THAN = 1/4 INCH FROM THAT SPECIFIED.
3. THE WET FILM THICKNESS OF A PAINTED LINE SHALL BE A MINIMUM OF 15 MILS THROUGHOUT THE ENTIRE WIDTH AND LENGTH OF LINE SPECIFIED.
4. OVERSPRAY SHALL BE KEPT TO AN ABSOLUTE MINIMUM.



HANDICAP STRIPING DETAIL

NOT TO SCALE
(MARCH 2012)

OPTION B

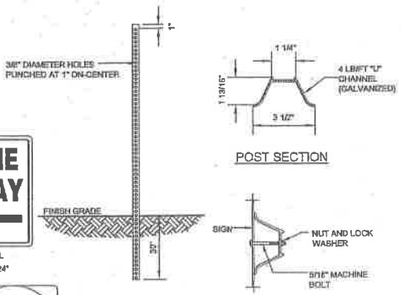
(2) FACE REPLACEMENT FOR (1) EXISTING D.F. PYLON SIGN

EXISTING CABINET & _____ RETAINER: WHITE*
FACE REPLACEMENTS: WHITE LEXAN
3M TRANS VINYLS WHITE, BLACK, & BLUE

FONTS: IMPACT

TRAFFIC SIGN NOTES:

1. ALL TRAFFIC SIGN FACES AND SHAPES SHALL CONFORM WITH THE MUTCD.
2. ALL SIGN POST MOUNTS SHALL CONFORM WITH THE AASHTO AND NHDOT SPECIFICATIONS.



POST SECTION

POST

MOUNTING

NOTE:
POST SHALL CONFORM TO NHDOT 616.2.5.3

STEEL SIGN POST DETAIL

NOT TO SCALE
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CONSTRUCTION DETAILS

GOODWILL

MAP 222; LOT 41
9 WASON ROAD
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

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STATE OF NEW HAMPSHIRE — PATRICK R. COLLINS No. 12985 LICENSED PROFESSIONAL ENGINEER — 5/7/14

REVISIONS

No.	DATE	DESCRIPTION	BY

DATE: FEBRUARY 5, 2014 | SCALE: AS SHOWN
PROJECT NO: 13-1215-2 | SHEET 8 OF 10

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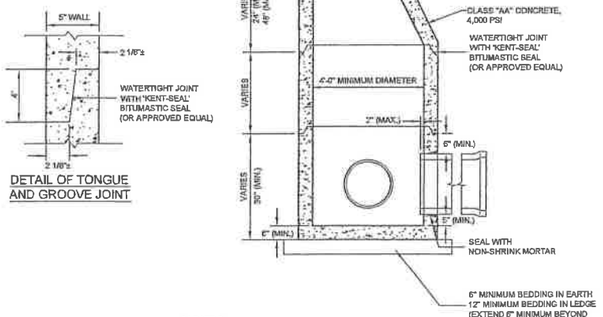


DETAIL OF TONGUE AND GROOVE JOINT

NOTES:

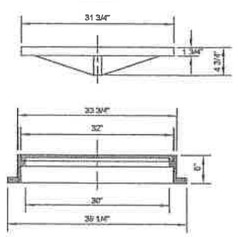
1. STEPS ARE NOT ALLOWED.
2. ALL SECTIONS SHALL BE CONCRETE CLASS AA (4,000 PSI). CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ. IN. PER L.F., IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER OF THE WALL.
3. THE TONGUE OR THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER L.F.
4. MATERIALS AND CONSTRUCTION TO NHDOT STANDARDS.

PRECAST REINFORCED DRAIN MANHOLE DETAIL

NOT TO SCALE

(MARCH 2008)

PLAN



SECTION

NOTES:

NEW HAMPSHIRE MAINTAINS A CLEAR OPENING DESIGNATION OF 30" FOR ITS MANHOLE CASTINGS.

FEATURES:

- 3" LETTERING
- COVERS MARKED DRAIN
- NONROCKING COVER
- DIAMOND SURFACE DESIGN

SPECIFICATIONS:

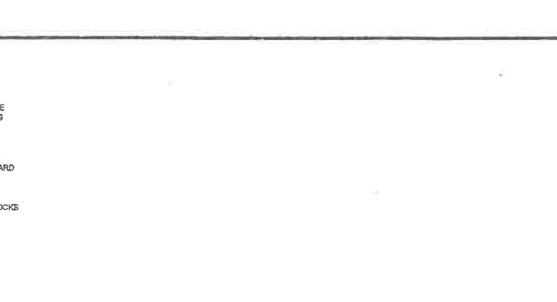
- FULLY MACHINED FRAME AND COVER
- H-20 LOAD RATED
- GRAY CAST IRON MEETS ASTM A48 CLASS 30

DRAIN MANHOLE FRAME AND COVER DETAIL

NOT TO SCALE

(JANUARY 2012)

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



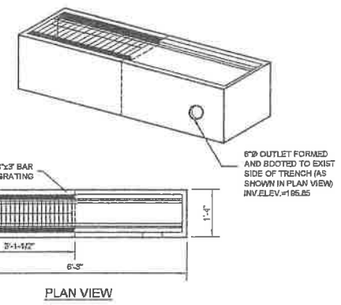
NOTES

1. THOROUGHLY COMPACTED SCREENED GRAVEL FOR RCP PIPE. SCREENED GRAVEL TO EXTEND TO SELECT FILL LINE.
2. FOR HDPE OR PVC PIPE, BEDDING SHALL BE 3/4" STONE TO THE TOP OF THE PIPE.

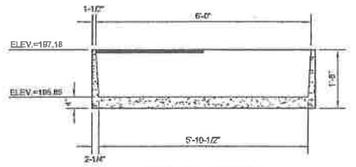
STORM DRAINAGE TRENCH DETAIL

NOT TO SCALE

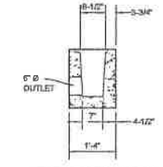
(MARCH 2008)



PLAN VIEW



SIDE SECTION VIEW



END SECTION VIEW

NOTES:

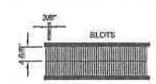
1. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.
2. AVAILABLE IN 3' AND 6' SECTIONS.
3. AVAILABLE IN END OR MIDDLE SECTIONS.
4. CONFORMS TO H-20 LOADING.

ITEM NO. M-TD6 6' SECTION	WEIGHT 1,315 LBS
M-TD6 3' SECTION	711 LBS

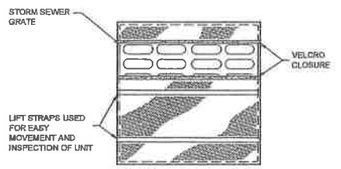
TRENCH DRAIN DETAIL

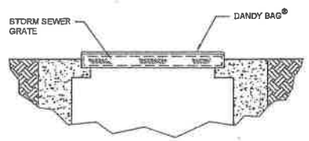
(BY SHEA, OR APPROVED EQUAL)

NOT TO SCALE



HANDICAP GRATE (OPTIONAL)





HI-FLOW DANDY BAG® (SAFETY ORANGE)

MECHANICAL PROPERTIES	TEST METHOD	UNITS	MARV
GRAB TENSILE STRENGTH	ASTM D 4632	kN (lbs)	1.82 (365) x 0.89 (200)
GRAB TENSILE ELONGATION	ASTM D 4632	%	24 x 19
PUNCTURE STRENGTH	ASTM D 4833	kN (lbs)	0.40 (90)
MULLEN BURST STRENGTH	ASTM D 3786	kPa (psi)	3097 (450)
TRAPEZOID TEAR STRENGTH	ASTM D 4533	kN (lbs)	0.51 (115) x 0.33 (75)
UV RESISTANCE	ASTM D 4355	%	90
APPARENT OPENING SIZE	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
FLOW RATE	ASTM D 4491	l/min/m² (gal/min/ft²)	5507 (145)
PERMITTIVITY	ASTM D 4491	Sec⁻¹	2.1

DANDY BAG®

NOT TO SCALE

(APRIL 2010)

CONSTRUCTION SEQUENCE

1. 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 REQUIREMENTS AND INTENT OF RSA 430:53 AND AGR 3800 RELATIVE TO INVASIVE SPECIES.
2. PRIOR TO COMMENCEMENT OF ANY EARTHMOVING OPERATIONS, ALL APPLICABLE TEMPORARY EROSION CONTROL MEASURES, INCLUDING SPECIFIED PERIMETER SILTATION FENCING AND STABILIZED CONSTRUCTION EXIT SHALL BE IN PLACE AS SHOWN ON THE PROJECT PLANS.
3. COMPLETE GRUBBING OPERATIONS. ALL STUMPS AND SIMILAR ORGANIC DEBRIS SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR. NATIVE ORGANIC SOIL MATERIALS SUITABLE FOR USE AS TOPSOIL SHALL BE STOCKPILED WITHIN AREAS OUT OF THE WAY OF OTHER CONSTRUCTIONS ACTIVITIES AND DRAINAGE FLOW. STOCKPILES SHALL BE TEMPORARILY SEEDED WITH WINTER RYE AND BE SURROUNDED WITH HAY BALES AND/OR FABRIC SILTATION FENCE IN ORDER TO PREVENT LOSS DUE TO EROSION.
4. BEGIN EARTHMOVING OPERATIONS, COMMENCING WITH WORK NEEDED TO BALANCE SITE AND FACILITATE BUILDING FOUNDATION AND RETAINING WALL CONSTRUCTION. PERMANENT DOWNSLOPE WORK SHALL BE PROTECTED FROM UPGRADIENT STORMWATER FLOW BY THE CONSTRUCTION OF TEMPORARY EARTHEN DIKES OR EXCAVATED SWALES.
5. ONCE BUILDING FOUNDATION WORK IS UNDERWAY, CONTINUE EARTHMOVING OPERATIONS UNTIL DESIGN SUBGRADE IS ACHIEVED.
6. INSTALL 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 FULLY STABILIZED.
7. PLACE GRAVEL AND CRUSHED GRAVEL OVER PROPOSED DRIVEWAY, WALKS AND PARKING AREAS AND COMPACT IN SPECIFIED LIFT THICKNESS.
8. COMPLETE EXCAVATION/STABILIZATION GRADING ACTIVITIES. WHEN COMPLETE, IMMEDIATELY BEGIN TOPSOILING PROPOSED TURF AREAS USING STOCKPILED LOAM SUPPLEMENTED WITH BORROW LOAM, IF NECESSARY, TO LEAVE A THICKNESS OF 4 INCHES OF FRIABLE LOAM.
9. 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 STABILIZED AND VEGETATED WITH A HEALTHY STAND OF TURF OR GROUND COVER. MAINTAIN SPECIFIED SILTATION/EROSION CONTROL MEASURES THROUGH ONE WINTER.
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

1. 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 GIVEN AREA OF THE SITE SHALL BE LEFT IN AN UNSTABILIZED CONDITION FOR A PERIOD OF TIME EXCEEDING FORTY-FIVE (45) CALENDAR DAYS.
2. TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH PROJECT PLANS. IN ADDITION, SIMILAR MEASURES SHALL BE INSTALLED WHERE AND WHEN THE FIELD CONDITION, OR FIELD 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 RAINFALL OR MORE. THEY SHALL BE CLEANED AND MAINTAINED AND OTHERWISE KEPT IN AN EFFECTIVE OPERATING MANNER THROUGHOUT THE CONSTRUCTION PERIOD.
3. 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 CLEANED OF DEPOSITED SEDIMENT SO AS TO MAINTAIN AN EFFECTIVE GRADE AND CROSS SECTION. ALL SWALES AND DITCHLINES SHALL BE FULLY STABILIZED PRIOR TO HAVING STORMWATER 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.
6. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
   A. BASE COURSE GRAVELS ARE INSTALLED IN AREAS TO BE PAVED;
   B. A MINIMUM OF 85% 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.
7. 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 JUDGEMENT IN INSTALLING SUPPLEMENTARY EROSION CONTROL MEASURES WHERE AND WHEN SPECIFIC SITE CONDITIONS AND/OR CONSTRUCTION METHODOLOGIES MAY WARRANT.
9. 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 CONFORM WITH THE RECOMMENDED BEST MANAGEMENT PRACTICE OUTLINED IN VOLUME 3 OF THE NEW HAMPSHIRE STORMWATER MANUAL "EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION."
10. 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

GOODWILL

MAP 222; LOT 41
9 WASON ROAD
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:	APPLICANT:
MANUEL D. SOUSA ET. AL. c/o STOP & SHOP SUPERMARKET 1385 HANCOCK STREET QUINCY, MA 02169 H.C.R.D. BK. 7178; PG. 233	GOODWILL INDUSTRIES OF NORTHERN NEW ENGLAND 75 WASHINGTON AVENUE PORTLAND, ME 04101

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

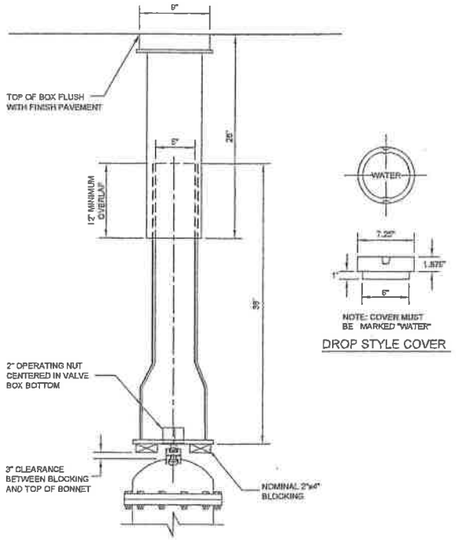
PATRICK R. COLBURN No. 12068 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE

REVISIONS

No.	DATE	DESCRIPTION	BY

DATE: FEBRUARY 5, 2014 | SCALE: AS SHOWN
PROJECT NO: 13-1216-2 | SHEET 9 OF 10

P:_project\13\216\13121621\dwg\13121621-DETAILS.dwg, 3/7/2014 8:51:41 AM, mf



BOTTOM DETAIL

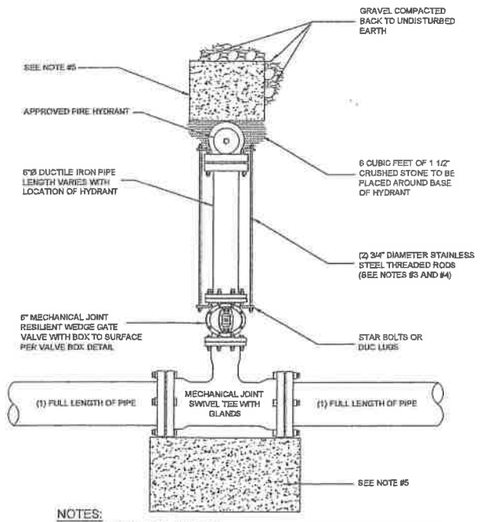
NOTE: COVER MUST BE MARKED "WATER"

DROP STYLE COVER

NOTES:

1. 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 FINISH GRADE.

VALVE BOX DETAIL
(A-09)
NOT TO SCALE
(MARCH 2008)



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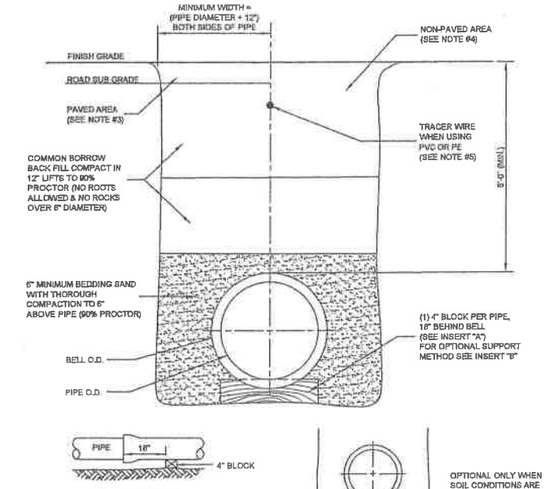
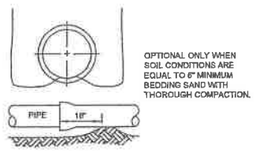
2. ALL PIPE SHOULD HAVE A MINIMUM DEPTHS OF 5'-0" FROM TOP OF PIPE TO FINISH GRADE.
3. 3/4"Ø S.S. RODS SHALL BE USED IN CONJUNCTION WITH REQUIRED S.S. NUTS. RODS ARE TO BE ATTACHED TO FITTINGS WITH EITHER STAR BOLTS OR DUC LUGS.
   10" FITTING OR SMALLER = (2) 3/4"Ø S.S. RODS & ASSOCIATED HARDWARE.
   12" FITTING OR LARGER = (4) 3/4"Ø S.S. RODS & ASSOCIATED HARDWARE.
4. WHEN DISTANCE FROM WATER MAIN TO HYDRANT IS MORE THAN 10'-0" SUBSTITUTE MEGALUGS (OR GRIP RINGS) IN LIEU OF THREADED RODS.
5. MINIMUM 3'x3'x3' PRE CAST CONCRETE THRUST BLOCK MAY BE USED WITH PENNICHUCK WATER WORKS, INC. APPROVAL OR CONCRETE THRUST BLOCK POURED AGAINST UNDISTURBED EARTH - SIZE TO BE BASED ON SIZE OF FITTING AND PRESSURE IN WATER MAIN. SEE THRUST BLOCK BEHIND FITTINGS DETAIL.

HYDRANT INSTALLATION
(A-10)
NOT TO SCALE
(MARCH 2008)



INSERT "A"

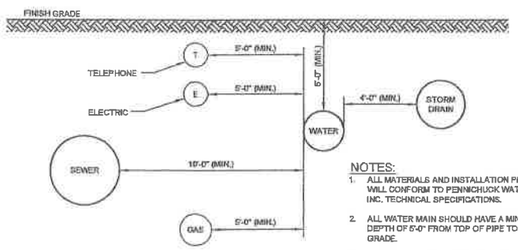


INSERT "B"

NOTES:

1. 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 FINISH GRADE.
3. REQUIREMENTS FOR SUBBASE AND BASE MATERIAL TYPE ARE TO BE IN ACCORDANCE WITH LOCAL AUTHORITY HAVING LOCAL JURISDICTION IN PAVED AREAS.
4. REQUIREMENTS FOR GRAVEL, LOAM AND/OR SEED ARE TO BE IN ACCORDANCE WITH LOCAL AUTHORITY HAVING LOCAL JURISDICTION IN NON-PAVED AREAS.
5. 10 GAUGE TRACER WIRE AS MANUFACTURED BY BMS, DIVISION OF ALBESTAR CORP., AVON, MA OR EQUIVALENT.

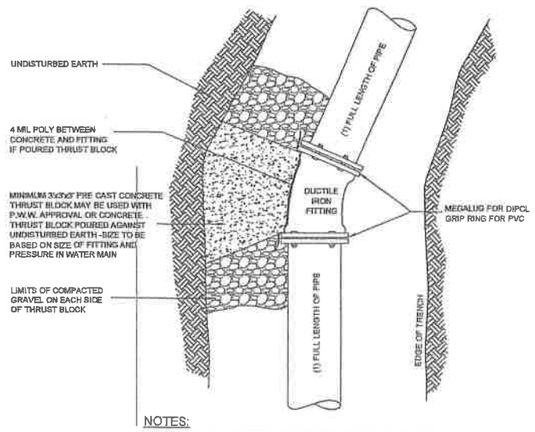
TRENCH DETAIL
(A-02)
NOT TO SCALE
(MARCH 2008)



NOTES:

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

UTILITY SEPARATION (MAIN) DETAIL
(A-01)
NOT TO SCALE
(MARCH 2008)



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THRUST BLOCK BEHIND FITTINGS INSTALLATION
(A-07)
NOT TO SCALE
(MARCH 2008)

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

CONSTRUCTION DETAILS
GOODWILL

MAP 222; LOT 41
9 WASON ROAD
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:
MANUEL D. SOUSA ET. AL.
c/o STOP & SHOP SUPERMARKET
1385 HANCOCK STREET
QUINCY, MA 02169
H.C.R.D. BK. 7178; PG. 233

APPLICANT:
GOODWILL INDUSTRIES OF NORTHERN NEW ENGLAND
75 WASHINGTON AVENUE
PORTLAND, ME 04101

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

PATRICK R. COLBURN No. 12986 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE

REVISIONS

No.	DATE	DESCRIPTION	BY

DATE: FEBRUARY 5, 2014 SCALE: AS SHOWN
PROJECT NO: 13-1216-2 SHEET 10 OF 10

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Goodwill Industries of Northern N.E. Site Plan

STAFF REPORT
April 9, 2014

SITE: Lowell/Wason Road -- Map 222/Lot 041 -- SP# 03-14

ZONING: Business (B)

PURPOSE OF PLAN: to convert the existing Stop & Shop Supermarket facility into a Goodwill Retail Store and shipping/receiving center. Application Acceptance & Hearing.

PLAN UNDER REVIEW ENTITLED: Amended Site Plan Goodwill Industries Map 222 Lot 41, 9 Wason Road, Hudson, NH, prepared by Keach-Nordstrom Associates, Inc., dated: Feb. 5, 2014, no revision date, consisting of Sheets 1 - 10 and Notes 1 – 25 (said plans are attached hereto).

ATTACHMENTS:

1) Project Narrative, Site Plan Application, Checklist and Waiver Forms, including an aerial site photo date stamped Mar. 07, 2014 – Attachment "**A**".
2) Keach-Nordstrom's Traffic Impact Analysis, dated March 4, 2014 – "**B**".
3) Keach-Nordstrom's Stormwater Management Analysis, dated March 3, 2014 – "**C**".
4) Comments/Memos from Zoning Administrator, Bill Oleksak, HFD Deputy Fire Chief, John O'Brien, and Asst. Assessor, Jim Michaud - ps – **"D".**
5) CLD's Initial Comments Report, dated Apr. 3, 2014 – "**E**".

REQUESTED WAIVERS:

1. HTC 275-9(C) -- Noise Study
2. HTC 275-9(D) -- Fiscal/Environmental Impact Study

STAFF COMMENTS/OUTSTANDING ISSUES:

1. The proposed new use, as depicted in Bill Oleksak's letter, dated Feb. 21, 2014, is allowed in the B district, and although it's not a supermarket, the business activities included in the new use are very similar to that of a supermarket. That is, products are delivered, sold and refuse/unused products are removed/distributed offsite. One important difference, as described in the traffic analysis, the amount of traffic associated with the new use, as opposed to the former supermarket, is a fraction of the latter. This is not to say that Stop & Shop ever came close to generating the amount of traffic that was professionally analyzed, and the basis for paid CAP Fee and offsite improvement costs associated with the former use. NOTE: in regard to a CAP Fee involving the new proposed use, with less P.M. Peak Hr. traffic associated with the site, and the fact that the new use is projected to create far less traffic to and from the site, no CAP Fee applies.

2. In regard to the possible future widening of both Lowell Rd. and Wason Rd., please refer to the "Master Plan" Sheet 1 of 10, and you will see a 40' wide ROW area, narrowing to approx. 20', along the lot's Lowell Rd. frontage. This existing ROW area, in all likelihood, will provide sufficient width for any future Lowell Rd. widening project along the frontage of the subject site. In regard to the lot's Wason Rd frontage, a 12 ft. in-width future road widening easement already exists and will continue with this project. This easement runs along the lot's entire frontage on Wason Rd. and ties into and includes 12' of the lot's Lowell Rd. frontage.

3. In regard to the two driveway entrances on Wason Rd., the one closest to Lowell Rd. includes a transition lane on Wason Rd., and is designed for Wason Rd. eastbound ingress only. Note: there is a solid double-yellow line running down Wason Rd, in front of the subject lot, and a left-turn queuing lane on the eastbound side of Wason Rd. in front of the aforementioned ingress only driveway. As such, this particular driveway is effectively barricaded from anyone (i.e., except for the worst traffic violators and they are out there) thinking about entering the site from the westbound side of Wason Rd. In any event, and besides, there is a well designed ingress/egress driveway associated with the site, located approximately 250 ft. east of said ingress only driveway.

4. Relative to the onsite parking, loading spaces and travel lanes, the proposed reduction in the number of parking spaces will provide for enhanced landscaping, which is proposed (see Landscape Plan, Sheet 7 of 10). The proposed number of parking spaces, together with the required number of loading spaces correspond with Planning Board Site Plan regulation requirements. Please refer to Notes 7 & 8 on the Master Plan Sheet 1 of 10 and said regulations, §275-8(26)(p), (27, (28) & (29)).

   The onsite travel lanes, however, need to be amended. Specifically, the loading area, located at the southwest corner of the building. Here, the two proposed travel lanes should be designated as one-way only, and the loading area, should be widened. Also, pavement surface directional arrows should be added throughout the site, relative to providing for safer flow of onsite travel.

5. Presently, the plans do not include a typical exterior lighting plan. However, Note 14, of the "Master Plan" addresses this issue, and the "Site Layout Plan", Sheet 4 of 10, shows the existing and relocated existing exterior site lighting locations.

6. In regard to onsite signage, Sheet 8 of 10 shows a photo of the existing freestanding sign pylon, with the Goodwill sign replacing the former business. The sign's dimensions are also provided on said sheet, next to the photo. All other site and wall signs will comply with the Zoning Ordinance sign requirements, and if any variation from same is proposed, ZBA action will be required.

7. Please read through CLD's attached Initial Comments Report – "E" – for the status of additional outstanding issues.

RECOMMENDATION: Taking the abovementioned outstanding issues/comments into consideration, and that this application is ready for application acceptance, for Wednesday night's initial public hearing staff recommends:

(i) Board vote for application acceptance;
(ii) Open and conduct the public hearing;
(iii) Allow the applicant to present the project and address all of the issues involved in this application, including those cited-above and in CLD's Initial Comments Report "**E**".
(iv) Hear any pro/con public input, and

(v) Defer further review of this site plan, date specific to the April 23d or May 14th meeting.

(vi) If the board moves to approve the waivers and/or the application, staff has provided below the appropriate DRAFT MOTIONS.

APPLICATION TRACKING:

- 03/07/2014 – Site Plan application submitted;
- 04/09/2014 - Initial public hearing scheduled.

DRAFT MOTIONS:

I move to accept the Site Plan application for Goodwill Industries, 9 Wason Rd., Map 222/Lot 041.

Motion by: _____Second: _____Carried/Failed: _____.

I move to defer further review of the Goodwill Industries Site Plan application, 9 Wason Rd., Map 222/Lot 041date specific, to the May 14, 2014 meeting.

Motion by: _____Second: _____Carried/Failed: _____.

REQUESTED WAIVERS:

1. HTC 275-9(C) -- Noise Study
2. HTC 275-9(D) -- Fiscal/Environmental Impact Study

1) HTC 275-9C – Noise Study

I move to grant the requested waiver: HTC 275-9C - Noise Study - because such a study is unnecessary, taking into consideration that the majority of the commercial activities associated with the proposed use shall be conducted inside the subject building, thus reducing the noise impact upon abutting properties, which are primarily existing commercial uses, and as such, 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) HTC 275-9D – Fiscal Impact Study

I move to grant the requested waiver: HTC 275-9D - Fiscal/Environmental Impact Study - because in addition to the submitted plans and submitted application documents said study is unnecessary in order to evaluate the fiscal/environmental impact of this development, and as such, the granting of this waiver is not contrary to the spirit and intent of the Site Plan Review regulations.

Motion by: _____Second: _____Carried/Failed: _____

MOTION to APPROVE:

I move to grant approval for the Site Plan entitled: : Amended Site Plan Goodwill Industries Map 222 Lot 41, 9 Wason Road, Hudson, NH, prepared by Keach-Nordstrom Associates, Inc., dated: Feb. 5, 2014, no revision date, consisting of Sheets 1 - 10 and Notes 1 – 25 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 easements along Lowell Rd and Wason Rd. shall be favorably reviewed and recommended on by Town Counsel.

3) All improvements shown on the Plan, including Notes 1-25, shall be completed in their entirety and at the expense of the Applicant or his assigns.

4) After the issuance of the foundation permit and prior to the issuance of the framing permit, 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) 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.

6) Onsite landscaping shall be provided for in accordance with the plant and tree species specified on Sheet 7 of 10 of the Plan.

7) 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.

8) This approval shall be subject to final engineering review.

Motion by: _____Second: _____Carried/Failed: _____

KNA KEACH-NORDSTROM ASSOCIATES, INC.

"A"

Goodwill Industries of Northern New England
Hudson Facility

Project Narrative

The proposed project entails converting the existing Stop & Shop supermarket facility into a Goodwill retail sales and shipping/receiving facility. The property is located at 9 Wason Road, at the corner of Lowell Road and Wason Road. The Goodwill – Hudson facility will consist of four main elements. There will be a retail store with an attended donation center on the far west end of the building. Next to the retail store will be a retail outlet store, where irregular or "B" quality products are sold for a discount. The majority of the building space will be occupied by the "back room" where processing, shipping and receiving will take place. Back room activities include sorting, grading, and preparing product to be sold in both the retail and the retail outlet stores. The sorting process will include deeming some product to be discarded. Discarded product is sorted by type, and hauled away by an outside contractor. The back room is a continuous stream of product flow. Products are not stored in this facility. Traditional shipping and receiving activities will take place at this facility. Goods arrive for the retail stores, and goods are returned to the Goodwill Warehouse facility in Gorham, Maine.

The existing site includes parking accommodations for a large grocery store, far exceeding the parking demand for the proposed use. The site plan amendment entails limited construction in two locations on the existing property. The first location is right in front of the building, where the applicants propose to remove an area of existing pavement, curbing, and associated site appurtenances, and reconfigure the area to accommodate daily deliveries to and from the site. The parking in this area is greatly reduced, leading to a significant increase in internal green space. Work in front of the building includes construction of a building addition, totaling 1,380 square feet, to house four additional loading dock bays. Along the westerly edge of the building, the applicants propose installation of a new entrance, to accommodate the attended donation center. Work along the west side of the building entails removal of existing pavement and curbing, making way for an extended canopy over a concrete pad. Visitors wishing to donate goods for sale will stop under the canopy and unload their goods into the facility for processing. Traffic is restricted to one-way in this location to accommodate two vehicles under the canopy at one time.

The proposed use is permitted within the Business Zone, pursuant to a Zoning Determination issued by the Hudson Zoning Administrator. The applicants believe it is an opportune site to retrofit to meet their needs, and are excited to move Goodwill into Hudson.

10 Commerce Park North, Suite 3B Bedford, NH 03110 Phone (603) 627-2881 Fax (603) 627-2915

"A" Cont.

HUDSON MAR 07 2014 COMMUNITY DEVELOPMENT

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

Date of Application: March 06, 2014 Tax Map # 222 Lot # 41

Name of Project: Goodwill-Hudson

Zoning District: B-Business (For Town Use) General SP# 03-14 (For Town Use)

ZBA Action: N/A

PROPERTY OWNER:	DEVELOPER:/APPLICANT
Name: Manuel D. Sousa Et. Al.	Goodwill Industries of Northern New England
Address: 46 Lowell Road	75 Washington Avenue
Address: Hudson, NH 03051	Portland, ME 04101
Telephone # 603-880-7799	207-774-6323
Fax # N/A	N/A
Email: N/A	mvjsweeney@gmail.com

PROJECT ENGINEER	SURVEYOR
Name: Keach-Nordstrom Assoc., Inc.	Keach-Nordstrom Assoc., Inc.
Address: 10 Commerce Park No., Unit 3	10 Commerce Park No., Unit 3
Address: Bedford, NH 03110	Bedford, NH 03110
Telephone # 603-627-2881	603-627-2881
Fax # 603-627-2915	603-627-2915
Email: abasso@keachnordstrom.com	abasso@keachnordstrom.com

PURPOSE OF PLAN:

To convert the existing Stop & Shop Supermarket facility into a Goodwill Retail Store and shipping/receiving center.

For Town Use mtg.

Plan Routing Date: 3-12-14 ~~Sub/Site~~ Date: 4-9-14

_____ I have no comments _____ I have comments (attach to form)

_____ Title: _____ Date: _____
(Initials)

DEPT:
_____ Zoning _____ Engineering _____ Assessor _____ Police _____ Fire _____ Planning
_____ Consultant _____ Highway Department

Fees Paid: _____

SITE DATA SHEET

PLAN NAME: Goodwill-Hudson

PLAN TYPE: SITE PLAN

LEGAL DESCRIPTION: MAP 222 LOT 41

DATE: March 06, 2014

Location by Street	Lowell Road and Wason Road
Zoning:	B-Business
Proposed Land Use:	Retail
Existing Use:	Retail
Surrounding Land Use(s):	Residential/Retail
Number of Lots Occupied:	1
Existing Area Covered by Building:	64,406 sf
Existing Buildings to be removed:	0
Proposed Area Covered by Building:	65,786 sf
Open Space Proposed:	43.3% (39.8% existing)
Open Space Required:	35%
Total Area:	S.F.: 370.702 Acres: 8.510
Area in Wetland:	37,476 sf Area Steep Slopes: 0
Required Lot Size:	30,000 sf
Existing Frontage:	414.7' (Lowell Road) 682.29' (Wason Road)
Required Frontage:	150'

Building Setbacks:	Required*	Proposed
Front:	50'	50'
Side:	15'	15'
Rear:	15'	15'

SITE PLAN DATA SHEET
(Continued)

Flood Zone Reference: 33011CO656D Panel 656 (not in flood zone)

Width of Driveways: 20'-West 72'-East

Number of Curb Cuts: 2

Proposed Parking Spaces: 246 (10-HC)

Required Parking Spaces: 193

Basis of Required Parking (Use): 15 Space/200 sf-Retail-132.49
1 Space/600 sf-Processing-60.14

Dates/Case #/Description/Stipulations of ZBA, Conservation Commission, NH Wetlands Board Actions: N/A
(Attach stipulations on separate sheet)

Waivers Requested:	Hudson Town Code Reference	Regulation Description
	1. 275-9(C)	Noise Study
	2. 275-9(D)	Fiscal/Environmental Impact
	3.	
	4.	
	5.	
	6.	
	7.	
	8.	

(Left column for Town Use)

Impact Fees:
C.A.P Fee:

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 site plan 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
PK	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.	
PK	b)	A Site Plan narrative, describing the purpose, locations, long-range plans, impacts on traffic, schools, and utilities	
PK	c)	Plan scale at not less the one inch equals fifty feet (1" = 50')	
PK	d)	Locus plan with 1,000' minimum radius of site to surrounding area	
PK	e)	Plan date by day/month/year	
PK	f)	Revision block inscribed on the plan	
PK	g)	Planning Board approval block inscribed on the plan	
PK	h)	Title of project inscribed on the plan	
PK	i)	Names and addresses of property owners and their signatures inscribed on the plan	
PK	j)	North point inscribed on the plan	
PK	k)	Property lines: exact locations and dimensions	
PK	l)	Square feet and acreage of site	
PK	m)	Square feet of each building (existing and proposed)	
PK	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
MC	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	
MC	p) Locations of existing and proposed permanent monuments and bench marks within 200 feet of the development tract	
MC	q) Pertinent highway projects	
MC	r) Assessor's Map and Lot number(s)	
MC	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	
MC	t) Delineate zoning district on the plan	
MC	u) Storm water drainage plan	
MC	v) Topographical elevations at 2-foot intervals contours: existing and proposed	
MC	w) Utilities: existing and proposed	
MC	x) Parking: existing and proposed	
MC	y) Parking space: length and width	
MC	z) Aisle width/maneuvering space	
MC	aa) Landscaping: existing and proposed	
MC	ab) Building and wetland setback lines	
MC	ac) Curb cuts	
MC	ad) Rights of way: existing and proposed	
MC	ae) Sidewalks: existing and proposed	
N/A	af) Exterior lighting plan	
MC	ag) Sign locations: size and design	
MC	ah) Water mains and sewerage lines	
N/A	ai) Location of dumpsters on concrete pads	
MC	aj) All notes from plats	

Applicant Initials		Staff Initials
ak)	Buffer as required by site plan regulations	
al)	Green and open space requirements met with both types of spaces inscribed on the plan	
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 performed by a State of New Hampshire Certified Soil Scientist, who shall affix his/her stamp and signature shall be inscribed on the plan.	
an)	Wetlands (and poorly-drained and very poorly-drained soils, 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.	
ao)	"Valid for one year after approval" statement inscribed on the plan.	
ap)	Loading bays/docks	
aq)	State of New Hampshire engineer's stamp, signature, surveyor's stamp, and signature	
ar)	Error of closure (1 in 10,000 or better)	
as)	Drafting errors/omissions	
at)	Developer names, addresses, telephone numbers and signatures	
au)	Photographs, electronic/digital display or video of site and area	
av)	Attach one (1) copy of the building elevations	N/A EXISTING
aw)	Fiscal impact study	
ax)	Traffic study	
ay)	Noise study	

Applicant Initials		Staff Initials
AK az)	Copies of any proposed or existing easements, covenants, deed restrictions, right of way agreements or other similar documents	DC
AK ba)	Copy of applicable Town, State, Federal approval/permits to include but not limited to the following:	JC

- 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.

AK bb)	Presentation plan (colored, with color-coded bar chart)	JC
AK bc)	Fees paid to clerk	JC
AK 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.	JC

*Under the purview of the Planning Board, any and all items may be waived.

APPLICATION FOR SITE PLAN REVIEW
TOWN OF HUDSON, NEW HAMPSHIRE

I hereby apply for Site 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 Site 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 given 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 to 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/or inspections conducted on his/her (their) property in connection with this applications.

Signature of Owner: Manuel D. Sousa

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

Signature of Developer: [signature]

- 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 Code Enforcement Officer/Building Inspector must be notified within two (2) working days of any change by the individual in charge of the project.

APPLICATION IS DUE AT NOON 21 days prior to the Planning Board Meeting. (The date the Agenda is CLOSED.) Any applications received after that time will be deferred until the next available meeting.

SUBDIVISION/SITE PLAN WAIVER REQUEST FORM

Name of Subdivision/Site Plan: **Goodwill - Hudson**

Street Address: **9 Wason Road, Hudson, New Hampshire 03051**

I **Anthony Basso** hereby request that the Planning Board waive the requirements of item **HTC 275-9C** of the Subdivision/Site Plan Checklist in reference to a plan presented by **Keach-Nordstrom Associates, Inc.** (name of surveyor and engineer) dated **February 5, 2014** for property Tax Map(s) **222** and Lot(s) **41** 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. The existing supermarket use is retail in nature, and similar to the proposed use. It is not expected that the Goodwill facility will bring any increased noise pollution to the site and to the residential and retail uses surrounding it, therefore granting of the waiver is in keeping with the spirit and intent of the ordinance.

Signed: _____

Applicant or Authorized Agent

Planning Board Action:

Waiver Granted: _____

Waiver Not Granted: _____

SUBDIVISION/SITE PLAN WAIVER REQUEST FORM

Name of Subdivision/Site Plan: **Goodwill - Hudson**

Street Address: **9 Wason Road, Hudson, New Hampshire 03051**

I **Anthony Basso** hereby request that the Planning Board waive the requirements of item **HTC 275-9D** of the Subdivision/Site Plan Checklist in reference to a plan presented by **Keach-Nordstrom Associates, Inc.** (name of surveyor and engineer) dated **February 5, 2014** for property Tax Map(s) **222** and Lot(s) **41** 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 with the CAP fee that this previously paid to 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 site is currently developed and the proposed construction will only improve the Best Management Practices onsite. Fiscally, the site was previously subject to a substantial CAP fee.

Signed: _____

Applicant or Authorized Agent

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:
____1.	Application incomplete	_____
✓ 2.	Application complete. Include any applicable requested waivers, fees paid, routing sheet returned	3.7.14
____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:	

GOODWILL – HUDSON
TAX MAP 222; LOT 41
KNA Project No. 13-1216
KNA PROJECT NO. 13-1216-2

KNA KEACH-NORDSTROM ASSOCIATES, INC.

"B"

March 4, 2014

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

Subject: **Traffic Impact Analysis**
Goodwill – Hudson: Tax Map 222; Lot 41
KNA Project No. 13-1216-2

Dear Mr. Cashell:

As you are aware, Goodwill Industries of Northern New England is preparing plans to retrofit the existing Stop & Shop Supermarket site (now vacant) with a Goodwill retail sales and shipping/receiving center. The purpose of this brief Traffic Impact Analysis is to illustrate the fact that the traffic generated by previous use of the site far exceeds that from the proposed Goodwill facility. In order to compare traffic generated from the two uses, we relied upon information presented within the 8th Edition *Trip Generation,* published by the Institute of Transportation Engineers. Within this document, trip generation rates are presented for a wide variety of "typical" uses. To prepare traffic estimates for the uses, we relied upon rates within Land Use Code 850 (Supermarkets), Land Use Code 820 (Shopping Centers), and Land Use Code 110 (General Light Industrial).

The previous supermarket use and the proposed retail use are common land uses easy to ascertain within the ITE manual. However, the processing, shipping and receiving uses associated with the proposed Goodwill is a bit more difficult to fit within the listed land use codes. General Light Industrial is described to "have an emphasis on activities other than manufacturing and typically have minimal office space." This is in keeping with the description of the "back room" use described by the applicant, which includes sorting, grading, and preparing product to be sold in the retail store. The sorting process will result in some product being discarded. Discarded product is sorted by type and hauled away. The back room is not a warehouse storage facility, rather, it operates with a continuous stream of product flow. According to the applicant, this facility is anticipated to see eight trips per day from large tractor trailer delivery trucks and waste recyclers, above and beyond the passenger vehicle trips estimated below.

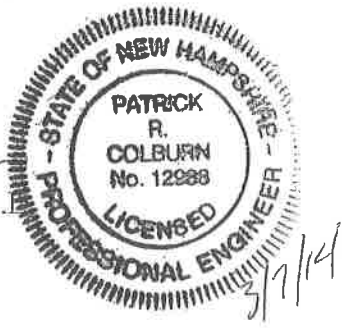
A comparison of the existing supermarket trip generation versus the proposed Goodwill trip generation is presented in the table below.

			Avg. Trips Per 1,000 sf GFA			Total Trips		
	Land Use Code	Building Area (square feet)	AM Peak	PM Peak	Saturday Mid-Day	AM Peak	PM Peak	Saturday Mid-Day
Stop & Shop	850 (Supermarket)	61,200	3.59	10.50	10.85	219.71	642.60	664.02
Goodwill	820 (Shopping Center)	26,497	N/A	3.73	4.89	N/A	98.83	129.57
	110 (General Light Industrial)	36083	0.92	0.97	0.14	33.20	35.00	5.05
	Goodwill Totals		0.92	4.70	5.03	33.20	133.83	134.62

As the table above illustrates, the anticipated vehicle trips to and from the proposed Goodwill facility will be just a fraction of the trips resulting from the previous supermarket use. The AM peak hour is not a concern at all, given the stores hours of operation. The only traffic to the site during the AM peak hour will be employee and truck traffic, which is limited and not anticipated to have any adverse impacts on existing traffic flow. The PM peak hour traffic and the Saturday mid-day peak hour traffic for the proposed use is just 20% of that of the previous use.

We trust the above information is self-explanatory and in keeping with your requirement for a traffic analysis. Should you have any questions or require further information, please do not hesitate to contact this office.

Respectfully,



Patrick Colburn, P.E.
Project Manager

Owner Affidavit

I, the undersigned, owner of the property referenced as Tax Map 222, Lot 41, located in Hudson, New Hampshire, hereby verify that I have authorized Keach-Nordstrom Associates Inc., to submit on my behalf, a Non-Residential Site Plan Application to the Hudson Planning Board, and all applicable state and local permit applications. Additionally, I authorize Keach-Nordstrom Associates Inc., to aid in the representation of these applications throughout the approval process.

Signature of Owner: Manuel D. Sousa

Address of Owner: 46 Lowell Road
Hudson, NH 03051

Date: 3/7/2014

KNA KEACH-NORDSTROM ASSOCIATES, INC.

Goodwill Industries of Northern New England
Hudson Facility

Project Narrative

The proposed project entails converting the existing Stop & Shop supermarket facility into a Goodwill retail sales and shipping/receiving facility. The property is located at 9 Wason Road, at the corner of Lowell Road and Wason Road. The Goodwill – Hudson facility will consist of four main elements. There will be a retail store with an attended donation center on the far west end of the building. Next to the retail store will be a retail outlet store, where irregular or "B" quality products are sold for a discount. The majority of the building space will be occupied by the "back room" where processing, shipping and receiving will take place. Back room activities include sorting, grading, and preparing product to be sold in both the retail and the retail outlet stores. The sorting process will include deeming some product to be discarded. Discarded product is sorted by type, and hauled away by an outside contractor. The back room is a continuous stream of product flow. Products are not stored in this facility. Traditional shipping and receiving activities will take place at this facility. Goods arrive for the retail stores, and goods are returned to the Goodwill Warehouse facility in Gorham, Maine.

The existing site includes parking accommodations for a large grocery store, far exceeding the parking demand for the proposed use. The site plan amendment entails limited construction in two locations on the existing property. The first location is right in front of the building, where the applicants propose to remove an area of existing pavement, curbing, and associated site appurtenances, and reconfigure the area to accommodate daily deliveries to and from the site. The parking in this area is greatly reduced, leading to a significant increase in internal green space. Work in front of the building includes construction of a building addition, totaling 1,380 square feet, to house four additional loading dock bays. Along the westerly edge of the building, the applicants propose installation of a new entrance, to accommodate the attended donation center. Work along the west side of the building entails removal of existing pavement and curbing, making way for an extended canopy over a concrete pad. Visitors wishing to donate goods for sale will stop under the canopy and unload their goods into the facility for processing. Traffic is restricted to one-way in this location to accommodate two vehicles under the canopy at one time.

The proposed use is permitted within the Business Zone, pursuant to a Zoning Determination issued by the Hudson Zoning Administrator. The applicants believe it is an opportune site to retrofit to meet their needs, and are excited to move Goodwill into Hudson.

10 Commerce Park North, Suite 3B Bedford, NH 03110 Phone (603) 627-2881 Fax (603) 627-2915

KNA KEACH-NORDSTROM ASSOCIATES, INC.

"C"

March 3, 2014

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

Subject: **Stormwater Management Analysis**
Goodwill – Hudson; Tax Map 222; Lot 41
KNA Project No. 13-1216-2

Dear Mr. Cashell:

I am writing this letter in place of a formal Stormwater Management Report due to the limited nature of the proposed site plan amendment and its negligible impact on the existing stormwater treatment and mitigation system on the subject site. As you are aware, the proposed project entails converting the existing Stop & Shop Supermarket facility into a Goodwill retail outlet and processing center. The existing structure will be divided into three separate rooms. Customers will shop within either the general retail store, or the outlet retail store. Together, these areas occupy 26,497 square feet of the existing structure. The remaining building area (34,703 square feet), along with a small proposed addition, will be utilized for warehouse storage and processing space.

The existing supermarket site includes 323 parking spaces and three loading spaces. The loading spaces provide access to three loading docks situated at the southeast corner of the existing building. The proposed facility requires only 193 parking spaces, due to the greatly reduced retail space. The proposed building addition (30'x65') will accommodate four additional loading docks. Due to the reduced parking demand, the proposed site plan adds considerable internal green space to the existing site, thereby benefiting the existing stormwater treatment and mitigation systems. Presented in the paragraphs that follow are specific details about the proposed site plan amendments that support this letter report's conclusion.

The existing stormwater management system onsite consists of both above ground and subsurface structures. A portion of the existing parking lot is graded to drain toward two double grate catch basins (CB#3433 and CB#3672), which outlet into an above ground sediment forebay and detention pond. The rest of the property drains to a series of other double grate and single grate catch basins, which all drain via closed pipe into a large subsurface detention pond located northwest of the building beneath existing parking spaces. Discharge from the above ground pond is directed via closed pipe into the subsurface pond. All of the onsite stormwater, following treatment and mitigation, is discharged into the municipal separate storm sewer system (MS4) under Lowell Road. Stormwater treatment is achieved above ground in the sediment forebay and detention pond, and subsurface within two Vortecnics hydrodynamic separators, all prior to discharge within the closed pipe subsurface pond.

Attached under this cover are two Figures which depict the pre-construction and post-construction sub delineation of affected drainage areas. In the pre-construction scenario, stormwater within the limits of work is directed either toward existing CB#3176 or CB#3085. During the design of proposed site improvements, care was taken to ensure that major drainage patterns within the limits of work were maintained. To the extent practicable, this is the case. You will note within subarea 1S that a large area of pavement is removed and replaced with landscaped green area. The area of 1S is slightly reduced in the post-construction scenario, with approximately 975 square feet of new roof area and approximately 4,000 square feet of new grass area directed toward existing CB#3433, outside the view of the attached Drainage Area Plans. The area of 1S is further reduced by approximately 2,000 square feet, along with 3,400 square feet reduced from area 2S due to the construction of a trench drain along and parallel to the proposed building addition. The area removed from 1S and 2S creates subarea 3S, which is connected to existing closed drainage running along and parallel to the front of the existing building. There is no doubt that stormwater flow directed toward CB#3176 and CB#3085 is reduced in the post-construction scenario. The result, however, is increased area contributing to CB#3433 and to the closed drainage system along and parallel to the front of the existing structure. The increase to the closed system in front of the existing building is greatly offset by removal of impervious surface and installation of new landscape area in its place along the westerly end of the building where additional site improvements are proposed. The increase in contributing area in either direction is very small and is not expected to cause any adverse impacts to the downstream treatment and mitigation systems.

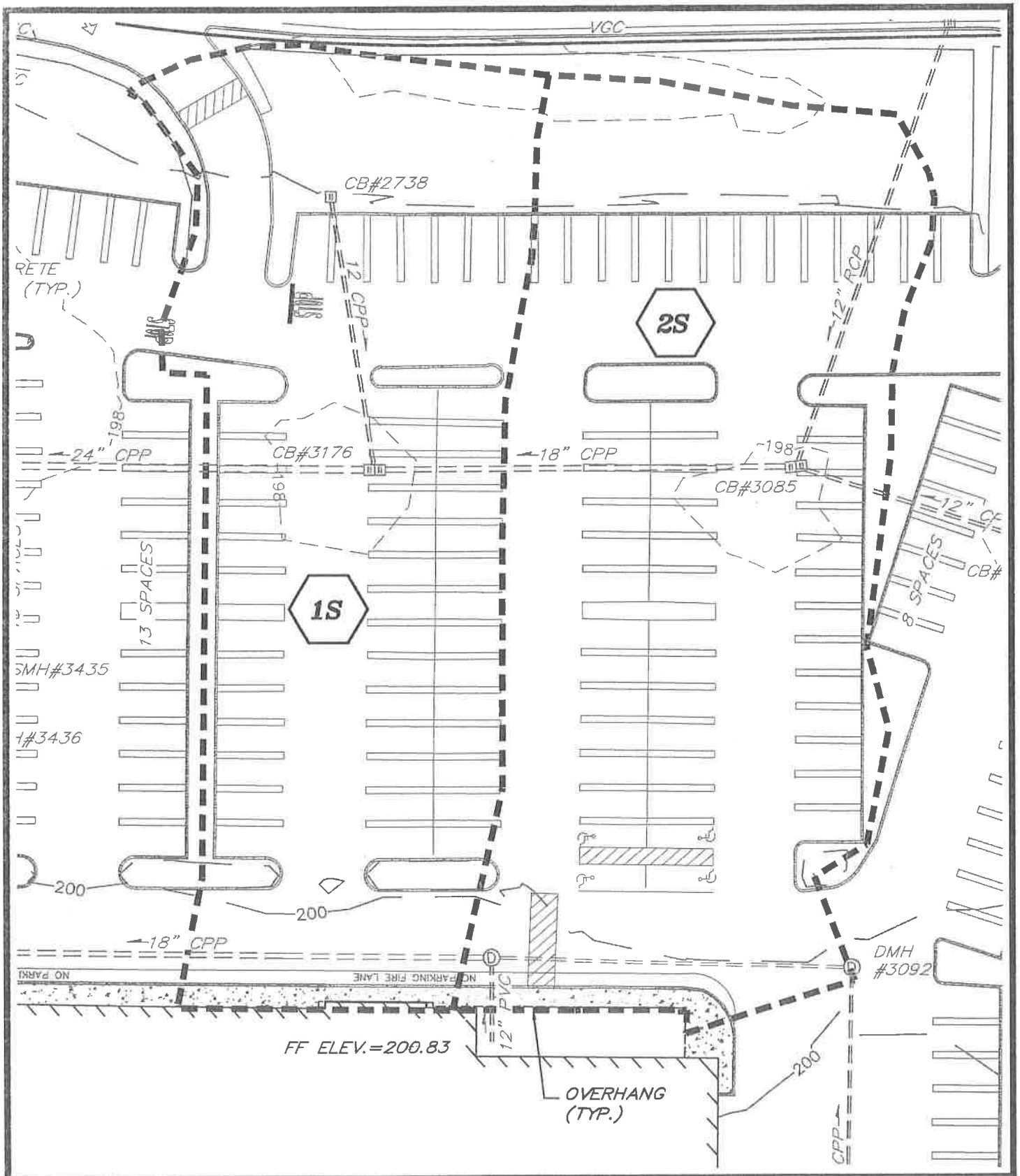
Understanding that the stormwater for the entire property all flows to the same subsurface pond and further into the MS4 makes understanding the impact of the proposed site improvements upon said system much easier. Overall, the proposed site improvements reduce the area of impervious surface onsite, and therefore will cause an overall decrease in the stormwater discharged offsite. The acreage and composition of the individual subareas onsite will change slightly. The resulting changes in stormwater flows to the individual catch basins, drain manholes, and treatment devices will not be measureable.

I trust the content of this brief letter report will serve to address the requirements for stormwater analysis associated with the subject site plan amendment. Should you have any questions or require further information, please do not hesitate to contact our office.

Respectfully,

STATE OF NEW HAMPSHIRE
PATRICK R. COLBURN No. 12988
LICENSED PROFESSIONAL ENGINEER

Patrick Colburn, P.E.
Project Manager

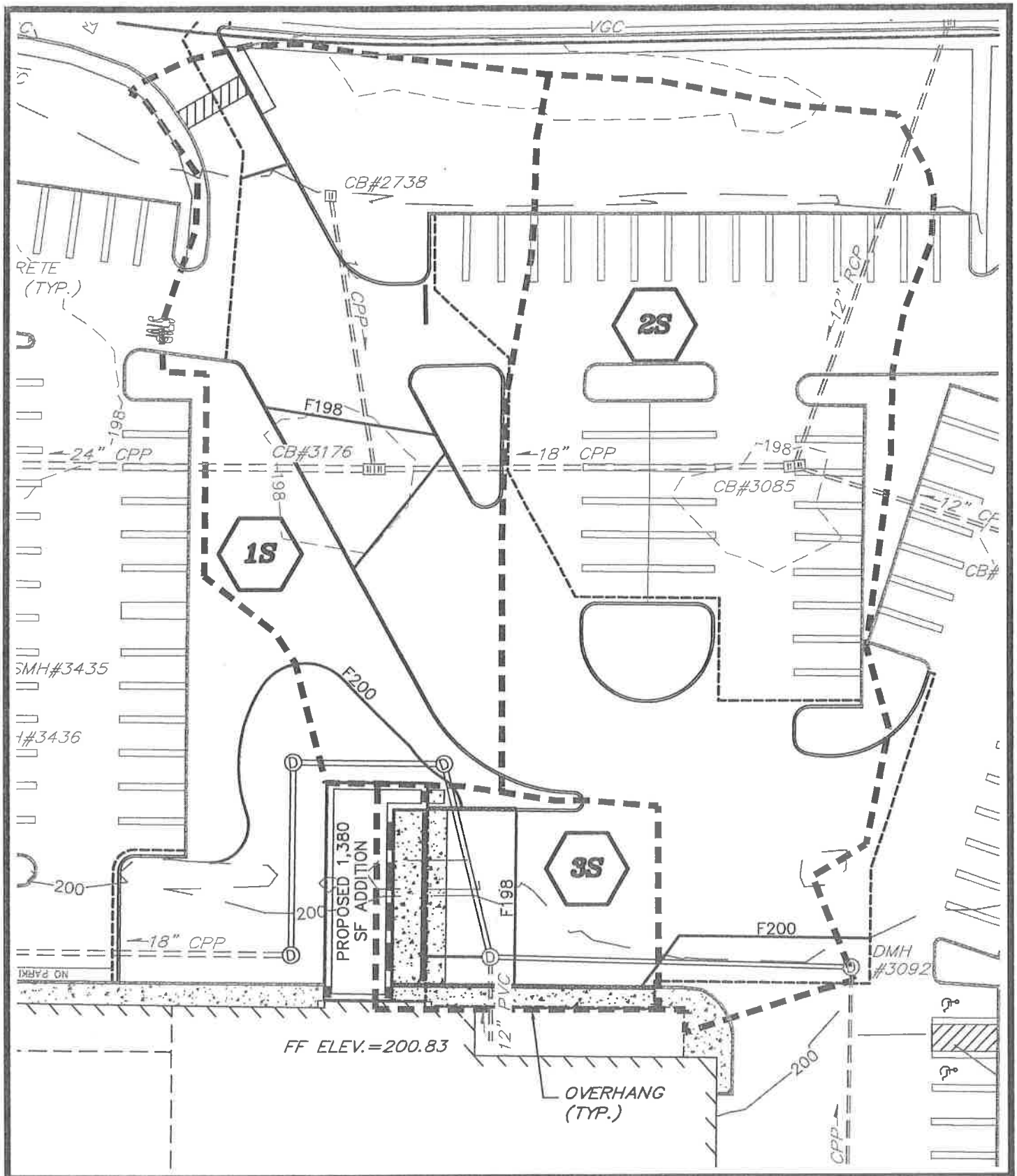


KEACH–NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110
Phone (603) 627-2881

TITLE: PRE-CONSTRUCTION DRAINAGE AREAS EXHIBIT PLAN
GOODWILL - HUDSON
MAP 222; LOT 41 - LOWELL ROAD AND WASON ROAD - HUDSON, NH

DRAWN BY: PRC DATE: 03/04/2014 JOB. NO. 13-1216-2

CHECKED BY: PRC SCALE: 1" = 40' FIGURE 1



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

TITLE: POST-CONSTRUCTION DRAINAGE AREAS EXHIBIT PLAN
GOODWILL - HUDSON
MAP 222; LOT 41 - LOWELL ROAD AND WASON ROAD - HUDSON, NH

DRAWN BY: PRC DATE: 03/04/2014 JOB. NO.13-1216-2

CHECKED BY: PRC SCALE: 1" = 40' FIGURE 2

HUDSON MAR 07 2014 COMMUNITY DEVELOPMENT

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

Date of Application: March 06, 2014 Tax Map # 222 Lot # 41

Name of Project: Goodwill-Hudson

Zoning District: B-Business (For Town Use) General SP# 03-14 (For Town Use)

ZBA Action: N/A

PROPERTY OWNER:	DEVELOPER:/APPLICANT
Name: Manuel D. Sousa Et. Al.	Goodwill Industries of Northern New England
Address: 46 Lowell Road	75 Washington Avenue
Address: Hudson, NH 03051	Portland, ME 04101
Telephone # 603-880-7799	207-774-6323
Fax # N/A	N/A
Email: N/A	mvjsweeney@gmail.com

PROJECT ENGINEER	SURVEYOR
Name: Keach-Nordstrom Assoc., Inc.	Keach-Nordstrom Assoc., Inc.
Address: 10 Commerce Park No., Unit 3	10 Commerce Park No., Unit 3
Address: Bedford, NH 03110	Bedford, NH 03110
Telephone # 603-627-2881	603-627-2881
Fax # 603-627-2915	603-627-2915
Email: abasso@keachnordstrom.com	abasso@keachnordstrom.com

PURPOSE OF PLAN:

To convert the existing Stop & Shop Supermarket facility into a Goodwill Retail Store and shipping/receiving center.

For Town Use

Plan Routing Date: 3-12-14 Sub/Site Date: _____

✓ I have no comments _____ I have comments (attach to form)

MM (Initials) Title: Z.A. Date: _____

DEPT: ✓ Zoning _____ Engineering _____ Assessor _____ Police _____ Fire _____ Planning _____ Consultant _____ Highway Department

Fees Paid: _____

TOWN OF HUDSON

COMMUNITY DEVELOPMENT DEPARTMENT

14-04

ZONING DETERMINATION

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

HUDSON
MAR 07 2014
COMMUNITY DEVELOPMENT

February 21, 2014

Tony Basso
Keach-Nordstrom Associates, Inc.
10 Commerce Park North, Suite 3B
Bedford, NH 03110

Re: 9 Wason Road – (Map 222, Lot 041) Proposed Goodwill Retail Store for Hudson

Dear Tony:

After the site tour of Goodwill Industries Retail Operation, I now understand the total process. The operation proposed for the vacant Stop and Shop Store by Goodwill would be no different than what was originally there. There would be the retail store, the retail outlet store, the processing section, receiving and shipping departments. This would be an excellent use for this site.

This Zoning Determination may be appealed within thirty (30) days. If you have any further questions, please contact me at 886-6008.

Sincerely,

COMMUNITY DEVELOPMENT DEPARTMENT

William Oleksak

William Oleksak
Zoning Administrator

cc: Zoning Board of Adjustment

HUDSON MAR 07 2014 COMMUNITY DEVELOPMENT

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

Date of Application: March 06, 2014 Tax Map # 222 Lot # 41

Name of Project: Goodwill-Hudson

Zoning District: B-Business (For Town Use) General SP# 03-14 (For Town Use)

ZBA Action: N/A

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Name: Manuel D. Sousa Et. Al.	Goodwill Industries of Northern New England
Address: 46 Lowell Road	75 Washington Avenue
Address: Hudson, NH 03051	Portland, ME 04101
Telephone # 603-880-7799	207-774-6323
Fax # N/A	N/A
Email: N/A	mvjsweeney@gmail.com

PROJECT ENGINEER	SURVEYOR
Name: Keach-Nordstrom Assoc., Inc.	Keach-Nordstrom Assoc., Inc.
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For Town Use

Plan Routing Date: 3-12-14 Sub/Site Date: _____

✓ I have no comments _____ I have comments (attach to form)

JoB (Initials) Title: Deputy Fire Chief Date: 3/17/2014

DEPT:

_____ Zoning _____ Engineering _____ Assessor ____ Police ✓ Fire ____ Planning

_____ Consultant _____ Highway Department

Fees Paid: _____

RECEIVED MAR 12 2014 BY: [signature]

HUDSON
MAR 07 2014
COMMUNITY DEVELOPMENT

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

Date of Application: March 06, 2014 Tax Map # 222 Lot # 41

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For Town Use

Plan Routing Date: 3-12-14 Sub/Site Date: _____

X I have no comments _____ I have comments (attach to form)

_____ Title: Asst. Assessor Date: 3-12-14
(Initials)

DEPT:
_____ Zoning _____ Engineering ✓ Assessor _____ Police _____ Fire _____ Planning
_____ Consultant _____ Highway Department

Fees Paid: _____

E

April 3, 2014

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

Re: Town of Hudson Planning Board Review
Goodwill (9 Wason Road)
Tax Map 222, Lot 41, PO #1350-832
CLD Reference No. 03-0249.1350

Dear Mr. Cashell:

CLD Consulting Engineers, Inc. (CLD) has reviewed the first submission of the materials received on March 24, 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 note that several items could not be verified by CLD and require action by the Town.

The project consists of converting the existing Stop and Shop Supermarket facility into a Goodwill Retail Center, a 1,380-square-foot shipping and receiving loading dock bays addition with associated site improvements on the previously developed site. The site is currently serviced by existing Municipal water and sewer.

The following items are noted:

1. **Site Plan Review Codes**
   a. Hudson Regulations (HR) 275-8.B. (17) The applicant has shown one temporary benchmark on the plan set. Reference to a USGS benchmark was not provided. The applicant has noted the horizontal datum as Magnetic 2008 and the vertical datum as NGVD29.
   b. HR 275-9.A. See comments below.
   c. HR 275-9.B. 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.
   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. Copies of deeds or easements were not received for review. The applicant has shown several existing easements on the plans including an existing sewer easement, an existing "100' Buffer" easement, an existing drainage easement and an existing "R.O.W." easement.

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

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

a. HR 275-9.B. The applicant has provided a Traffic Impact Analysis Letter (TIAL) dated March 4, 2014. The TIAL concludes that the traffic generation from the previous supermarket use far exceeds what the expected generation from the proposed Goodwill use will be. While we may not necessarily agree that the ITE land use codes used in the analysis are representative of the proposed uses, intuitively, the differences in total trips are likely of a similar order-of-magnitude to the information presented. As such, we concur with that finding of the TIAL. No further CLD comment.

b. HR 193-10.E. We were unable to find sight distance information on the plan set for the driveways.

c. The applicant has noted that the angle of the existing right turn in 'slip' ramp is being altered to facilitate truck traffic to the new loading area on the east side of the building. This will likely encourage higher entry speeds for all traffic, including trucks. The applicant states in the TIAL that only eight tractor trailer trips per day are expected to enter and exit the site on a daily basis. Given that the passenger car traffic will far exceed the amount of truck traffic, the applicant should reconsider altering this entry angle to accommodate only eight entering trucks. The previous supermarket use likely had a comparable amount, if not more, of daily truck traffic yet these vehicles used the main entry drive to access their loading area.

d. It is unclear what the intended traffic pattern is for the new truck entry drive. A 40-foot-wide area is provided with a 26-foot lane and a 14-foot lane separated by a solid white line. This solid line is aligned with the edge of the travel way from the slip ramp, which implies it is an edge line. In that case, what is the proposed use of the 14-foot lane? Is this section intended for 2-way traffic?

e. All Stop bars, words and symbols should be repainted. This includes the Stop bars/symbols on either side of the slip ramp drive, the stop condition at the east end of the site near the exit, as well as the lane markings at the main exit drive.

f. Two 'Do Not Enter' signs should be provided at the end of the slip ramp facing the parking field so that vehicles do not try to use this ramp as an exit.

g. The proposed Directory sign is providing a lot of information right at the decision point for the driver at the end of the slip ramp. A detail should be provided in the plans

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showing the size of the sign as well as proposed lettering, should the truck lane be approved as currently shown.

h. The EB Stop sign (and Stop bar) at the slip ramp is positioned so as to not obscure the visibility of the proposed directory sign. However, it should be noted that if a car is stopped there, they could interfere with the circulation within the adjacent parking aisle.

i. A 'No Left Turn' sign should be considered on Wason Road facing WB traffic near the slip ramp.

j. The applicant should clarify as to why the crosswalk from the handicapped-accessible parking spaces at the front of the building is aligned at an angle. We are unable to tell if the intent is to match to an existing curb ramp. We strongly recommend that the crosswalk be provided at an angle to give the shortest crossing path.

k. The applicant should clarify the existing and proposed grading schematic/spot grades at the westerly drive to be reconstructed.

l. The applicant should confirm that the existing guardrail is in satisfactory condition, approximately located and is adequately protective based upon 2014 standards.

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

a. The applicant has not shown how electric or telephone services are connected to the building, but has shown the electric meter on the building.

b. Although we believe that the proposed use is less intensive than the former use, we did not find proposed water or sewer usage calculations in the packages received for review.

c. The applicant should demonstrate that appropriate vertical separation exists between the existing water and sewer crossings.

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

a. HR 275-9.A. (1) and (4) and HR 290-4.A. (10) The applicant has not supplied stormwater engineering calculations for relevant design storms as required by the Regulations. We suggest that the applicant request waivers from all appropriate Stormwater Regulations. The applicant's Stormwater Management Analysis utilizes the concept of "reduce impervious and increase green-space" but according to Town of Hudson Regulations, drainage calculations are required to illustrate, "all drainage shall be designed to achieve a zero increase in runoff for both peak and volume." Since the applicant has indicated that the pond adjacent to Wason Road will receive some additional area, we do recommend that the applicant provide a basic calculation demonstrating that water levels in the pond will not increase and that additional erosion protection (e.g. riprap) is not necessary.

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b. HR 290-4.C. (1) and (2) (m) The applicant should further analyze the need for additional erosion control BMPs including, but not limited to, a construction entrance and protective measures for the southwest corner of the site. The operation and maintenance schedule of all proposed BMPs should also be provided within the submission.

c. HR 290-5B. (1) (u) and (v) The applicant has shown a very small snow storage area on an interior landscaped island and has noted that excess snow will be removed from the site. We suggest that the note be expanded to emphasize that snow will not be stored in the wetlands buffer or where it will block sight distance.

5. Erosion Control/Wetland Impacts

- HR 290-5.B. (1) (m) The applicant should show a temporary stockpile area and detail for pavement to be removed.

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

- HR 275-8.B.(31)(d) The applicant has met (exceeded) the tree requirement. The applicant has noted that the existing shrubs are covered by snow. We suggest that a note be added to the plan indicating a commitment from the applicant to provide a definitive number of shrubs through either all existing or to be supplemented if necessary.

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

- Additional local permitting may be required.

8. Other

a. HR 275-8.B. (35) The applicant should expand the note regarding American with Disabilities Act (ADA) compliance to include the date of the Regulations used and remove the limitation that the compliance evaluation is solely limited to dimension and grade. An ADA sidewalk ramp detail should be provided for the sidewalk modification at the westerly entrance driveway. Lastly, the applicant should provide additional detail for the westerly building entrance, showing clearly the intent or not for a flush entrance.

b. A lighting plan was not provided. Two light poles are proposed to be relocated. No lighting details were provided.

c. The applicant should provide additional detail for the proposed cast-in-place retaining walls to be designed by others. At a minimum, top and bottom of wall elevations should be more clearly labeled, and the intent or not to have "behind the wall" drainage should be shown or labeled.

Please feel free to call if you have any questions.

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

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CONSULTING ENGINEERS
540 Commercial Street Manchester, NH 03101
(603) 668-8223 • Fax: (603) 668-8802
cld@cldengineers.com • www.cldengineers.com
New Hampshire • Vermont • Maine

TO: File

FROM: Kelsey M. Gagnon KMG

DATE: April 3, 2014

RE: Town of Hudson Planning Board Review
Goodwill (9 Wason Road)
Tax Map 222, Lot 41, PO #1350-832
CLD Reference No. 03-0249.1350

The following list itemizes the documents reviewed related to the current Goodwill Plan Review comments.

- Various emails between Town of Hudson and CLD, between March18 and March 25, 2014.
- Letter of Transmittal from Keach-Nordstrom Associates, Inc., dated and received March 25, 2014, including the following:
  1. Copy of *Preliminary and Final Site Plan Application for Plan Review*, dated March 6, 2014.
  2. Copy of *Owner Affidavit*, dated March 7, 2014.
  3. Copy of *Zoning Determination Letter*, dated February 21, 2014.
  4. Stormwater Management Analysis letter dated March 3, 2014, including Figures 1 and 2.
  5. Traffic Impact Analysis letter, dated March 4, 2014.
- Package from the Town of Hudson, dated March 7, 2014, received March 24, 2014 including:
  1. Copy of *Site Plan, Amended Site Plan, 9 Wason Road, Hudson, New Hampshire* Plan Set, prepared by Keach-Nordstrom Associates, Inc. dated February 5, 2014, unless otherwise noted, with no revisions noted, including the following:
     a. Cover Sheet.
     b. *Master Site Plan*, Sheet 1 of 10.
     c. *Existing Conditions Plan*, Sheet 2 of 10.
     d. *Removals/Demolition Plan*, Sheet 3 of 10.
     e. *Non-Residential Site Layout Plan*, Sheet 4 of 10.
     f. *Grading, Drainage and Erosion Control Plan*, Sheet 5 of 10.
     g. *Utility Plan*, Sheet 6 of 10.
     h. *Landscape Plan*, Sheet 7 of 10.
     i. *Construction Details*, Sheets 8 through 10 of 10.
  2. Copy of *Project Narrative*, not dated.
  3. Copy of Preliminary and Final Site Plan Application Cover Sheet, dated March 6, 2014.

KMG:jt

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

APPLICATION FOR SITE PLAN REVIEW
TOWN OF HUDSON, NEW HAMPSHIRE

Goodwill, 9 Watson Road
Town of Hudson
CLD Reference No. 03-0249.1350
Reviewed April 3, 2014

Thirty (30) days prior to Planning Board Meeting, a complete site plan 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	
_____	a) 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 A.M. Tuesday the week prior to the scheduled public hearing/conceptual review date.	_____	
_____	b) A Site Plan narrative, describing the purpose, locations, long range plans, impacts on traffic, schools, and utilities	CLD/KMG	b) Traffic/School/Utility impacts not noted in narrative.
_____	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 surrounding area	CLD/KMG	
_____	e) Plan date by day/month/year	_____	e) Plan date by month/day/year.
_____	f) Revision block inscribed on the plan	CLD/KMG	
_____	g) Planning Board approval block inscribed on the plan	_____	g) Language does not exactly match Regulation. Size doesn't match (Regulation states 2"x6"; plan shows 2"x5.5")
_____	h) Title of project inscribed on the plan	CLD/KMG	
_____	i) Names and addresses of property owners and their signatures inscribed on the plan	CLD/KMG	
_____	j) North point inscribed on the plan	CLD/KMG	
_____	k) Property lines: exact locations and dimensions	CLD/KMG	
_____	l) Square feet and acreage of site	CLD/KMG	
_____	m) Square feet of each building (existing & proposed)	CLD/KMG	
_____	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	_____	n) Abutters' names and addresses are shown on plan.

Applicant Initials		Staff Initials
_____ 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	CLD/KMG
_____ p)	Locations of existing and proposed permanent monuments and bench marks within 200 feet of the development tract	CLD/KMG
_____ q)	Pertinent highway projects HR 275-8.B. (23)	
_____ r)	Assessor's Map and Lot number(s)	CLD/KMG
_____ 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	CLD/KMG
_____ t)	Delineate zoning district on the plan	CLD/KMG
_____ u)	Stormwater drainage plan	CLD/KMG
_____ v)	Topographical elevations at 2-foot intervals contours: existing and proposed	CLD/KMG
_____ w)	Utilities: existing and proposed	CLD/KMG
_____ x)	Parking: existing and proposed	CLD/KMG
_____ y)	Parking space: length and width	CLD/KMG
_____ z)	Aisle width/maneuvering space	CLD/KMG
_____ aa)	Landscaping: existing and proposed	CLD/KMG
_____ ab)	Building and wetland setback lines	CLD/KMG
_____ ac)	Curb cuts	CLD/KMG
_____ ad)	Rights of way: existing and proposed	CLD/KMG
_____ ae)	Sidewalks: existing and proposed	CLD/KMG
_____ af)	Exterior lighting plan	CLD/KMG
_____ ag)	Sign locations: size and design	CLD/KMG
_____ ah)	Water mains and sewerage lines	CLD/KMG
_____ ai)	Location of dumpsters on concrete pads	CLD/KMG
_____ aj)	All notes from plats	CLD/KMG

p) One temporary benchmark is shown on the plans.

LOWELL RD INTERSECTION IS KNOWN BY APPLICANT. THAT PROJECT DOES NOT APPLY TO THIS PROJECT

q) No highway projects noted.

aa) Applicant noted on the plan that existing shrub totals are not known due to snow cover. 65 new shrubs proposed.

ad) No change from existing.

af) Relocate 2 poles. No details provided.

ag) "Goodwill Retail Center" sign detail provided. Proposed to be installed on existing store sign structure at intersection.

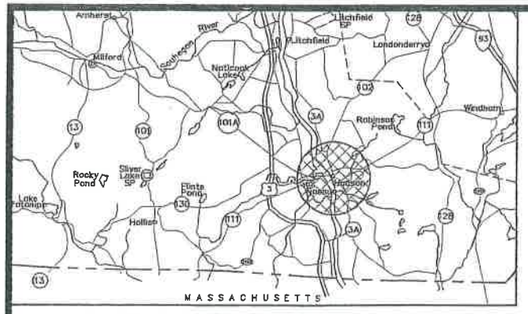
ai) No dumpsters proposed, discarded items to be hauled away by contractor.

Applicant Initials		Staff Initials	
_____	ak) Buffer as required by site plan regulations	EXISTING	ak) Pavement setback only 20 feet at southwest corner of site and just under 35 feet at northwest corner of site (existing).
_____	al) Green and open space requirements met with percentages of both types of spaces inscribed on the plan.	CLD/KMG	
_____	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 performed by a State of New Hampshire certified Soil Scientist, who shall affix his/her stamp and signature shall be inscribed on the plan.	N/A	am) Regulation was repealed in 2010. Soil types indicated.
_____	an) Wetlands (and poorly-drained and very poorly-drained soils, 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.	N/A	an) Adjacent wetlands are shown on the plan; however, a New Hampshire certified wetland or soil scientist has not affixed his stamp and signature to the plan.
_____	ao) "Valid for one year after approval" statement inscribed on the plan	CLD/KMG	
_____	ap) Loading bays/docks	CLD/KMG	ap) Height not provided for canopy above loading spaces.
_____	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	CLD/KMG	
_____	au) Photographs, electronic/digital display or video of site and area	CLD/KMG	
_____	av) Attach one (1) copy of the building elevations	CLD/KMG W	aw) Not received, waiver requested.
_____	aw) Fiscal impact study		
_____	ax) Traffic study	CLD/KMG W	ay) Not received, waiver requested.
_____	ay) Noise study		

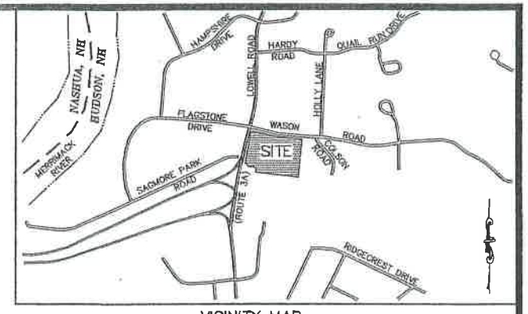
Applicant Initials		Staff Initials	
_____ az)	Copies of any proposed or existing easements, covenants, deed restrictions, right of way agreements or other similar documents		az) Easements shown on plan, no deeds or easements received for review.
_____ ba)	Copy of applicable Town, State, Federal approval/ 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 ▪ shoreland 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.		ba) No permits received in package for review.
_____ bb)	Presentation plan (colored, with color coded bar chart)		bb) No presentation plan received, requires a Town action.
_____ bc)	Fees paid to clerk		bc) Requires Town action.
_____ 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.		bd) Requires Town action.

*Under the purview of the Planning Board any and all items may be waived. _____

PACKET 4/9/14



VICINITY PLAN
NOT TO SCALE



VICINITY MAP
SCALE: 1" = 1,000'

AMENDED SITE PLAN
GOODWILL INDUSTRIES
MAP 222; LOT 41
9 WASON ROAD
HUDSON, NEW HAMPSHIRE

HUDSON
APR 01 2014
COMMUNITY DEVELOPMENT

OWNER:
MANUEL D. SOUSA ET AL
c/o STOP & SHOP SUPERMARKET CO.
1385 HANCOCK STREET
QUINCY, MASSACHUSETTS 02169

APPLICANT:
GOODWILL INDUSTRIES OF NORTHERN NEW ENGLAND
75 WASHINGTON AVENUE
PORTLAND, MAINE 04101

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

STATE OF NEW HAMPSHIRE
038
ANTHONY M. MASSO
3/7/14

DIG SAFE
811
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM

STATE OF NEW HAMPSHIRE
PATRICK R. COLBURN
No. 12298
LICENSED PROFESSIONAL ENGINEER
3/7/14

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

FEBRUARY 5, 2014

PROJECT NO. 13-1216-2

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

SHEET TITLE	SHEET No.
MASTER PLAN	1
EXISTING CONDITIONS PLAN	2
REMOVALS/DEMOLITION PLAN	3
NON-RESIDENTIAL SITE LAYOUT PLAN	4
GRADING, DRAINAGE, AND EROSION CONTROL PLAN	5
UTILITY PLAN	6
LANDSCAPE PLAN	7
CONSTRUCTION DETAILS	8 - 10

P:_Projects\13-1216\13-1216 dwg\13-1216-DETAILS.dwg, 3/7/2014 9:33:52 AM, mf

PLAN REFERENCES:

1. "EASEMENT PLAN, LOWELL ROAD AND WASON ROAD, HUDSON, NEW HAMPSHIRE," SCALE: 1"=40', DATED: SEPT. 10, 2004, PREPARED BY VANASSE HANGEN BRUSTLIN, INC. H.C.R.D. PLAN NO. 33436.
2. "AS BUILT, CONDITIONS PLAN, SUPER STOP & SHOP, STORE #202, WASON ROAD/LOWELL ROAD (NH RTE. 3A), HUDSON, NEW HAMPSHIRE," SCALE: 1"=50', DATED: OCTOBER 4, 2004, PREPARED BY VANASSE HANGEN BRUSTLIN, INC.
3. "MAP 10, LOTS 43, 45 AND 46, CONSOLIDATION AND, LOT LINE RELOCATION PLAN, LOWELL ROAD AND WASON ROAD, HUDSON, NEW HAMPSHIRE," SCALE: 1"=50', DATED: MARCH 22, 2002 WITH REVISIONS THROUGH MAY 1, 2002, PREPARED BY VANASSE HANGEN BRUSTLIN, INC.

VICINITY MAP
SCALE: 1" = 1,000'

GENERAL NOTES:

1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE CONVERSION OF AN EXISTING STOP & SHOP SUPERMARKET INTO A GOODWILL RETAIL STORE WITH ASSOCIATED SITE IMPROVEMENTS ON LOT 41 ON THE TOWN OF HUDSON TAX MAP 222.
2. TOTAL SITE AREA: 370,702 SF, OR 8.510 ACRES
3. MAP 222; LOT 41 INDICATES TOWN OF HUDSON TAX ASSESSORS MAP AND LOT NUMBER.
4. PRESENT OWNER OF RECORD:
   MANUEL D. SOUSA ET. AL.
   c/o STOP & SHOP SUPERMARKET
   1385 HANCOCK STREET
   QUINCY, MA 02169
   H.C.R.D. BK. 7178; PG. 233
5. PRESENT ZONING: BUSINESS (B)
   MINIMUM LOT REQUIREMENTS:
   - LOT AREA 30,000 SF (WITH TOWN WATER AND SEWER)
   - LOT FRONTAGE 150 FT (ARTERIAL/COLLECTOR)
   MINIMUM BUILDING SETBACKS: (ARTERIAL/COLLECTOR)
   - FRONT 50 FT
   - SIDE 15 FT
   - REAR 15 FT
6. SITE IS SERVICED BY MUNICIPAL WATER AND SEWER.
7. PARKING:
   SORTING/PROCESSING/SHIPPING/RECEIVING:
   1 SPACE/600 SF = 36,083 SF/600 = 60.1 SPACES REQUIRED
   RETAIL: 1 SPACE/200 SF = 26,497 SF/200 = 132.5 SPACES REQUIRED
   TOTAL SPACES REQUIRED = 192.6 = 193 SPACES REQUIRED
   TOTAL SPACES PROVIDED = 246 SPACES (INCLUDES 10 HANDICAP SPACES)
8. LOADING:
   REQUIRED: 1 SPACE FOR FIRST 5,000 SF + 1 SPACE FOR EACH ADDITIONAL 10,000 SF (62,580 SF) = 1 + 5.76 = 7 SPACES REQUIRED
   PROVIDED: 3 EXISTING AND 4 PROPOSED = 7 TOTAL LOADING SPACES PROVIDED
9. OPEN SPACE:
   REQUIRED: 35%
   EXISTING: 39.8%
   PROPOSED: 42.7%
10. BOUNDARY AND TOPOGRAPHIC INFORMATION DEPICTED ON THIS PLAN IS BASED ON A FIELD SURVEY PERFORMED BY THIS OFFICE BETWEEN JANUARY AND FEBRUARY 2014.
11. DUE TO HEAVY SNOW COVER DURING ONSITE SURVEY EFFORTS, WETLANDS WERE TAKEN FROM PLAN REFERENCE #2. ONCE THE SNOW MELTS, THE WETLAND MAPPING WILL BE UPDATED BUT IS NOT EXPECTED TO IMPACT THE PROJECT.
12. EXAMINATION OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAPS (FIRM) FOR THE TOWN OF HUDSON, NEW HAMPSHIRE, HILLSBOROUGH COUNTY, MAP NUMBER 33011C0656D, PANEL NUMBER 656 OF 701, EFFECTIVE DATE: SEPTEMBER 25, 2009 INDICATES THAT THE SUBJECT PREMISES IS NOT LOCATED WITHIN A FLOOD HAZARD AREA.
13. THE LOCATION OF ANY UNDERGROUND UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. KEACH-NORDSTROM ASSOCIATES, INC. MAKES NO CLAIM TO THE ACCURACY OR COMPLETENESS OF UTILITIES SHOWN. PRIOR TO ANY EXCAVATION ON SITE THE CONTRACTOR SHALL CONTACT DIG SAFE AT 811.
14. SITE LIGHTING SHALL BE AS SHOWN ON THE PLAN, DIRECTED ONTO SITE, AND SHALL CONFORM WITH ALL APPLICABLE TOWN OF HUDSON ZONING REGULATIONS.
15. SITE IMPROVEMENTS DEPICTED ON THE PLAN SHALL CONFORM WITH TITLE III OF THE AMERICANS WITH DISABILITIES ACT WITH REGARD TO DIMENSION AND GRADE.
16. IT SHALL BE UNLAWFUL TO MODIFY, CHANGE, OR ALTER ANY STRUCTURE OR USE SHOWN ON THIS SITE PLAN IN ANYWAY WHATSOEVER, OR CONVERT OR ALTER ANY STRUCTURE OR USE SHOWN ON THIS SITE PLAN, OR CHANGE THE ABOVE USE INDICATED ON THE PLAN WITHOUT RECEIVING APPROVAL FROM THE TOWN OF HUDSON PLANNING BOARD.
17. GOODWILL'S BUSINESS MODEL IS SUCH THAT ALL OF THEIR DONATIONS ARE SOLD EITHER FOR RETAIL PRICES, OUTLET PRICES, OR COMMODITY. THEREFORE, THEY DO NOT USE TRADITIONAL DUMPSTERS. ALL GOODS AND WASTE IS RECYCLED AND HAULED AWAY BY CASELLA WASTE IN CONTAINERS.
18. THE RETAIL STORE WILL BE OPEN MONDAY THROUGH SATURDAY 8AM-9PM AND SUNDAY 8AM-6PM.
19. EXTERIOR CONSTRUCTION ACTIVITIES ON THE SITE SHALL BE LIMITED TO BETWEEN 7:00 AM AND 7:00 PM MONDAY THROUGH SATURDAY. NO CONSTRUCTION ACTIVITIES SHALL OCCUR ON SUNDAYS.
20. WAIVERS REQUESTED:
    275-9(C) - NOISE STUDY
    275-9(D) - FISCAL/ENVIRONMENTAL IMPACT
21. PLOWED SNOW FROM THE FACILITIES, DRIVEWAY, PARKING LOTS AND SIDEWALK SHALL BE STORED IN THE DESIGNATED AREAS SHOWN IN THIS PLAN SET. WHEN THE SNOW STORAGE AREAS ARE AT CAPACITY, SUBSEQUENT SNOW SHALL BE HAULED OFF-SITE AND DISPOSED OF IN AN ENVIRONMENTALLY SOUND FASHION AND IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
22. IF LOT DEVELOPMENT INVOLVES BLASTING AND/OR RAMMING OF BEDROCK MATERIALS, SAID ACTIVITIES SHALL BE LIMITED TO THE HOURS BETWEEN 7:00 AM AND 5:00 PM MONDAY THROUGH FRIDAY ONLY. SAID BLASTING/RAMMING ACTIVITIES SHALL BE PROHIBITED ON WEEKENDS.

LEGEND

- STONE BOUND FOUND
- IRON PIN FOUND
- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- SLOPED GRANITE CURB
- CONCRETE CURB
- BUFFER EASEMENT
- DRAINAGE EASEMENT
- SLOPE EASEMENT
- ABUTTER LINE
- PROPERTY LINE
- WETLAND
- CHAIN LINK FENCE
- STOCKADE FENCE
- GUARDRAIL
- TREELINE
- RETAINING WALL
- BUILDING SETBACK
- ZONE LINE

DIG SAFE
811 CALL TOLL FREE
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM

UTILITY NOTE

THE UNDERGROUND UTILITIES DEPICTED HEREON HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND PLOTTED FROM EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES DEPICTED COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND PORTIONS OF THE UTILITIES.

ZONING NOTE

THE ZONING/BUILDING SETBACKS DEPICTED ON THIS PLAN ARE THOSE WE HAVE INTERPRETED FROM THE LATEST ZONING ORDINANCE OF THE MUNICIPALITY AND, AS SUCH, ARE ONLY OPINIONS EXPRESSED BY KEACH-NORDSTROM ASSOCIATES, INC. THE FINAL INTERPRETATION OF THE ORDINANCE CAN ONLY BE MADE BY THE APPROPRIATE ZONING AUTHORITY. SINCE BUILDING ORIENTATION, PROPOSED USES, AND OTHER FACTORS CAN AFFECT THE SETBACKS, PRIOR TO ANY DEVELOPMENT OF THIS PROPERTY. THE BUILDER/OWNER MUST CONSULT WITH THE TOWN/CITY TO INSURE THE CORRECT APPLICATION OF THE ZONING ORDINANCE.

GENERAL NOTES (CONTINUED):

23. ONSITE DRAINAGE SYSTEM SHALL BE CONSTRUCTED AND MAINTAINED IN COMPLIANCE WITH NHDES REQUIREMENTS FOR SUCH SYSTEMS.
24. THE APPLICANT'S ENGINEER AND/OR CONTRACTOR SHALL CONTACT THE TOWN OF HUDSON TO SCHEDULE A PRECONSTRUCTION MEETING, WHICH WILL BE HELD WITH STAFF PRIOR TO STARTING CONSTRUCTION.
25. ALL IMPROVEMENTS SHOWN ON THE SITE PLAN-OF-RECORD, INCLUDING NOTES 1-25, SHALL BE COMPLETED IN THEIR ENTIRETY AND AT THE EXPENSE OF THE APPLICANT OR HIS ASSIGNS.

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

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

OWNER OF MAP 222; LOT 41
SIGNATURE: Manuel D' Sousa
DATE: 3/7/14

THIS PLAN AND THE SURVEY UPON WHICH IT IS BASED WAS MADE ON THE GROUND UNDER MY DIRECTION AND SUPERVISION BETWEEN JANUARY AND FEBRUARY OF 2014 IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE STATE OF NEW HAMPSHIRE AND THE CITY/TOWN WITHIN WHICH IT IS LOCATED WITH A TRAVERSE ERROR OF CLOSURE BETTER THAN 1 PART IN 10,000. THE SURVEY PERFORMED IS CLASSIFIED AS AN URBAN STANDARD SURVEY, (CATEGORY 1, CONDITION 1) AS DEFINED IN THE NEW HAMPSHIRE LAND SURVEYORS ASSOCIATION ETHICS AND STANDARDS.

3/7/14
DATE

STATE OF NEW HAMPSHIRE — PATRICK R. COLBURN No. 12708 — LICENSED PROFESSIONAL ENGINEER

MASTER PLAN
GOODWILL
MAP 222; LOT 41
9 WASON ROAD
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:	APPLICANT:
MANUEL D. SOUSA ET. AL. c/o STOP & SHOP SUPERMARKET 1385 HANCOCK STREET QUINCY, MA 02169 H.C.R.D. BK. 7178; PG. 233	GOODWILL INDUSTRIES OF NORTHERN NEW ENGLAND 75 WASHINGTON AVENUE PORTLAND, ME 04101

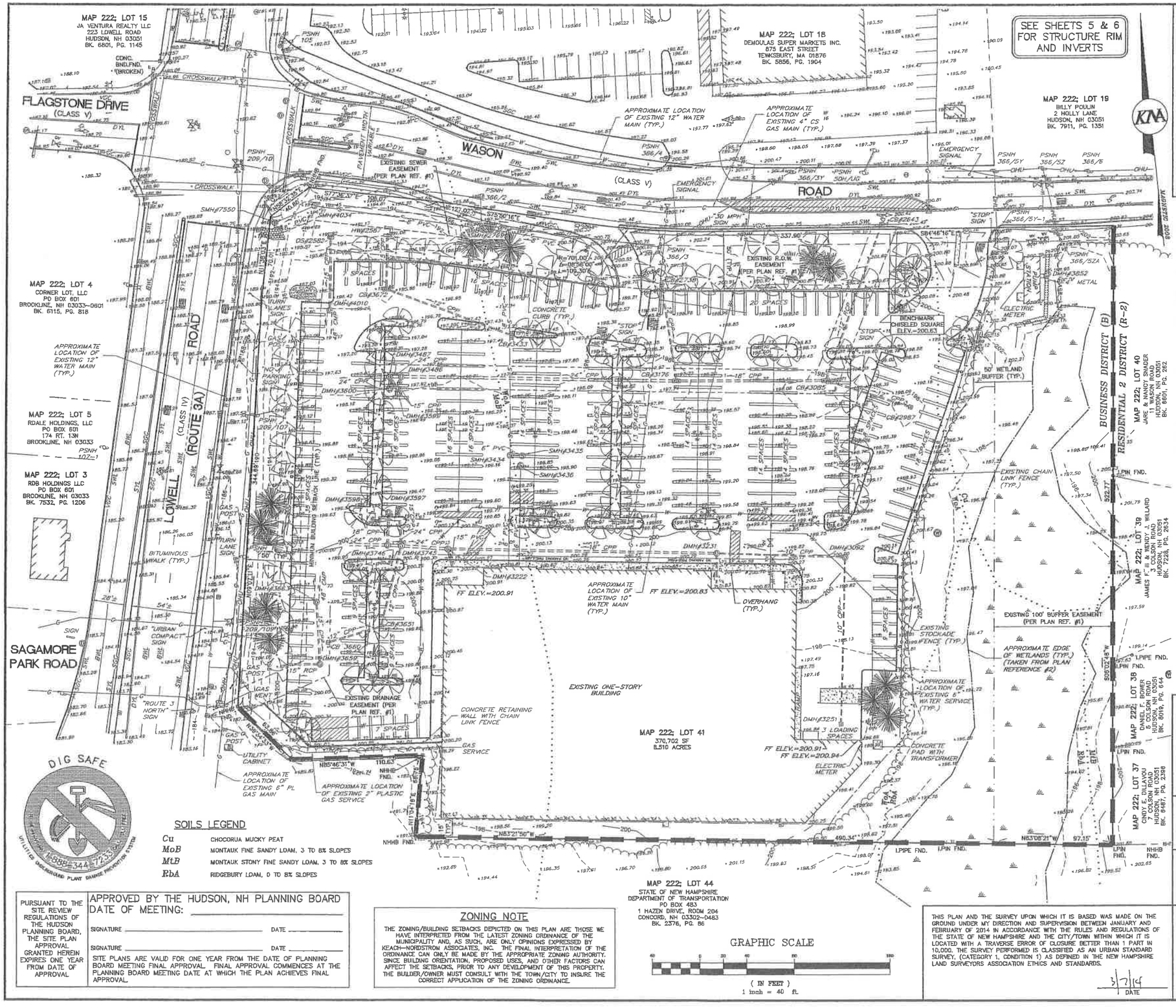
KNA KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

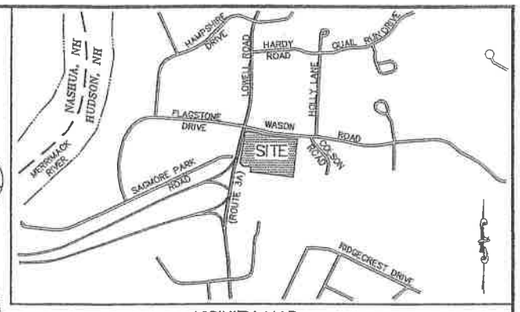
STATE OF NEW HAMPSHIRE — ANTHONY M. BASSO — LAND SURVEYOR

REVISIONS

No.	DATE	DESCRIPTION	BY

DATE: FEBRUARY 5, 2014	SCALE: 1" = 50'
PROJECT NO: 13-1216-2	SHEET 1 OF 10





VICINITY MAP
SCALE: 1" = 1,000'

PLAN REFERENCES:

1. "EASEMENT PLAN, LOWELL ROAD AND WASON ROAD, HUDSON, NEW HAMPSHIRE," SCALE: 1"=40', DATED: SEPT. 10, 2004, PREPARED BY VANASSE HANGEN BRUSTLIN, INC. H.C.R.D. PLAN NO. 33436.
2. "AS BUILT, CONDITIONS PLAN, SUPER STOP & SHOP, STORE #202, WASON ROAD/LOWELL ROAD (NH RTE. 3A), HUDSON, NEW HAMPSHIRE," SCALE: 1"=50', DATED: OCTOBER 4, 2004, PREPARED BY VANASSE HANGEN BRUSTLIN, INC.
3. "MAP 10, LOTS 43, 45 AND 46, CONSOLIDATION AND, LOT LINE RELOCATION PLAN, LOWELL ROAD AND WASON ROAD, HUDSON, NEW HAMPSHIRE," SCALE: 1"=50', DATED: MARCH 22, 2002 WITH REVISIONS THROUGH MAY 1, 2002, PREPARED BY VANASSE HANGEN BRUSTLIN, INC.

NOTES:

1. THE PURPOSE OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS OF LOT 41 ON THE TOWN OF HUDSON TAX MAP 222.
2. TOTAL SITE AREA: 370,702 SF, OR 8.510 ACRES
3. MAP 222; LOT 41 INDICATES TOWN OF HUDSON TAX ASSESSORS MAP AND LOT NUMBER.
4. PRESENT OWNER OF RECORD:
   MANUEL D. SOUSA ET. AL.
   c/o STOP & SHOP SUPERMARKET
   1385 HANCOCK STREET
   QUINCY, MA 02169
   H.C.R.D. BK. 7178; PG. 233
5. PRESENT ZONING: BUSINESS (B)
   MINIMUM LOT REQUIREMENTS:
   - LOT AREA 30,000 SF (WITH TOWN WATER AND SEWER)
   - LOT FRONTAGE 150 FT (ARTERIAL/COLLECTOR)
   MINIMUM BUILDING SETBACKS: (ARTERIAL/COLLECTOR)
   - FRONT 50 FT
   - SIDE 15 FT
   - REAR 15 FT
6. BOUNDARY AND TOPOGRAPHIC INFORMATION DEPICTED ON THIS PLAN IS BASED ON A FIELD SURVEY PERFORMED BY THIS OFFICE BETWEEN JANUARY AND FEBRUARY 2014.
7. HORIZONTAL DATUM IS MAGNETIC 2008. VERTICAL DATUM IS NGVD 29.
8. WETLANDS WERE TAKEN FROM PLAN REFERENCE #2.
9. EXAMINATION OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAPS (FIRM) FOR THE TOWN OF HUDSON, NEW HAMPSHIRE, HILLSBOROUGH COUNTY, MAP NUMBER 33011C0656D, PANEL NUMBER 656 OF 701, EFFECTIVE DATE: SEPTEMBER 25, 2009 INDICATES THAT THE SUBJECT PREMISES IS NOT LOCATED WITHIN A FLOOD HAZARD AREA.
10. THE LOCATION OF ANY UNDERGROUND UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. KEACH-NORDSTROM ASSOCIATES, INC. MAKES NO CLAIM TO THE ACCURACY OR COMPLETENESS OF UTILITIES SHOWN. PRIOR TO ANY EXCAVATION ON SITE THE CONTRACTOR SHALL CONTACT DIG SAFE AT 811.

LEGEND

■	STONE BOUND FOUND		ABUTTER LINE
●	IRON PIN FOUND		PROPERTY LINE
⊕	UTILITY POLE		WETLAND
⊙	SIGN		CHAIN LINK FENCE
☼	LIGHT		STOCKADE FENCE
⋈	GAS VALVE		GUARDRAIL
⋈	WATER VALVE	OHU	OVERHEAD UTILITIES
⊕	HYDRANT	G	GAS LINE
⋈	WATER SHUT OFF	W	WATER LINE
Ⓢ	SEWER MANHOLE	S	SEWER LINE
Ⓓ	DRAINAGE MANHOLE		DRAINAGE LINE
⊞	CATCH BASIN		TREELINE
	EDGE OF PAVEMENT		RETAINING WALL
	VERTICAL GRANITE CURB		10' CONTOUR
	SLOPED GRANITE CURB		2' CONTOUR
	CONCRETE CURB		SCS SOIL LINE
	BUFFER EASEMENT		BUILDING SETBACK
	DRAINAGE EASEMENT		ZONE LINE
	SLOPE EASEMENT		

SOILS LEGEND

Cu	CHOCORUA MUCKY PEAT
MoB	MONTAUK FINE SANDY LOAM, 3 TO 8% SLOPES
MtB	MONTAUK STONY FINE SANDY LOAM, 3 TO 8% SLOPES
RbA	RIDGEBURY LOAM, 0 TO 8% SLOPES

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

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____

SIGNATURE _____ DATE _____

SIGNATURE _____ DATE _____

SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN ACHIEVES FINAL APPROVAL.

ZONING NOTE

THE ZONING/BUILDING SETBACKS DEPICTED ON THIS PLAN ARE THOSE WE HAVE INTERPRETED FROM THE LATEST ZONING ORDINANCE OF THE MUNICIPALITY AND, AS SUCH, ARE ONLY OPINIONS EXPRESSED BY KEACH-NORDSTROM ASSOCIATES, INC. THE FINAL INTERPRETATION OF THE ORDINANCE CAN ONLY BE MADE BY THE APPROPRIATE ZONING AUTHORITY. SINCE BUILDING ORIENTATION, PROPOSED USES, AND OTHER FACTORS CAN AFFECT THE SETBACKS, PRIOR TO ANY DEVELOPMENT OF THIS PROPERTY, THE BUILDER/OWNER MUST CONSULT WITH THE TOWN/CITY TO INSURE THE CORRECT APPLICATION OF THE ZONING ORDINANCE.

GRAPHIC SCALE
40 0 20 40 80 120
(IN FEET)
1 inch = 40 ft.

THIS PLAN AND THE SURVEY UPON WHICH IT IS BASED WAS MADE ON THE GROUND UNDER MY DIRECTION AND SUPERVISION BETWEEN JANUARY AND FEBRUARY OF 2014 IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE STATE OF NEW HAMPSHIRE AND THE CITY/TOWN WITHIN WHICH IT IS LOCATED WITH A TRAVERSE ERROR OF CLOSURE BETTER THAN 1 PART IN 10,000. THE SURVEY PERFORMED IS CLASSIFIED AS AN URBAN STANDARD SURVEY, (CATEGORY 1, CONDITION 1) AS DEFINED IN THE NEW HAMPSHIRE LAND SURVEYORS ASSOCIATION ETHICS AND STANDARDS.

3/7/14
DATE

EXISTING CONDITIONS PLAN
GOODWILL
MAP 222; LOT 41
9 WASON ROAD
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:
MANUEL D. SOUSA ET. AL
c/o STOP & SHOP SUPERMARKET
1385 HANCOCK STREET
QUINCY, MA 02169
H.C.R.D. BK. 7178; PG. 233

APPLICANT:
GOODWILL INDUSTRIES OF NORTHERN NEW ENGLAND
75 WASHINGTON AVENUE
PORTLAND, ME 04101

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

NEW HAMPSHIRE LICENSED LAND SURVEYOR ANTHONY M. BASSO

REVISIONS			
No.	DATE	DESCRIPTION	BY

DATE: FEBRUARY 5, 2014 | SCALE: 1" = 40'
PROJECT NO: 13-1216-2 | SHEET 2 OF 10

P:_projects\13\1216\13121652\dwg\13121652-EXCON.dwg, 3/7/2014 8:46:35 AM, rnl

GENERAL NOTES:

1. THE PURPOSE OF THIS PLAN IS TO SHOW EXISTING FEATURES ON SITE TO BE REMOVED, SALVAGED, OR REPLACED.
2. BOUNDARY AND TOPOGRAPHIC INFORMATION DEPICTED ON THIS PLAN IS BASED ON A FIELD SURVEY PERFORMED BY THIS OFFICE BETWEEN JANUARY AND FEBRUARY 2014.
3. ITEMS TO BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH THE TOWN OF HUDSON REQUIREMENTS, UNLESS OTHERWISE SHOWN HEREON OR DIRECTED BY OWNER.
4. ALL EXISTING PAVEMENT AND GRAVEL WITHIN THE CROSS HATCHED AREA IS TO BE REMOVED DURING THE DEMOLITION PHASE OF THE PROJECT. EXCESS MATERIAL FROM THESE AREAS SHALL BE APPROPRIATELY DISPOSED OF OFFSITE.
5. REMOVE AND SALVAGE ALL STREET SIGNS, POSTS, AND LIGHT POLES WITHIN THE WORK AREA. INSTALL NEW SIGNS ON NEW POSTS AS SPECIFIED HEREON.
6. THE CONTRACTOR SHALL CONTROL ALL DUST GENERATED DURING THE REMOVAL PHASE AND CONSTRUCTION PHASE SO THAT NO DUST LEAVES THE SITE.
7. ANY MONUMENTS DISTURBED DURING CONSTRUCTION SHALL BE RESET BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR AT THE SITE CONTRACTORS EXPENSE.

LEGEND

- STONE BOUND FOUND
- IRON PIN FOUND
- UTILITY POLE
- SIGN
- LIGHT
- GAS VALVE
- WATER VALVE
- HYDRANT
- WATER SHUT OFF
- SEWER MANHOLE
- DRAINAGE MANHOLE
- CATCH BASIN
- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- SLOPED GRANITE CURB
- CONCRETE CURB
- BUFFER EASEMENT
- DRAINAGE EASEMENT
- SLOPE EASEMENT
- ABUTTER LINE
- PROPERTY LINE
- WETLAND
- CHAIN LINK FENCE
- STOCKADE FENCE
- GUARDRAIL
- OHU — OVERHEAD UTILITIES
- G — G — GAS LINE
- W — W — WATER LINE
- S — S — SEWER LINE
- DRAINAGE LINE
- TREELINE
- RETAINING WALL
- BUILDING SETBACK
- SAWCUT LINE
- PAVEMENT & GRAVEL TO BE REMOVED

DIG SAFE — CALL 811 — UTILITY UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM

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

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

REMOVALS/DEMOLITION PLAN
GOODWILL
MAP 222; LOT 41
9 WASON ROAD
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:	APPLICANT:
MANUEL D. SOUSA ET. AL. c/o STOP & SHOP SUPERMARKET 1385 HANCOCK STREET QUINCY, MA 02169 H.C.R.D. BK. 7178; PG. 233	GOODWILL INDUSTRIES OF NORTHERN NEW ENGLAND 75 WASHINGTON AVENUE PORTLAND, ME 04101

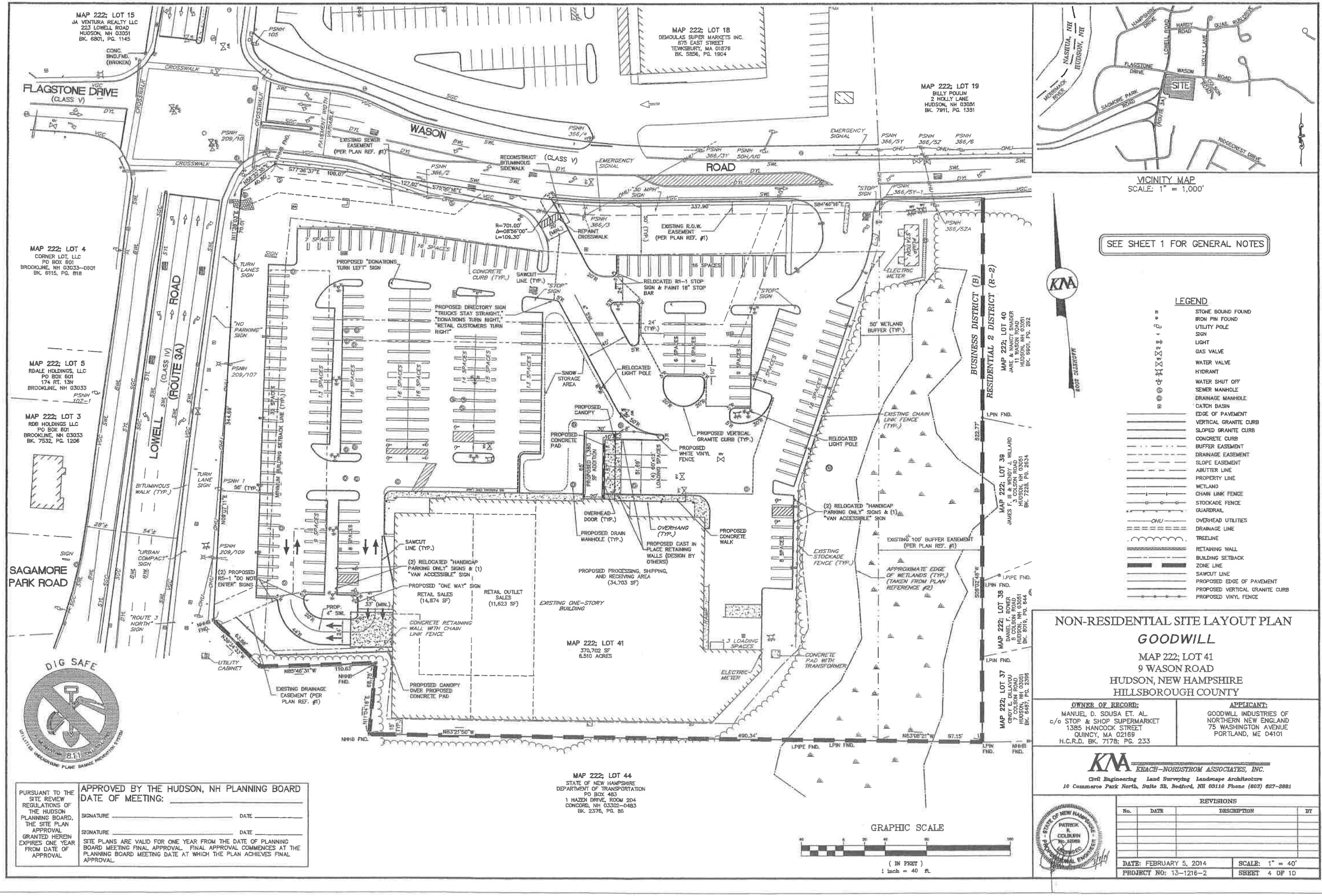
KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

PATRICK R. COLBURN No. 12388 — STATE OF NEW HAMPSHIRE — PROFESSIONAL ENGINEER — 3/17/14

REVISIONS			
No.	DATE	DESCRIPTION	BY

DATE: FEBRUARY 5, 2014 | SCALE: 1" = 40'
PROJECT NO: 13-1216-2 | SHEET 3 OF 10

P:_projects\13121613121613\dwg\13121653-SITEPLAN.dwg, 3/7/2014 8:30:40 AM, rnl



VICINITY MAP
SCALE: 1" = 1,000'

SEE SHEET 1 FOR GENERAL NOTES

KNA

LEGEND

- STONE BOUND FOUND
- IRON PIN FOUND
- UTILITY POLE
- SIGN
- LIGHT
- GAS VALVE
- WATER VALVE
- HYDRANT
- WATER SHUT OFF
- SEWER MANHOLE
- DRAINAGE MANHOLE
- CATCH BASIN
- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- SLOPED GRANITE CURB
- CONCRETE CURB
- BUFFER EASEMENT
- DRAINAGE EASEMENT
- SLOPE EASEMENT
- ABUTTER LINE
- PROPERTY LINE
- WETLAND
- CHAIN LINK FENCE
- STOCKADE FENCE
- GUARDRAIL
- OHU — OVERHEAD UTILITIES
- DRAINAGE LINE
- TREELINE
- RETAINING WALL
- BUILDING SETBACK
- ZONE LINE
- SAWCUT LINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED VERTICAL GRANITE CURB
- PROPOSED VINYL FENCE

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

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

NON-RESIDENTIAL SITE LAYOUT PLAN

GOODWILL

MAP 222; LOT 41
9 WASON ROAD
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:	APPLICANT:
MANUEL D. SOUSA ET. AL. c/o STOP & SHOP SUPERMARKET 1385 HANCOCK STREET QUINCY, MA 02169 H.C.R.D. BK. 7178; PG. 233	GOODWILL INDUSTRIES OF NORTHERN NEW ENGLAND 75 WASHINGTON AVENUE PORTLAND, ME 04101

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

REVISIONS

No.	DATE	DESCRIPTION	BY

PATRICK R. COLBURN No. 12055 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE

DATE: FEBRUARY 5, 2014 | SCALE: 1" = 40'
PROJECT NO: 13-1216-2 | SHEET 4 OF 10

P:_projects\13121621\13121621dwg\13121621-SITEPLAN.dwg, 3/7/2014 8:31:04 AM, mll

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 ROAD AND BRIDGE CONSTRUCTION, STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION, APPROVED AND ADOPTED 2010 ARE HEREBY INCORPORATED BY REFERENCE.
2. 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 HDPEP. CATCH BASINS SHALL BE TYPE B, AND HAVE 3' SUMPS UNLESS OTHERWISE NOTED.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION. THE ENGINEER 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 CONTACTING "DIG SAFE" AT 811 AT LEAST 72 HOURS BEFORE DIGGING.
4. ALL DRAINAGE PIPE SHALL BE INSTALLED FOLLOWING MANUFACTURER'S INSTALLATION INSTRUCTIONS.
5. SEE CONSTRUCTION DETAILS FOR SPECIFIC CONSTRUCTION INFORMATION.
6. CONTRACTOR TO CONFIRM CONSTRUCTABILITY OF NEW DMH#3231 AND RELAY 12" PVC ROOF DRAIN IF NECESSARY.

EROSION CONTROL NOTES:

1. ALL MEASURES IN THE PLAN SHALL MEET AS A MINIMUM THE BEST MANAGEMENT PRACTICES SET FORTH IN VOLUME 3 OF THE NEW HAMPSHIRE STORMWATER MANUEL TITLED "EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION." DATED DECEMBER 2008, AS AMENDED FROM TIME TO TIME.
2. WHENEVER PRACTICAL, NATURAL VEGETATION SHALL BE RETAINED, PROTECTED OR SUPPLEMENTED. THE STRIPPING OF VEGETATION SHALL BE DONE IN A MANNER THAT MINIMIZES SOIL EROSION.
3. APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO LAND DISTURBANCE.
4. THE AREA OF DISTURBANCE SHALL BE KEPT TO A MINIMUM. DISTURBED AREAS REMAINING IDLE FOR MORE THAN 30 DAYS SHALL BE STABILIZED.
5. MEASURES SHALL BE TAKEN TO CONTROL EROSION WITHIN THE PROJECT AREA. SEDIMENT IN RUNOFF WATER SHALL BE TRAPPED AND RETAINED WITHIN THE PROJECT AREA USING APPROVED MEASURES. WETLAND AREAS AND SURFACE WATERS SHALL BE PROTECTED FROM SEDIMENT.
6. OFFSITE SURFACE WATER AND RUNOFF FROM UNDISTURBED AREAS SHALL BE DIVERTED AWAY FROM DISTURBED AREAS WHERE FEASIBLE OR CARRIED NON-EROSIVELY THROUGH THE PROJECT AREA. INTEGRITY OF DOWNSTREAM DRAINAGE SYSTEMS SHALL BE MAINTAINED.
7. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN FUNCTIONING CONDITION UNTIL FINAL SITE STABILIZATION IS ACCOMPLISHED.
8. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED AFTER FINAL SITE STABILIZATION. TRAPPED SEDIMENT AND OTHER DISTURBED SOIL AREAS RESULTING FROM THE REMOVAL OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED WITHIN 30 DAYS UNLESS CONDITIONS DICTATE OTHERWISE.
9. THE TOWN OF HUDSON SHALL RESERVE THE RIGHT TO REQUIRE FURTHER EROSION CONTROL PRACTICES DURING CONSTRUCTION SHOULD THEY FIND IT NECESSARY.

LOAM & SEED ALL DISTURBED AREAS (TYP.)

DRAINAGE INVERT TABLE

CB#3651
RIM=199.29
INV.IN=193.85
INV.OUT=193.85

DMH#3659
RIM=199.46
INV.IN=182.65
INV.OUT=182.86

CB#3660
RIM=199.02
INV.OUT=194.24

DMH#3663
RIM=199.52
INV.IN=185.18
INV.OUT=185.18

DMH#3746
RIM=200.13
INV.IN=188.12(N)
INV.IN=187.86(E)
INV.OUT=187.86

DMH#3745
RIM=200.30
INV.IN=188.61(N)
INV.IN=188.52(E)
INV.IN=193.69(S)
INV.OUT=188.43

DMH#3598
RIM=199.83
INV.OUT=188.16

DMH#3597
RIM=199.72
INV.OUT=TOO DEEP

DMH#3222
RIM=200.18
INV.IN=188.90(E)
INV.IN=194.93(S)
INV.OUT=188.81

DMH#3231
RIM=200.19
INV.IN=190.50(E)
INV.IN=194.45(S)
INV.OUT=190.26

DMH#3092
RIM=200.09
INV.IN=191.66
INV.OUT=191.64

DMH#3251
RIM=196.52
INV.OUT=TOO DEEP

CB#2987
RIM=197.77
INV.OUT=193.85

DMH#3852
RIM=199.85
INV.OUT=196.62

CB#3085
RIM=197.71
INV.IN=193.11(N)
INV.IN=193.18(E)
INV.OUT=193.11

CB#2643
RIM=200.08
INV.OUT=195.23

CB#2738
RIM=199.45
INV.OUT=TOO DEEP

CB#3176
RIM=197.68
INV.IN=192.85(N)
INV.IN=192.76(E)
INV.OUT=192.06

CB#3433
RIM=197.02
INV.OUT=193.33

DMH#3486
RIM=197.69
INV.IN=189.57(E)
INV.IN=189.85(S)
INV.OUT=189.47

DMH#3487
RIM=197.72
INV.IN=189.00(E)
INV.IN=189.13(S)
INV.OUT=187.51

DMH#3599
RIM=198.02
INV.OUT=TOO DEEP

DMH#3600
RIM=197.98
INV.OUT=189.78

CB#3672
RIM=195.62
INV.IN=191.94
INV.OUT=191.82

DMH#4010
RIM=196.44
INV.IN=TOO DEEP
INV.OUT=185.53

OS#2582
RIM=194.17
INV.OUT=189.37

HW#2587
INV.=191.08

SOILS LEGEND

Cu	CHOCORUA MUCKY PEAT
MoB	MONTAUK FINE SANDY LOAM, 3 TO 8% SLOPES
MtB	MONTAUK STONY FINE SANDY LOAM, 3 TO 8% SLOPES
RbA	RIDGEBURY LOAM, 0 TO 8% SLOPES

LEGEND

STONE BOUND FOUND
IRON PIN FOUND
UTILITY POLE
SIGN
LIGHT
SEWER MANHOLE
DRAINAGE MANHOLE
CATCH BASIN
EDGE OF PAVEMENT
VERTICAL GRANITE CURB
SLOPED GRANITE CURB
CONCRETE CURB
BUFFER EASEMENT
DRAINAGE EASEMENT
SLOPE EASEMENT
TEMPORARY DANDY BAG AT ALL CATCH BASINS

ABUTTER LINE
PROPERTY LINE
WETLAND
CHAIN LINK FENCE
STOCKADE FENCE
GUARDRAIL
DRAINAGE LINE
TREELINE
RETAINING WALL
10' CONTOUR
2' CONTOUR
SCS SOIL LINE
BUILDING SETBACK
SAWCUT LINE
PROPOSED EDGE OF PAVEMENT
PROPOSED VERTICAL GRANITE CURB
PROPOSED DRAIN LINE
PROPOSED CONTOUR LINE

DIG SAFE — 811 — UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM

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GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

GRADING, DRAINAGE, AND EROSION CONTROL PLAN
GOODWILL
MAP 222; LOT 41
9 WASON ROAD
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:	APPLICANT:
MANUEL D. SOUSA ET. AL. c/o STOP & SHOP SUPERMARKET 1385 HANCOCK STREET QUINCY, MA 02169 H.C.R.D. BK. 7178; PG. 233	GOODWILL INDUSTRIES OF NORTHERN NEW ENGLAND 75 WASHINGTON AVENUE PORTLAND, ME 04101

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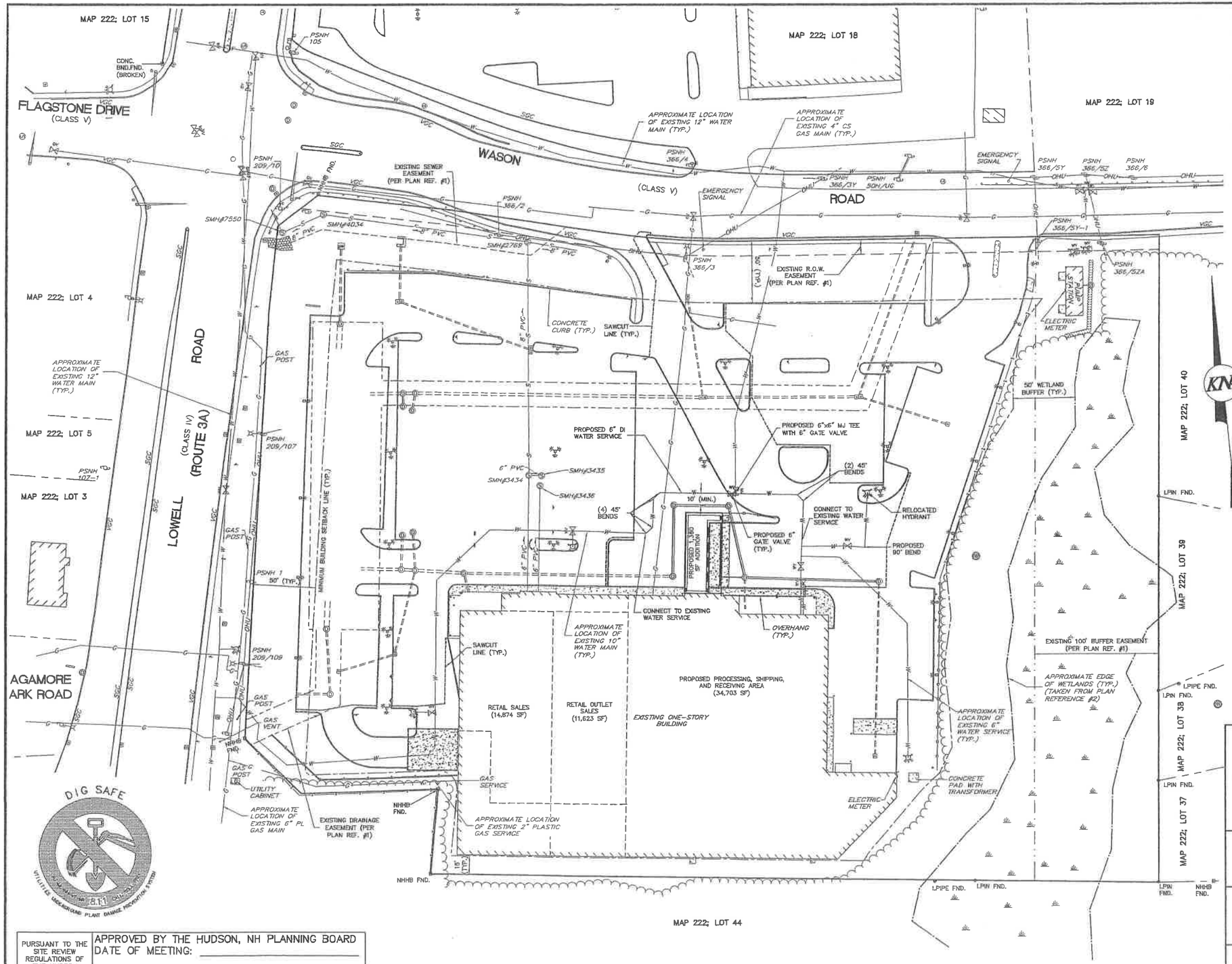
STATE OF NEW HAMPSHIRE — PATRICK R. COLBURN No. 12036 — LICENSED PROFESSIONAL ENGINEER — 3/7/14

REVISIONS

No.	DATE	DESCRIPTION	BY

DATE: FEBRUARY 5, 2014 | SCALE: 1" = 40'
PROJECT NO: 13-1216-2 | SHEET 5 OF 10

P:_project\1312162\1312162\dwg\1312162-SITEPLAN.dwg, 3/7/2014 8:31:29 AM, ml



CONSTRUCTION NOTES:

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3. ALL WATER SERVICE CONSTRUCTION SHALL CONFORM WITH HUDSON WATER UTILITY CONSTRUCTION SPECIFICATIONS.
4. EMERGENCY CONTACTS:
   HUDSON WATER UTILITY
   c/o PENNICHUCK WATER WORKS
   (603)882-5191
   HUDSON HIGHWAY DEPARTMENT
   (603)886-6018

INVERT TABLE

SMH#7550
RIM=191.09
INV.IN=183.74
INV.OUT=183.65

SMH#3434
RIM=198.70
INV.IN=189.54(S)
INV.IN=189.99(E)
INV.OUT=189.56

SMH#3436
RIM=198.82
INV.IN=191.64

SMH#3435
RIM=198.73
INV.OUT=TOO DEEP

SMH#2769
RIM=198.34
INV.IN=187.46(S)
INV.IN=187.47(E)
INV.OUT=187.28

SMH#4034
RIM=195.17
INV.IN=182.93
INV.OUT=184.81

LEGEND

- STONE BOUND FOUND
- IRON PIN FOUND
- UTILITY POLE
- SIGN
- LIGHT
- GAS VALVE
- WATER VALVE
- HYDRANT
- WATER SHUT OFF
- SEWER MANHOLE
- DRAINAGE MANHOLE
- CATCH BASIN
- ABUTTER LINE
- PROPERTY LINE
- WETLAND
- CHAIN LINK FENCE
- STOCKADE FENCE
- GUARDRAIL
- OVERHEAD UTILITIES
- GAS LINE
- WATER LINE
- SEWER LINE
- DRAINAGE LINE
- TREELINE
- RETAINING WALL
- BUILDING SETBACK
- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- SLOPED GRANITE CURB
- CONCRETE CURB
- BUFFER EASEMENT
- DRAINAGE EASEMENT
- SLOPE EASEMENT
- SAWCUT LINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED VERTICAL GRANITE CURB
- PROPOSED DRAIN LINE
- PROPOSED WATER LINE

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

UTILITY PLAN
GOODWILL
MAP 222; LOT 41
9 WASON ROAD
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:
MANUEL D. SOUSA ET. AL.
c/o STOP & SHOP SUPERMARKET
1385 HANCOCK STREET
QUINCY, MA 02169
H.C.R.D. BK. 7178; PG. 233

APPLICANT:
GOODWILL INDUSTRIES OF NORTHERN NEW ENGLAND
75 WASHINGTON AVENUE
PORTLAND, ME 04101

KNA KEACH-NORDSTROM ASSOCIATES, INC.
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PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____
SIGNATURE _____ DATE _____
SIGNATURE _____ DATE _____
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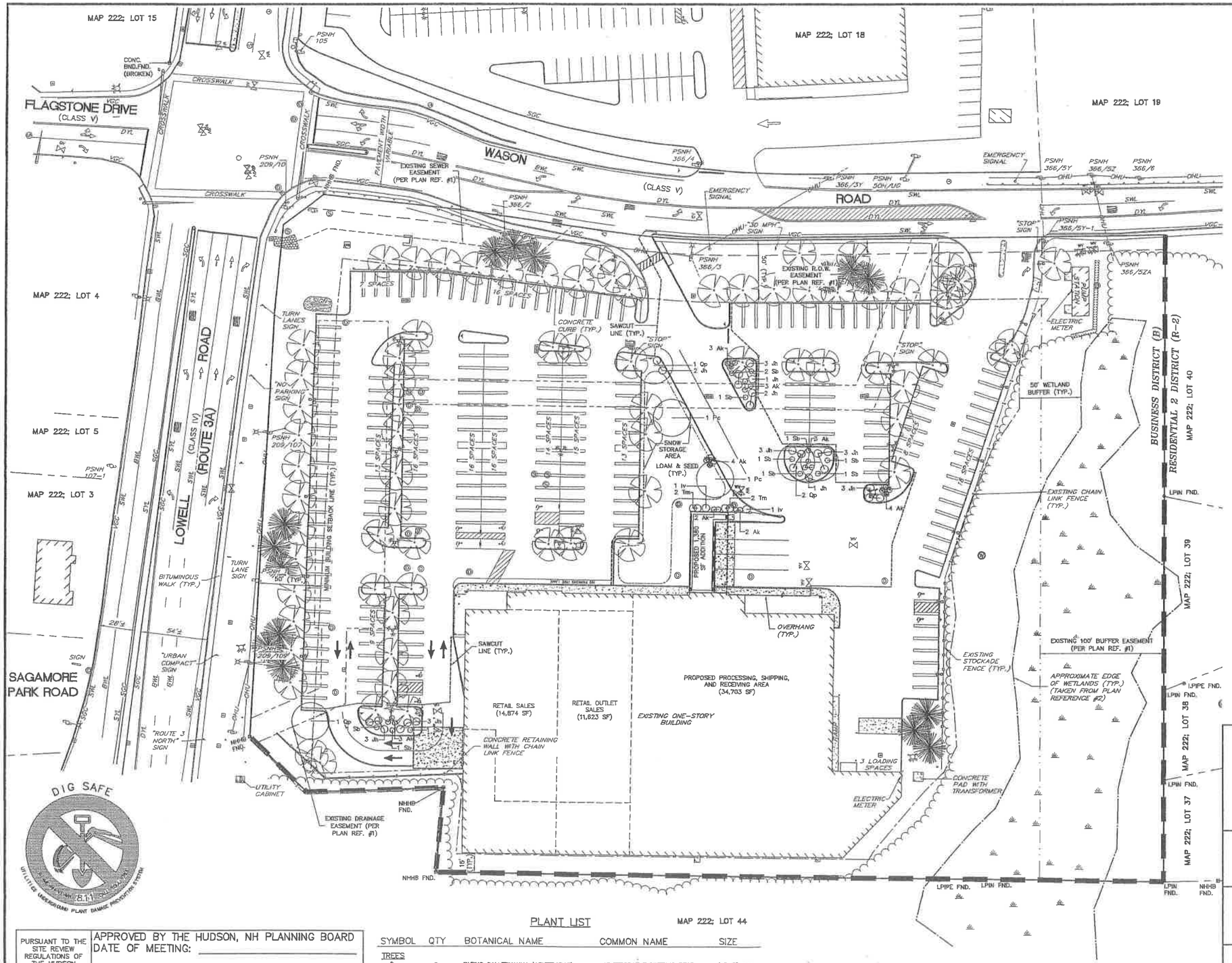
STATE OF NEW HAMPSHIRE
PATRICK H. COLBURN
No. 12608
LICENSED PROFESSIONAL ENGINEER
3/7/14

REVISIONS

No.	DATE	DESCRIPTION	BY

DATE: FEBRUARY 5, 2014 | SCALE: 1" = 40'
PROJECT NO: 13-1216-2 | SHEET 6 OF 10

P:_projects\13121\13121\13121652\dwg\p\312167-SITEPLAN.dwg, 3/7/2014 8:31:55 AM, mf



LANDSCAPE NOTES:

1. THE PURPOSE OF THIS PLAN IS TO SHOW THE PROPOSED SITE LANDSCAPE WHICH PROVIDES CLIMATIC RELIEF AND AESTHETIC APPEAL.
2. ALL PLANT MATERIALS USED SHALL BE NURSERY STOCK AND SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM DATE OF INSTALLATION. ANY MATERIAL WHICH DIES OR DOES NOT SHOWN HEALTHY APPEARANCE WITHIN THIS TIME SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE; WITH SAME WARRANTY REQUIREMENTS AS THE ORIGINAL. WARRANTIES TYPICALLY DO NOT COVER LOSS DUE TO INSECT INFESTATION OR MECHANICAL DAMAGE (I.E. SNOW STORAGE).
3. IF THE SOIL CONDITIONS ARE EXTREMELY SANDY, ALL TREES SHALL HAVE A 6" LAYER OF COMPACTED TOPSOIL PLACED IN THE BASE OF THE PLANT PIT AS A MOISTURE RETENTION LAYER. THE PLANT PIT SIDEWALLS SHALL BE OVER EXCAVATED BY AN ADDITIONAL 12" BEYOND THE NORMAL OUTSIDE RADIUS OF THE HOLE. A TOPSOIL MIXTURE SHALL BE USED TO BACKFILL THE HOLE AS FOLLOWED; ORGANIC TOPSOIL AMENDED WITH 10% WOOD ASH, 10% MANURE, 30% COMPOST AND A GRANULAR HYDROGEL TO ABSORB AND RETAIN WATER.
4. PLANTING BEDS AND SAUCERS SHALL RECEIVE A 4" MINIMUM THICKNESS OF PINE/HEMLOCK BARK MULCH OVER A 5oz. POLYPROPYLENE WEED CONTROL FABRIC.
5. PAVEMENT AND ROAD BASE MATERIAL ENCOUNTERED IN ANY LAWN OR PLANTING BED SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SUITABLE AMENDED SOIL INSTALLED AS SPECIFIED IN THE TURF ESTABLISHMENT SCHEDULE.

LANDSCAPE CALCULATIONS

EXISTING PARKING LOT INTERIOR LANDSCAPE AREA

EXISTING PARKING AREA PAVED:	118,841 SF
10% REQUIRED LANDSCAPE AREA:	11,884 SF
EXISTING LANDSCAPE AREA:	11,000 SF

REQUIRED PARKING LOT INTERIOR LANDSCAPE AREA

PROPOSED PARKING AREA PAVED:	92,602 SF
10% REQUIRED LANDSCAPE AREA:	9,260 SF
PROVIDED LANDSCAPE AREA:	19,338 SF

REQUIRED PARKING LOT SHADE TREES AND SHRUBS

PROPOSED PAVED AREA:	92,602 SF
SHADE TREES REQUIRED (92,602/1,600):	58 TREES REQUIRED
(OR 1 TREE/5 PARKING SPACES x 246)	49 TREES REQUIRED
SHADE TREES PROVIDED:	95 TREES TOTAL (69 EXISTING + 8 PROPOSED)
SHRUBS REQUIRED (92,602/200):	463 SHRUBS, OR
(OR 1.5 x 246 PROP. PARKING SPACES)	394 SHRUBS REQUIRED
SHRUBS PROVIDED:	BURRIED BY SNOW

LEGEND

- STONE BOUND FOUND
- IRON PIN FOUND
- UTILITY POLE
- SIGN
- LIGHT
- GAS VALVE
- WATER VALVE
- HYDRANT
- WATER SHUT OFF
- SEWER MANHOLE
- DRAINAGE MANHOLE
- CATCH BASIN
- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- SLOPED GRANITE CURB
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- DRAINAGE LINE
- TREELINE
- RETAINING WALL
- BUILDING SETBACK
- ZONE LINE
- SAWCUT LINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED VERTICAL GRANITE CURB

PLANT LIST

MAP 222; LOT 44

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE
TREES				
Pc	2	PYRUS CALLERYANNA 'ARISTOCRAT'	ARISTOCRAT FLOWERING PEAR	2.5–3" CAL.
Qp	4	QUERCUS PALUSTRIS	PIN OAK	2.5–3" CAL.
SHRUBS				
Ak	24	AZALEA 'KAREN'	KAREN AZALEA	18–24"
Iv	2	ILEX VERTICILLATA 'MARYLAND BEAUTY'	MARYLAND BEAUTY WINTERBERRY	2–2.5'
Jh	24	JUNIPERUS HORIZONTALIS 'BAR HARBOR'	BAR HARBOR JUNIPER	#3
Sb	11	SPIRAEA BUMALDA 'FROEBELII'	FROEBEL SPIREA	18–24"
Tm	4	TAXUS MEDIA 'TAUNTONII'	TAUNTONI YEW	18–24" B&B

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

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APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____

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LANDSCAPE PLAN

GOODWILL

MAP 222; LOT 41
9 WASON ROAD
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:
MANUEL D. SOUSA ET. AL.
c/o STOP & SHOP SUPERMARKET
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REVISIONS

No.	DATE	DESCRIPTION	BY

DATE: FEBRUARY 5, 2014 | SCALE: 1" = 40'
PROJECT NO: 13-1216-2 | SHEET 7 OF 10

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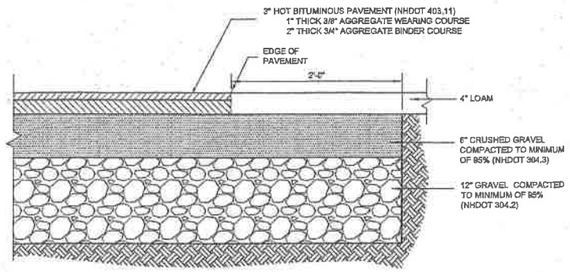
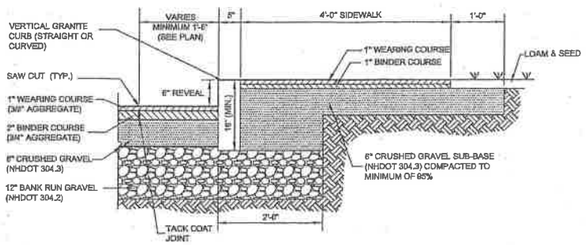


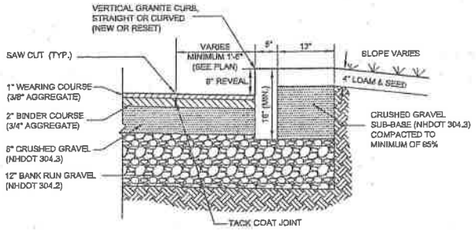
DRIVEWAY AND PARKING LOT SECTION

NOT TO SCALE
(MARCH 2008)



VERTICAL GRANITE CURB WITH BITUMINOUS SIDEWALK

NOT TO SCALE
(MARCH 2008)



VERTICAL GRANITE CURB DETAIL

NOT TO SCALE
(MARCH 2008)

TURF ESTABLISHMENT SCHEDULE

PURPOSE:

TO ESTABLISH AND MAINTAIN PERMANENT AND TEMPORARY TURF AREAS, RESTORE GROWTH TO EXISTING TURF AREAS DISTURBED DURING CONSTRUCTION AND CONTROL SOIL EROSION.

PREPARATION AND EXECUTION:

1. RAKE THE SUBGRADE OF ALL AREAS TO BE LOAMED AND SEEDED TO REMOVE RUBBISH, STICKS, ROOTS AND STONES LARGER THAN 1 INCH.
2. PLACE LOAM OVER AREAS TO BE SEEDED AND SPREAD.
3. FINE GRADE SURFACE AND SUPPLEMENT WITH SUITABLE LOAM WHERE NEEDED TO CREATE A UNIFORM SURFACE ACCORDING TO THE FINISH GRADES INDICATED; TOP AND BOTTOM OF SLOPES SHALL BE ROUNDED. NO LOAM SHALL BE SPREAD IF THE SUBGRADE IS EXCESSIVELY WET OR FROZEN.
4. 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 MIXTURE FOR AREA TO BE SEEDED BASED ON EXAMINATION OF PROJECT PLANS. UNIFORMLY SPREAD THE SEED BY BROADCASTING OR HYDROSEEDING. IF BROADCASTING, LIGHTLY RAKE INTO THE PREPARED SURFACE AND ROLL. IF, HYDROSEEDING, USE 4 TIMES THE RECOMMENDED RATE OF INOCULANT. AFTER SEED IS SPREAD, WATER THOROUGHLY WITH A FINE SPRAY.
7. 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 UNTILLABLE.
8. WITHIN 24 HOURS AFTER SEEDING OPERATION, UNIFORMLY MULCH THE AREA WITH HAY. ANCHOR MULCH ON ALL SLOPES EXCEEDING 3 : 1 USING MULCH NETTING INSTALLED IN ACCORDANCE WITH THE MANUFACTURER.
9. PROTECT AND PREVENT AGAINST WASHOUTS, ANY WASHOUTS WHICH OCCUR SHALL BE PROMPTLY REGRADED AND RESEEDED.
10. WHEN IT IS IMPRACTICAL TO ESTABLISH PERMANENT GROWTH ON DISTURBED EARTH BY 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:

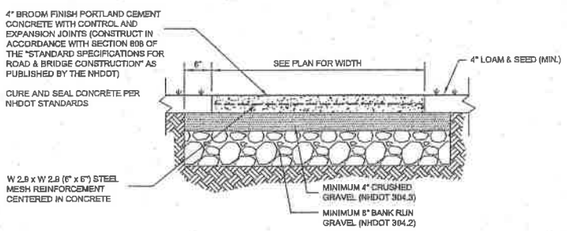
ALL SEEDED AREAS SHALL BE KEPT WATERED AND IN GOOD CONDITION. RESEED AS NECESSARY TO ESTABLISH HEALTHY UNIFORM GROWTH OVER THE ENTIRE SEEDED AREA. MAINTAIN SEEDED AREAS IN AN APPROVED CONDITION UNTIL FINAL ACCEPTANCE. MAINTENANCE SHALL INCLUDE REPAIRS FOR DAMAGE CAUSED BY EROSION.

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 POUNDS PER 1,000 S.F.
3. FERTILIZER SHALL BE APPLIED AT A RATE OF 30 POUNDS PER 1,000 S.F.
4. 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.
6. SEED MIXTURE FOR SLOPE AREAS SHALL BE APPLIED AT A RATE OF 80 POUNDS PER ACRE OR 2 POUNDS PER 1,000 S.F.
7. SEED MIXTURE FOR STORMWATER MANAGEMENT AREAS SHALL BE APPLIED AT A RATE OF 70 POUNDS PER ACRE OR 1.6 POUNDS PER 1,000 S.F.
8. MULCH SHALL BE APPLIED AT A RATE OF 90 POUNDS PER 1,000 S.F.

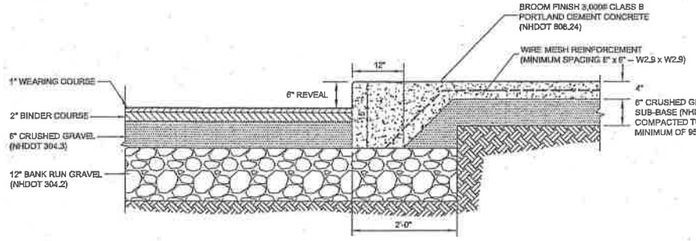
MATERIALS:

1. LOAM USED FOR TOPSOIL SHALL BE FRIABLE, FERTILE, NATURAL FREE-DRAINING LOAM; FREE OF ROOTS, GRASS, STICKS, WEEDS, CLAY, SOD LUMPS, DEBRIS AND STONES LARGER THAN 1 INCH IN ANY DIMENSION. SOIL SHALL NOT BE EXCESSIVELY ACID OR ALKALINE AND CONTAIN NO TOXIC MATERIALS.
2. LIME SHALL BE GROUND LIMESTONE CONTAINING NO LESS THAN 85% CALCIUM AND MAGNESIUM CARBONATES.
3. FERTILIZER SHALL BE 10-20-20 COMMERCIAL GRADE.
4. SEED MIXTURE FOR LAWN AREAS SHALL BE 99% PURE LIVE SEED AND CONSIST OF THE FOLLOWING:
   - 25% CREEPING RED FESCUE
   - 25% KENTUCKY BLUEGRASS
   - 25% REDTOP
   - 25% MANHATTAN PERENNIAL RYEGRASS
5. TEMPORARY SEEDING MIXTURE SHALL BE AN APPROVED CONSERVATION MIX OR CONSIST OF THE FOLLOWING:
   - 15% BLACKWELL OR SHELTER SWITCHGRASS
   - 20% NIAGRA OR KAW BIG BLUESTEM
   - 20% CAMPER OR BLAZE LITTLESTEM
   - 15% NE-27 OR BLAZE SAND LOVEGRASS
   - 10% VIKING BIRDSFOOT TREFOIL
   - INOCULUM SPECIFIC TO BIRDSFOOT TREFOIL MUST BE USED WITH THIS MIXTURE. IF SEEDING BY HAND, A STICKING AGENT SHALL BE USED. IF SEEDING WITH A HYDROSEEDER, USE FOUR TIMES THE RECOMMENDED AMOUNT OF INOCULUM.
6. SEED MIXTURE FOR SLOPE AREAS SHALL BE 99% PURE LIVE SEED AND SHALL CONSIST OF THE FOLLOWING:
   - 30% CREEPING RED FESCUE
   - 40% PERENNIAL RYE GRASS
   - 15% REDTOP
   - 15% BIRDSFOOT TREFOIL
   - *IN ADDITION TO THE MIX SPECIFIED ABOVE, CROWN 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.
7. SEED MIXTURE FOR STORMWATER MANAGEMENT AREAS, INCLUDING DETENTION BASINS AND VEGETATED TREATMENT SWALES SHALL CONSIST OF THE FOLLOWING:
   - 25% CREEPING RED FESCUE
   - 15% SWITCH GRASS
   - 15% FOX SEDGE
   - 15% CREEPING BENTGRASS
   - 10% FLATPEA
   - 20% WILDFLOWER VARIETY
8. 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.



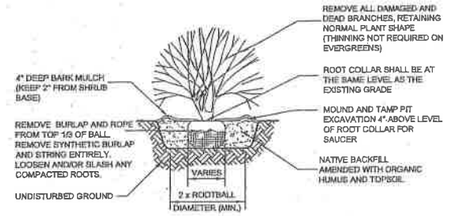
CONCRETE PAD DETAIL

NOT TO SCALE
(MARCH 2008)



INTEGRAL CURB AND WALK DETAIL

NOT TO SCALE
(MARCH 2008)

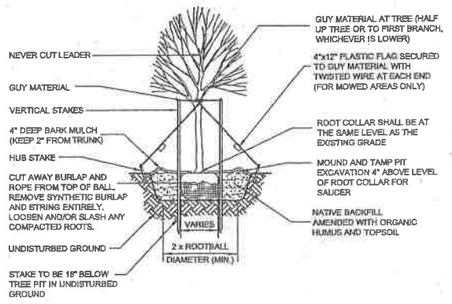


BALLED & BURLAP SHRUB PLANTING DETAIL

NOT TO SCALE
(JANUARY 2012)

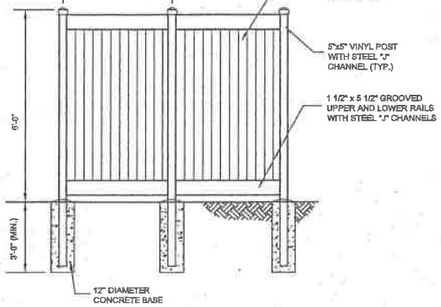
NOTE:

GUYING AND STAKING TO BE DETERMINED IN THE FIELD BY THE LANDSCAPE ARCHITECT. LOCAL FIELD CONDITIONS AS WELL AS PLANT CHARACTERISTICS WILL DETERMINE THE NECESSITY OF GUYING AND STAKING.



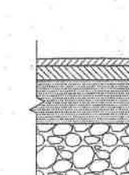
DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE
(JANUARY 2012)



VINYL FENCE DETAIL

NOT TO SCALE
(MARCH 2008)



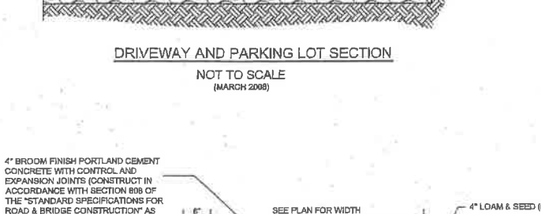
THROUGH (STRAIGHT) ARROW

PEDESTRIAN WALK & CROSSING STRIPING

STOP BAR

STRIPING NOTES:

1. ALL PAVEMENT MARKINGS SHALL BE IN CONFORMANCE WITH THESE STANDARDS AND THE CURRENT EDITION OF MUTCD.
2. WIDTH OF LINES SHALL VARY NO MORE THAN = 1/4 INCH FROM THAT SPECIFIED.
3. THE WET FILM THICKNESS OF A PAINTED LINE SHALL BE A MINIMUM OF 15 MILS THROUGHOUT THE ENTIRE WIDTH AND LENGTH OF LINE SPECIFIED.
4. OVERSPRAY SHALL BE KEPT TO AN ABSOLUTE MINIMUM.



HANDICAP STRIPING DETAIL

NOT TO SCALE
(MARCH 2012)

OPTION B

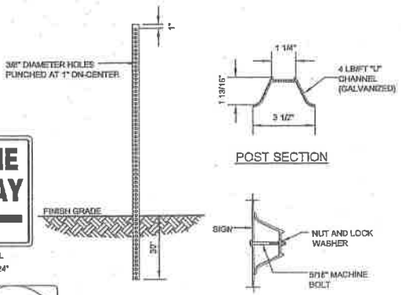
(2) FACE REPLACEMENT FOR (1) EXISTING D.F. PYLON SIGN

EXISTING CABINET & _____ RETAINER: WHITE*
FACE REPLACEMENTS: WHITE LEXAN
3M TRANS VINYLS WHITE, BLACK, & BLUE

FONTS: IMPACT

TRAFFIC SIGN NOTES:

1. ALL TRAFFIC SIGN FACES AND SHAPES SHALL CONFORM WITH THE MUTCD.
2. ALL SIGN POST MOUNTS SHALL CONFORM WITH THE AASHTO AND NHDOT SPECIFICATIONS.



POST SECTION

POST

MOUNTING

NOTE:
POST SHALL CONFORM TO NHDOT 616.2.5.3

STEEL SIGN POST DETAIL

NOT TO SCALE
(MARCH 2008)

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

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____

SIGNATURE _____ DATE _____

SIGNATURE _____ DATE _____

SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN ACHIEVES FINAL APPROVAL.

CONSTRUCTION DETAILS

GOODWILL

MAP 222; LOT 41
9 WASON ROAD
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:
MANUEL D. SOUSA ET. AL
c/o STOP & SHOP SUPERMARKET
1385 HANCOCK STREET
QUINCY, MA 02169
H:C.R.D. BK. 7178; PG. 233

APPLICANT:
GOODWILL INDUSTRIES OF NORTHERN NEW ENGLAND
75 WASHINGTON AVENUE
PORTLAND, ME 04101

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

STATE OF NEW HAMPSHIRE — PATRICK R. COLLINS No. 12985 LICENSED PROFESSIONAL ENGINEER — 5/7/14

REVISIONS

No.	DATE	DESCRIPTION	BY

DATE: FEBRUARY 5, 2014 | SCALE: AS SHOWN
PROJECT NO: 13-1215-2 | SHEET 8 OF 10

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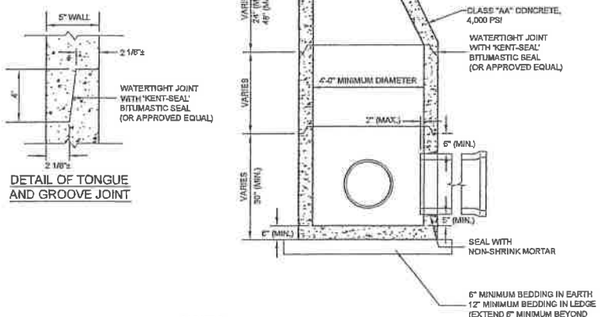


DETAIL OF TONGUE AND GROOVE JOINT

NOTES:

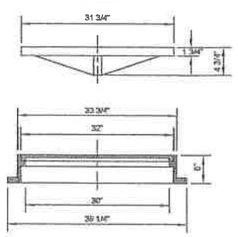
1. STEPS ARE NOT ALLOWED.
2. ALL SECTIONS SHALL BE CONCRETE CLASS AA (4,000 PSI). CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ. IN. PER L.F., IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER OF THE WALL.
3. THE TONGUE OR THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER L.F.
4. MATERIALS AND CONSTRUCTION TO NHDOT STANDARDS.

PRECAST REINFORCED DRAIN MANHOLE DETAIL

NOT TO SCALE

(MARCH 2008)

PLAN



SECTION

NOTES:

NEW HAMPSHIRE MAINTAINS A CLEAR OPENING DESIGNATION OF 30" FOR ITS MANHOLE CASTINGS.

FEATURES:

- 3" LETTERING
- COVERS MARKED DRAIN
- NONROCKING COVER
- DIAMOND SURFACE DESIGN

SPECIFICATIONS:

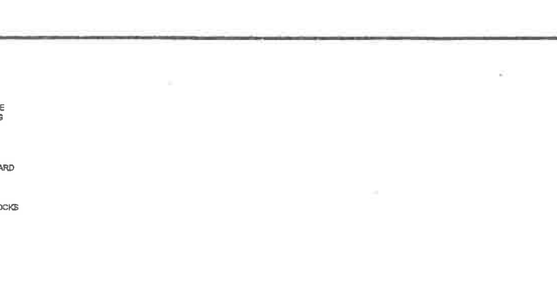
- FULLY MACHINED FRAME AND COVER
- H-20 LOAD RATED
- GRAY CAST IRON MEETS ASTM A48 CLASS 30

DRAIN MANHOLE FRAME AND COVER DETAIL

NOT TO SCALE

(JANUARY 2012)

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



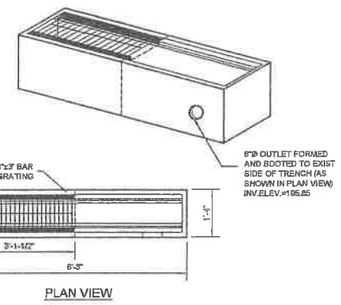
NOTES

1. THOROUGHLY COMPACTED SCREENED GRAVEL FOR RCP PIPE. SCREENED GRAVEL TO EXTEND TO SELECT FILL LINE.
2. FOR HDPE OR PVC PIPE, BEDDING SHALL BE 3/4" STONE TO THE TOP OF THE PIPE.

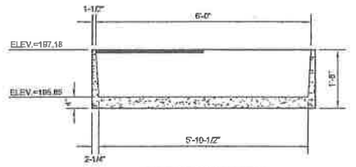
STORM DRAINAGE TRENCH DETAIL

NOT TO SCALE

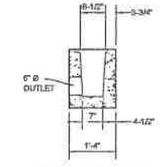
(MARCH 2008)



PLAN VIEW



SIDE SECTION VIEW



END SECTION VIEW

NOTES:

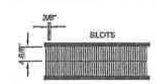
1. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.
2. AVAILABLE IN 3' AND 6' SECTIONS.
3. AVAILABLE IN END OR MIDDLE SECTIONS.
4. CONFORMS TO H-20 LOADING.

ITEM NO. M-TD6 6' SECTION	WEIGHT 1,315 LBS
M-TD6 3' SECTION	711 LBS

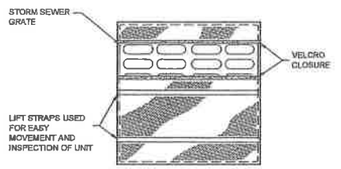
TRENCH DRAIN DETAIL

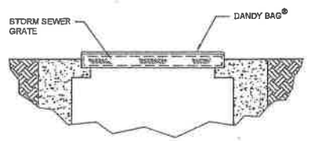
(BY SHEA, OR APPROVED EQUAL)

NOT TO SCALE



HANDICAP GRATE (OPTIONAL)





HI-FLOW DANDY BAG® (SAFETY ORANGE)

MECHANICAL PROPERTIES	TEST METHOD	UNITS	MARV
GRAB TENSILE STRENGTH	ASTM D 4632	kN (lbs)	1.82 (365) x 0.89 (200)
GRAB TENSILE ELONGATION	ASTM D 4632	%	24 x 19
PUNCTURE STRENGTH	ASTM D 4833	kN (lbs)	0.40 (90)
MULLEN BURST STRENGTH	ASTM D 3786	kPa (psi)	3097 (450)
TRAPEZOID TEAR STRENGTH	ASTM D 4533	kN (lbs)	0.51 (115) x 0.33 (75)
UV RESISTANCE	ASTM D 4355	%	90
APPARENT OPENING SIZE	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
FLOW RATE	ASTM D 4491	l/min/m² (gal/min/ft²)	5507 (145)
PERMITTIVITY	ASTM D 4491	Sec⁻¹	2.1

DANDY BAG®

NOT TO SCALE

(APRIL 2010)

CONSTRUCTION SEQUENCE

1. 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 REQUIREMENTS AND INTENT OF RSA 430:53 AND AGR 3800 RELATIVE TO INVASIVE SPECIES.
2. PRIOR TO COMMENCEMENT OF ANY EARTHMOVING OPERATIONS, ALL APPLICABLE TEMPORARY EROSION CONTROL MEASURES, INCLUDING SPECIFIED PERIMETER SILTATION FENCING AND STABILIZED CONSTRUCTION EXIT SHALL BE IN PLACE AS SHOWN ON THE PROJECT PLANS.
3. COMPLETE GRUBBING OPERATIONS. ALL STUMPS AND SIMILAR ORGANIC DEBRIS SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR. NATIVE ORGANIC SOIL MATERIALS SUITABLE FOR USE AS TOPSOIL SHALL BE STOCKPILED WITHIN AREAS OUT OF THE WAY OF OTHER CONSTRUCTIONS ACTIVITIES AND DRAINAGE FLOW. STOCKPILES SHALL BE TEMPORARILY SEEDED WITH WINTER RYE AND BE SURROUNDED WITH HAY BALES AND/OR FABRIC SILTATION FENCE IN ORDER TO PREVENT LOSS DUE TO EROSION.
4. BEGIN EARTHMOVING OPERATIONS, COMMENCING WITH WORK NEEDED TO BALANCE SITE AND FACILITATE BUILDING FOUNDATION AND RETAINING WALL CONSTRUCTION. PERMANENT DOWNSLOPE WORK SHALL BE PROTECTED FROM UPGRADIENT STORMWATER FLOW BY THE CONSTRUCTION OF TEMPORARY EARTHEN DIKES OR EXCAVATED SWALES.
5. ONCE BUILDING FOUNDATION WORK IS UNDERWAY, CONTINUE EARTHMOVING OPERATIONS UNTIL DESIGN SUBGRADE IS ACHIEVED.
6. INSTALL 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 FULLY STABILIZED.
7. PLACE GRAVEL AND CRUSHED GRAVEL OVER PROPOSED DRIVEWAY, WALKS AND PARKING AREAS AND COMPACT IN SPECIFIED LIFT THICKNESS.
8. COMPLETE EXCAVATION/STABILIZATION GRADING ACTIVITIES. WHEN COMPLETE, IMMEDIATELY BEGIN TOPSOILING PROPOSED TURF AREAS USING STOCKPILED LOAM SUPPLEMENTED WITH BORROW LOAM, IF NECESSARY, TO LEAVE A THICKNESS OF 4 INCHES OF FRIABLE LOAM.
9. 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 STABILIZED AND VEGETATED WITH A HEALTHY STAND OF TURF OR GROUND COVER. MAINTAIN SPECIFIED SILTATION/EROSION CONTROL MEASURES THROUGH ONE WINTER.
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

1. 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 GIVEN AREA OF THE SITE SHALL BE LEFT IN AN UNSTABILIZED CONDITION FOR A PERIOD OF TIME EXCEEDING FORTY-FIVE (45) CALENDAR DAYS.
2. TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH PROJECT PLANS. IN ADDITION, SIMILAR MEASURES SHALL BE INSTALLED WHERE AND WHEN THE FIELD CONDITION, OR FIELD 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 RAINFALL OR MORE. THEY SHALL BE CLEANED AND MAINTAINED AND OTHERWISE KEPT IN AN EFFECTIVE OPERATING MANNER THROUGHOUT THE CONSTRUCTION PERIOD.
3. 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 CLEANED OF DEPOSITED SEDIMENT SO AS TO MAINTAIN AN EFFECTIVE GRADE AND CROSS SECTION. ALL SWALES AND DITCHLINES SHALL BE FULLY STABILIZED PRIOR TO HAVING STORMWATER 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.
6. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
   A. BASE COURSE GRAVELS ARE INSTALLED IN AREAS TO BE PAVED;
   B. A MINIMUM OF 85% 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.
7. 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 JUDGEMENT IN INSTALLING SUPPLEMENTARY EROSION CONTROL MEASURES WHERE AND WHEN SPECIFIC SITE CONDITIONS AND/OR CONSTRUCTION METHODOLOGIES MAY WARRANT.
9. 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 CONFORM WITH THE RECOMMENDED BEST MANAGEMENT PRACTICE OUTLINED IN VOLUME 3 OF THE NEW HAMPSHIRE STORMWATER MANUAL "EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION."
10. 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

GOODWILL

MAP 222; LOT 41
9 WASON ROAD
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:	APPLICANT:
MANUEL D. SOUSA ET. AL. c/o STOP & SHOP SUPERMARKET 1385 HANCOCK STREET QUINCY, MA 02169 H.C.R.D. BK. 7178; PG. 233	GOODWILL INDUSTRIES OF NORTHERN NEW ENGLAND 75 WASHINGTON AVENUE PORTLAND, ME 04101

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

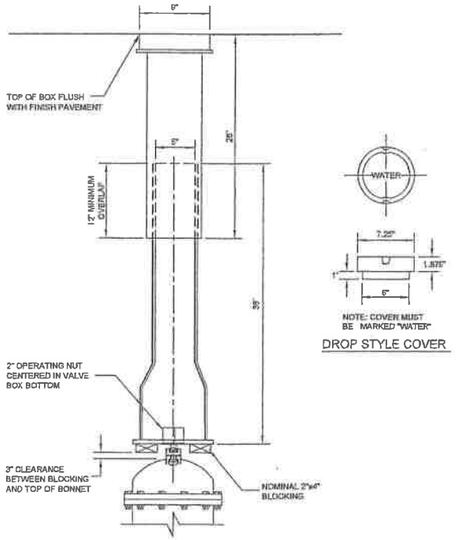
PATRICK R. COLBURN No. 12068 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE

REVISIONS

No.	DATE	DESCRIPTION	BY

DATE: FEBRUARY 5, 2014 | SCALE: AS SHOWN
PROJECT NO: 13-1216-2 | SHEET 9 OF 10

P:_project\13\216\13121621\dwg\13121621-DETAILS.dwg, 3/7/2014 8:51:41 AM, mf



BOTTOM DETAIL

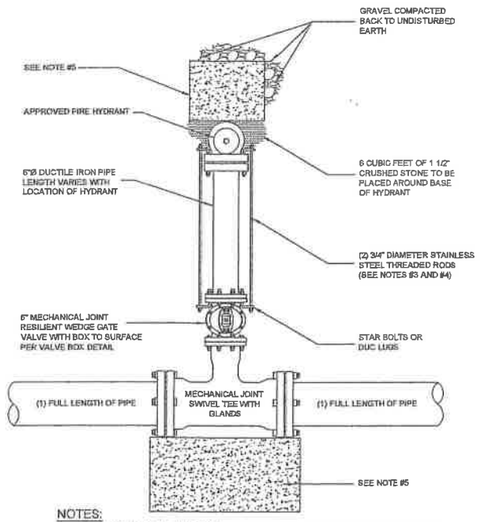
NOTE: COVER MUST BE MARKED "WATER"

DROP STYLE COVER

NOTES:

1. 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 FINISH GRADE.

VALVE BOX DETAIL
(A-09)
NOT TO SCALE
(MARCH 2008)



NOTES:

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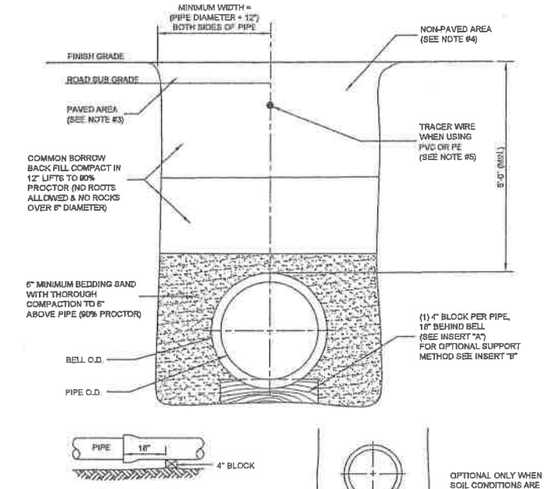
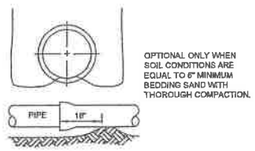
2. ALL PIPE SHOULD HAVE A MINIMUM DEPTHS OF 5'-0" FROM TOP OF PIPE TO FINISH GRADE.
3. 3/4"Ø S.S. RODS SHALL BE USED IN CONJUNCTION WITH REQUIRED S.S. NUTS. RODS ARE TO BE ATTACHED TO FITTINGS WITH EITHER STAR BOLTS OR DUC LUGS.
   10" FITTING OR SMALLER = (2) 3/4"Ø S.S. RODS & ASSOCIATED HARDWARE.
   12" FITTING OR LARGER = (4) 3/4"Ø S.S. RODS & ASSOCIATED HARDWARE.
4. WHEN DISTANCE FROM WATER MAIN TO HYDRANT IS MORE THAN 10'-0" SUBSTITUTE MEGALUGS (OR GRIP RINGS) IN LIEU OF THREADED RODS.
5. MINIMUM 3'x3'x3' PRE CAST CONCRETE THRUST BLOCK MAY BE USED WITH PENNICHUCK WATER WORKS, INC. APPROVAL OR CONCRETE THRUST BLOCK POURED AGAINST UNDISTURBED EARTH - SIZE TO BE BASED ON SIZE OF FITTING AND PRESSURE IN WATER MAIN. SEE THRUST BLOCK BEHIND FITTINGS DETAIL.

HYDRANT INSTALLATION
(A-10)
NOT TO SCALE
(MARCH 2008)



INSERT "A"

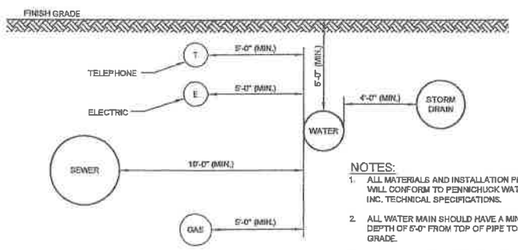


INSERT "B"

NOTES:

1. 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 FINISH GRADE.
3. REQUIREMENTS FOR SUBBASE AND BASE MATERIAL TYPE ARE TO BE IN ACCORDANCE WITH LOCAL AUTHORITY HAVING LOCAL JURISDICTION IN PAVED AREAS.
4. REQUIREMENTS FOR GRAVEL, LOAM AND/OR SEED ARE TO BE IN ACCORDANCE WITH LOCAL AUTHORITY HAVING LOCAL JURISDICTION IN NON-PAVED AREAS.
5. 10 GAUGE TRACER WIRE AS MANUFACTURED BY BMS, DIVISION OF ALBESTAR CORP., AVON, MA OR EQUIVALENT.

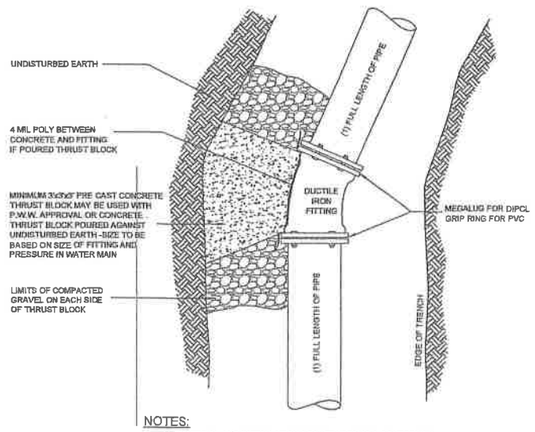
TRENCH DETAIL
(A-02)
NOT TO SCALE
(MARCH 2008)



NOTES:

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

UTILITY SEPARATION (MAIN) DETAIL
(A-01)
NOT TO SCALE
(MARCH 2008)



NOTES:

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THRUST BLOCK BEHIND FITTINGS INSTALLATION
(A-07)
NOT TO SCALE
(MARCH 2008)

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

CONSTRUCTION DETAILS
GOODWILL

MAP 222; LOT 41
9 WASON ROAD
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER OF RECORD:
MANUEL D. SOUSA ET. AL.
c/o STOP & SHOP SUPERMARKET
1385 HANCOCK STREET
QUINCY, MA 02169
H.C.R.D. BK. 7178; PG. 233

APPLICANT:
GOODWILL INDUSTRIES OF NORTHERN NEW ENGLAND
75 WASHINGTON AVENUE
PORTLAND, ME 04101

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

PATRICK R. COLBURN No. 12986 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE

REVISIONS

No.	DATE	DESCRIPTION	BY

DATE: FEBRUARY 5, 2014 SCALE: AS SHOWN
PROJECT NO: 13-1216-2 SHEET 10 OF 10

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55 Executive Drive Parking Lot Additions Site Plan

STAFF REPORT
April 9, 2014

SITE: 55 Executive Drive/Friars Dr. Map 209/Lots 2 & 3 SP# 05-14

ZONING: Industrial (I)

PURPOSE OF PLAN: to show proposed parking lot additions with accompanying site improvements. Application Acceptance & Hearing.

PLAN UNDER REVIEW ENTITLED: Parking Lot Additions 55 Executive Drive & Friars Drive Hudson, NH, Map 209/Lots 2 & 3, prepared by HSI Hayner/Swanson, Inc., dated: 17 Mar 2014 and revised thru 1 Apr 2014, consisting of a Cover Sheet, Sheets 1 – 27 and Notes 1 – 19 (said plans attached hereto).

ATTACHMENTS:

1) Project Narrative, Site Plan Application, Checklist and Waiver Form, including a building photo, aerial site photo and locus plans date stamped Jan. 28, 2014 – Attachment "**A**".
2) CLD's Initial Comments Report, including Application Checklist, dated Mar. 31, 2014 – "**B**".
3) CLD's Traffic Peer Review Letter, dated Mar. 31, 2014 – "**C**".
4) HSI, Inc. Response Letter to CLD's above-cited Initial Comments Report dated Mar. 31, 2014 –"**D**".
5) Stephen Pernaw & Co., Inc. Traffic Response Letter (RE: CLD's attached Traffic Peer Review Letter), dated Apr. 1, 2014 – "**E**".
6) Comments/Memos from Road Agent, Kevin Burns, HFD Deputy Fire Chief, John O'Brien, , and Asst. Assessor – **"F.**

REQUESTED WAIVERS:

1. HTC 275-9(C) -- Noise Study
2. HTC 275-9(D) -- Fiscal and Environmental Impact Study
3. HTC 275-8(31)a – 10% Interior Parking Lot Landscaping
4. HTC 275-8(31)d - Shrubs

STAFF COMMENTS/OUTSTANDING ISSUES:

As board members will recall, this project was last reviewed as a Conceptual Plan at the Feb. 26, 2014 Meeting. The DRAFT minutes of that meeting are provided below:

-- DRAFT COPY --

HUDSON PLANNING BOARD
MEETING MINUTES
February 26, 2014

Letter dated August 2, 2013, from Hayner/Swanson, Inc. to John Cashell, Town Planner, Re: Proposed Site Plan, 55 Executive Drive, Hudson, NH

Chairman van der Veen read aloud the published notice, as repeated above.

Mr. James Petropulos, PE, LEED AP, principal engineer of Hayner Swanson, Inc., 3 Congress Street, Nashua, NH, appearing before the Board as the engineering representative of the applicant, noted that he was accompanied by Mr. Sam Altreuter, Executive Vice-President of Farley White Interests, a Boston-based owner of commercial real estate.

Mr. Petropulos posted two plans on the wall and expressed appreciation for Town Planner Cashell's having placed him on the agenda for this evening. Mr. Petropulos noted one plan was ***Aerial Display Plan, 55 Executive Drive***, dated 02-21-14, while the other was ***Conceptual Display Plan, 55 Executive Drive***, dated 02-21-14. He described the property as a 20-acre piece at the end of Executive Drive, with an adjoining 27-acre lot also being purchased. He noted this was the old Presstek site, saying it had full utilities (sewer, water, electric, and gas) and noting that only a part of the originally planned building had been built. He said the Presstek firm recently was sold to a group that had no interest in the real estate, and Mr. Altreuter's company had purchased it, noting that there was a prospective tenant (a call center) interested in taking the space, occupying four fifths of the building, and they would like to occupy the facility by May with 150 employees, but they hoped to have 400 employees in the facility by the end of this year and to add another 500 by the end of 2016—adding that these would be mostly new hires but with some employees being relocated from the parent firm.

He said the hours of operation would be from 6:00 a.m. to 11:00 p.m. with two staggered shifts, stating that the staggering would prevent large groups of traffic from moving into or out of the property at the same time, with first-shift employees arriving between 6:00 a.m. to 9:00 a.m. and leaving between 3:00 p.m. and 6:00 p.m., with the same variation for the afternoon shift. He said there would be no trucking associated with the call center facility, saying the intended purpose was allowed in the zoning district (Industrial) but there was not enough parking, with only 250 spaces currently existing, so parking expansion was needed, which was what he would be showing on a formal site plan in the very near future. He described where the parking would go on the property, saying additional building would not be prohibited. He said there was a lot of work to do to design this parking lot in a very short time, so the final version might be slightly changed from this concept plan. He said they were proposing a single curb cut off Friar's Drive, just to help distribute traffic from the site, but the main entrance would be at the end of Executive Drive. He said the plan would be for an expansion of 742 parking spaces, giving a total of 954 spaces. He said there would be new lighting and new landscaping, adding that the biggest challenge would be stormwater drainage. He said there was ample room for treatment basins or measures on the property, probably as a mixture of treatment methods. He suggested they might need noise, fiscal, and environmental waivers, adding that staff had suggested it would be appropriate to have a traffic study, and they had a consultant lined up to do that. He said they would be back soon with a full site plan but wanted to hear any inputs, adding that they would be glad to answer any questions.

Chairman van der Veen noted there was no public present to provide comment.

Selectman Maddox said the Board of Selectmen was looking to keep traffic pertaining to the industrial park off Lowell Road, and there had been talk of reworking the intersections within the park to shepherd traffic up to Flagstone Drive and out that way, and maybe to have a dedicated lane to let Executive Drive go straight through.

Ms. McGrath noted there would be 150 employees in May and more in July. Mr. Petropulos said it would go from 150 to 400 in a six month period, saying he wanted to have one of the parking cells constructed by July. Ms. McGrath asked if he intended to have two-way traffic on Friar's Drive; Mr. Petropulos answered in the affirmative.

Mr. Petropulos said the curb cut shown was good planning. Chairman van der Veen asked about the driveways for the property across the street. Mr. Petropulos said he could look at alignment issues, sight distance, and turning movements.

Chairman van der Veen asked about the shift times. Mr. Petropulos said the day ran from 6:00 a.m. to 11:00 p.m. with flextime provided to the employees, so there would be a group coming at 6:00 a.m., another group at 7:00 a.m., another group at 8:00 a.m., and another group at 9:00 a.m., with similar overlapping for the evening hours.

Ms. McGrath asked if there would be business visitors coming in. Mr. Petropulos said he understood it would be a very small percentage, saying he did not think there would be a need for much walk-in traffic. Ms. McGrath said even a small percentage would add to the traffic and parking needs.

Mr. Della-Monica sked if they were planning on food service within the building. Mr. Altreuter answered in the affirmative. Mr. Della-Monica noted this would also cut down on traffic in the area.

Town Planner Cashell noted they would need five full-size plans when they came back, with properly drafted notes. Mr. Petropulos said he had taken good notes during the previous hearings this evening.

Town Planner Cashell said he had suggested having the traffic study cover as far south as the Sagamore Bridge road, including all of the feeder roads coming out of the industrial park. He noted that the overall industrial park currently lacked full traffic, predicting that traffic from this particular use could be easily absorbed.

Mr. Petropulos said he thought their approach would be to look at its intended use compared with what was allowed by right, adding that he would have the traffic consultant send the scope to Town Planner Cashell to make sure Mr. Cashell was comfortable with it. He said they would be hoping for a one-meeting night when they came back, noting that time was critical. He suggested he would come back with a plan at the April 23rd meeting.

Selectman Maddox said the Board was trying to be business friendly, but it was up to the engineer to have all the information there. He noted that it would be up to the employer to encourage the employees to use the Industrial Park roads and not go on Lowell Road. Mr. Petropulos said he expected some of the employees to live here in town, but he understood the direction.

Mr. Della-Monica asked if anyone could think of intersections that ought to be looked at, other than the three on Lowell Road and the four inside the industrial park. Chairman van der Veen said the main thing was to look at the traffic patterns.

Chairman van der Veen declared a break at 8:47 p.m., calling the meeting back to order at 9:10 p.m.

To the effect of the above minutes, at Wednesday night's meeting Mr. Petropulos will be prepared to present this project and address the outstanding items included in both CLD's Initial Site Plan Comments Report **"B"**, as well as those CLD provided for traffic "**C**". In regard to CLD comments, please refer also to HSI's response letter "**D**", and HSI's Traffic Consultant, Stephen Pernaw's, response letter "**E**".

It is anticipated by staff that Mr. Petropulos will need at least a ½ hr. to present the project and address all of the issues involved, especially in regard to the proposed flow of traffic leading in and

out of Sagamore Park. Please note, although no CAP Fee is involved with this project (i.e., because said fee was already paid by the original Presstek project), staff requested the Applicant to consider offering a contribution to the Town's traffic improvement fund, relative to improving the capacity of the roadways within Sagamore Park and leading out to Sagamore Bridge Road. That is, the roads that will provide the primary means of access to the site. NOTE: the Applicant indicated to staff that this request will be brought to the property owner's attention for consideration.

In addition to the above, the attached Plans include Sheets specific to: the Master Plan, Existing Conditions, Site Grading & Utilities, Drainage & Erosion Control, together with landscaping & Photometric Site Lighting, Buildings & Features within 200 ft. of the site, Eng. and Surveyor Stamps & Signatures, as well as Owners Signatures.

No other issues remain at this time, but may arise during the hearing.

RECOMMENDATION: Taking the abovementioned outstanding issues/comments into consideration, and that this application is ready for application acceptance, for Wednesday night's initial public hearing staff recommends:

(i) Board vote for application acceptance;
(ii) Open and conduct the public hearing;
(iii) Allow the applicant to present the project and address all of the issues involved in this application, including those cited-above and in CLD's attached Comments Reports "**B**" & "**C**", as well as your own.
(iv) Hear any pro/con public input, and
(v) Defer further review of this site plan, date specific to the April 23d meeting.
(vi) In the event the board moves to approve the waivers and the application, staff has provided below the appropriate DRAFT MOTIONS below.

APPLICATION TRACKING:

- 03/21/2014 - Application submitted.
- 04/09/2014 - Initial public hearing scheduled.

DRAFT MOTIONS:

I move to accept the Site Plan application for the 55 Executive Drive, Map 209/Lots 2 & 3.

Motion by: _____Second: _____Carried/Failed: _____.

I move to defer further review of the 55 Executive Drive Site Plan application, Map 209/Lots 2 &3 date specific to the 23 April 2014 meeting.

Motion by: _____Second: _____Carried/Failed: _____.

REQUESTED WAIVERS:

1. HTC 275-9(C) -- Noise Study
2. HTC 275-9(D) -- Fiscal and Environmental Impact Study
3. HTC 275-8(31)a – 10% Interior Parking Lot Landscaping
4. HTC 275-8(31)d - Shrubs

1) HTC 275-9C – Noise Study

I move to grant the requested waiver: HTC 275-9C - Noise Study - because such a study is unnecessary, taking into consideration the nature of the intended use, that being a "call-center" within an existing building and the fact that the nearest abutting structure is over 575 ft. away, and as such, 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) HTC 275-9D – Fiscal Impact Study

I move to grant the requested waiver: HTC 275-9D - Fiscal Impact Study - because the proposed parking lot additions will not require the expenditure of public money nor will the project burden the local school system nor will it pose harm on the environment, and as such, the granting of this waiver is not contrary tothe spirit and intent of the Site Plan Review regulations.

Motion by: _____Second: _____Carried/Failed: _____.

3) HTC 275-8(31)a – 10% Interior Parking Lot Landscaping

I move to grant the requested waiver: HTC 275-8(31)a – 10% Interior Parking Lot Landscaping - because the project provides 61% landscaped/open space, wherein only 35% is, and the fact that the proponent provides nearly half of the required interior parking lot landscaping, while at the same time providing a feasible means to plow and remove snow from the subject parking lots, as such, the granting of this waiver is not contrary to the spirit and intent of the Site Plan Review regulations.

Motion by: _____Second: _____Carried/Failed: _____.

4) HTC 275-8(31)d - Shrubs

I move to grant the requested waiver: HTC 275-8(31)d - Shrubs -- because as can be seen on the Landscape Plans for this project there is a significant amount of trees and shrubbery being proposed, both internally and externally of the proposed parking areas, and due to the size of the proposed parking lot additions less shrubs are proposed because they would be damaged during winter months during snow removal operations., as such, the granting of this waiver is not contrary to the spirit and intent of the Site Plan Review regulations.

Motion by: _____Second: _____Carried/Failed: _____.

MOTION to APPROVE:

I move to grant approval for the Site Plan entitled: Parking Lot Additions 55 Executive Drive & Friars Drive Hudson, NH, Map 209/Lots 2 & 3, prepared by HSI Hayner/Swanson, Inc., dated: 17 Mar 2014 and revised thru 1 Apr 2014, consisting of a Cover Sheet, Sheets 1 – 27 and Notes 1 – 19, 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, together with any applicable easement deeds shall be favorably reviewed and recommended on by Town Counsel.

3) In accordance with Note 1 on the Plan, prior to the issuance of a Certificate of Occupancy, Lots 2, 3 and Parcel "A" (as shown on Sheet 2 of 27) shall be merged by Town Form to create a single lot, having a street address of 55 Executive Dr and shown on Tax Map 209 as Lot 2.

4) All improvements shown on the Plan, including Notes 1-19, shall be completed in their entirety and at the expense of the Applicant or his assigns.

5) 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.

6) Onsite landscaping shall be provided for in accordance with the plant and tree species specified on Sheets 21 – 23 of 27 of the Plan.

7) Exterior construction activities on the site shall be limited to between 7:00 A.M. and 7:00 P.M. Monday through Saturday. No exterior construction activities shall occur on Sunday.

8) This approval shall be subject to final engineering review.

Motion by: _____ Second: _____ Carried/Failed: _____

"A"

PROJECT NARRATIVE

The project area under consideration for this application is located at the corner of 55 Executive Drive and Friars Drive in Hudson, NH. The site currently consists of two lots, however the applicant intends on consolidating the parcels to form one tract to be known as Map 209, Lot 2. The parcel is located in Hudson's I-Industrial zoning district. Abutting the 35.7 +/- acre property on the north is undeveloped land, a commercial building to the east, Friars Drive abuts the site to the south and the Merrimack River abuts the site to the west. The location of this property is in the north end of the Sagamore Industrial Park. In general, the properties in the vicinity of this site are a mix of commercial and industrial businesses.

Since 1998, Presstek has constructed a 168,000 square foot office/light industrial building with accompanying parking, access and site improvements. The existing development currently has access off of Executive Drive and a paved driveway around three sides of the T-shaped building. There are approximately 227 parking spaces located in several parking areas as shown on the site plan. The building is currently serviced by municipal sewer and water along with telephone, electric and gas utilities. With regard to stormwater, the existing impervious areas on the property drain to several infiltration basins located in the south and west portions of the site. The original approved site plan showed areas for future building (100,000 square feet) and parking (96 spaces) on the western portion of the lot. Based on SCS Soils Maps and recent test pits performed on this property the site contains deep deposits of sandy soils. Groundwater or seasonal high groundwater was not evident in any of the test pits performed.

It is being proposed to re-tenant a majority of this building with a "call-center" use. The tenant will occupy 80% of the building (approximately 135,000 square feet) with the remaining square footage to be used as professional offices. The tenant hopes to have approximately 800 employees

occupy this building by the end of 2017. The building owner estimates that another 100 people could be employed in the remaining building area. The hours of operation for the call center would be from 6 AM to 11 PM in two work shifts. This staggering of arrival and departure times for the employees will minimize the peak traffic demand on the local roadways. There is little trucking associated with the proposed use of this site. As mentioned above there are approximately 227 parking existing spaces on this property, which is not enough to service the proposed tenant. Therefore, it is being proposed to add three parking lots on this site as shown on the attached site plans. The parking lot on the west side of the site will contain 368 spaces and it will connect the rear access drive to the site entrance at Executive Drive. Two new parking areas are proposed on the south and east sides of the parcel. They will add another 363 spaces to the overall total. Once completed, the site will contain 941 parking spaces which will meet the needs of the proposed tenant.

With regard to stormwater measures needed to accommodate these three new parking areas, the site design will include a combination of treatment practices. The northern part of the east parking lot will contain a subsurface recharge system beneath the proposed parking lot. This system will promote recharge of runoff back into the groundwater on the east side of the site. The southern portion of the east parking lot, the south parking lot and access drives in this area will be piped into a sediment forebay before being released into an existing infiltration basin located adjacent to Executive Drive. This existing drainage area will provide for storage and infiltration of runoff for up to the 50-year storm event. Lastly, the west parking lots will be drained into two subsurface recharge systems to promote groundwater recharge on the west side of the property.

New landscaping and lighting for the proposed parking lot additions have been incorporated into the site plan set.

"A" cont.

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

Date of Application: March 17, 2014 Tax Map # 209 Lot # 2 & 3

Name of Project: Parking Lot Addition

Zoning District: I-Industrial (For Town Use) General SP# 05-14 (For Town Use)

ZBA Action: None

HUDSON MAR 21 2014 COMMUNITY DEVELOPMENT

	PROPERTY OWNER:	DEVELOPER:
Name:	Presstek, LLC	Farley White Interests
Address:	10 Glenville St., 3rd Floor	155 Federal Street, Suite 1800
Address:	Greenwich, CT 06831	Boston, MA 02110
Telephone #	603-402-7502	617-854-9400
Fax #		617-338-2387
Email:	rarnold@presstek.com	saltreuter@farleywhite.com

	PROJECT ENGINEER	SURVEYOR
Name:	Hayner/Swanson, Inc.	Hayner/Swanson, Inc.
Address:	3 Congress Street	3 Congress Street
Address:	Nashua, NH 03062	Nashua, NH 03062
Telephone #	603-882-2057	603-882-2057
Fax #	603-883-5057	603-883-5057
Email:	jpetropulos@hayner-swanson.com	jpetropulos@hayner-swanson.com

PURPOSE OF PLAN:

To show proposed parking lot additions with accompanying site improvements.

For Town Use

Plan Routing Date: 3/24/14 Sub/Site Date: 4/1/14 @ 10:00 AM

_____ I have no comments _____ I have comments (attach to form)

_____ Title: _____ Date: _____
(Initials)

DEPT:
_____ Zoning _____ Engineering _____ Assessor ____ Police ____ Fire ____ Planning
_____ Consultant _____ Highway Department

Fees Paid: _____

SITE DATA SHEET

PLAN NAME: Parking Lot Additions

PLAN TYPE: SITE PLAN

LEGAL DESCRIPTION: MAP 209 LOT 2 & 3

DATE: March 17, 2014

Location by Street	55 Executive Drive & Friars Drive
Zoning:	I - Industrial
Proposed Land Use:	Business/Professional Offices
Existing Use:	Offices/Light Industrial
Surrounding Land Use(s):	Commercial/Industrial
Number of Lots Occupied:	One
Existing Area Covered by Building:	155,000+/- s.f.
Existing Buildings to be removed:	None
Proposed Area Covered by Building:	155,000+/- s.f.
Open Space Proposed:	61%
Open Space Required:	35%
Total Area:	S.F.: 1,556,960 Acres: 35.74+/-
Area in Wetland:	0.25+/- Area Steep Slopes: 2.25+/-
Required Lot Size:	30,000 s.f.
Existing Frontage:	1,800'+
Required Frontage:	150'

Building Setbacks:	Required*	Proposed
Front:	50'	109'+/-
Side:	15'	217'+/-
Rear:	15'	147'

SITE PLAN DATA SHEET
(Continued)

Flood Zone Reference: Map Number 33011C0652E & 33011C656D

Width of Driveways: 24'

Number of Curb Cuts: 1 - New, 1 - Existing

Proposed Parking Spaces: 941

Required Parking Spaces: 560

Basis of Required Parking (Use): Professional Office

Dates/Case #/Description/Stipulations of ZBA, Conservation Commission, NH Wetlands Board Actions: N/A
(Attach stipulations on separate sheet)

Waivers Requested: (Left column for Town Use)	Hudson Town Code Reference	Regulation Description
	1. 275-9C	Noise Study
	2. 275-9D	Fiscal and Environmental Impact Studies
	3. 275-8(31)a	10% Interior Landscaping in Parking Lot
	4.	
	5. 275 - 8(31)d	Shrubs
	6.	
	7.	
	8.	

Impact Fees:
C.A.P Fee: N/A

Development Agreement Proposed: Pending

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 site plan 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
JWP	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.	
JWP	b)	A Site Plan narrative, describing the purpose, locations, long-range plans, impacts on traffic, schools, and utilities	
JWP	c)	Plan scale at not less the one inch equals fifty feet (1" = 50')	
JWP	d)	Locus plan with 1,000' minimum radius of site to surrounding area	
JWP	e)	Plan date by day/month/year	
JWP	f)	Revision block inscribed on the plan	
JWP	g)	Planning Board approval block inscribed on the plan	
JWP	h)	Title of project inscribed on the plan	
JWP	i)	Names and addresses of property owners and their signatures inscribed on the plan	
JWP	j)	North point inscribed on the plan	
JWP	k)	Property lines: exact locations and dimensions	
JWP	l)	Square feet and acreage of site	
JWP	m)	Square feet of each building (existing and proposed)	
JWP	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
JWP 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	_____
JWP p)	Locations of existing and proposed permanent monuments and bench marks within 200 feet of the development tract	_____
JWP q)	Pertinent highway projects	_____
JWP r)	Assessor's Map and Lot number(s)	_____
JWP 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	_____
JWP t)	Delineate zoning district on the plan	_____
JWP u)	Storm water drainage plan	_____
JWP v)	Topographical elevations at 2-foot intervals contours: existing and proposed	_____
JWP w)	Utilities: existing and proposed	_____
JWP x)	Parking: existing and proposed	_____
JWP y)	Parking space: length and width	_____
JWP z)	Aisle width/maneuvering space	_____
JWP aa)	Landscaping: existing and proposed	_____
JWP ab)	Building and wetland setback lines	_____
JWP ac)	Curb cuts	_____
JWP ad)	Rights of way: existing and proposed	_____
JWP ae)	Sidewalks: existing and proposed	_____
JWP af)	Exterior lighting plan	_____
JWP ag)	Sign locations: size and design	_____
JWP ah)	Water mains and sewerage lines	_____
JWP ai)	Location of dumpsters on concrete pads	_____
JWP aj)	All notes from plats	_____

Applicant Initials		Staff Initials
JNP ak)	Buffer as required by site plan regulations	
JNP al)	Green and open space requirements met with both types of spaces inscribed on the plan	
JNP 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 performed by a State of New Hampshire Certified Soil Scientist, who shall affix his/her stamp and signature shall be inscribed on the plan.	
JNP an)	Wetlands (and poorly-drained and very poorly-drained soils, 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.	
JNP ao)	"Valid for one year after approval" statement inscribed on the plan.	
JNP ap)	Loading bays/docks	
JNP aq)	State of New Hampshire engineer's stamp, signature, surveyor's stamp, and signature	
JNP ar)	Error of closure (1 in 10,000 or better)	
JNP as)	Drafting errors/omissions	
JNP at)	Developer names, addresses, telephone numbers and signatures	
JNP au)	Photographs, electronic/digital display or video of site and area	
JNP av)	Attach one (1) copy of the building elevations	
JNP aw)	Fiscal impact study (Waiver)	
JNP ax)	Traffic study	
JNP ay)	Noise study (Waiver)	

Applicant Initials		Staff Initials
JMP az)	Copies of any proposed or existing easements, covenants, deed restrictions, right of way agreements or other similar documents	_____
JMP 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.	_____
(PENDING) JMP bb)	Presentation plan (colored, with color-coded bar chart)	_____
JMP bc)	Fees paid to clerk	_____
JMP 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 purview of the Planning Board, any and all items may be waived.

_____
_____
_____
_____
_____
_____
_____
_____
_____

APPLICATION FOR SITE PLAN REVIEW
TOWN OF HUDSON, NEW HAMPSHIRE

I hereby apply for Site 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 Site 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 given 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 to 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/or inspections conducted on his/her (their) property in connection with this applications.

Signature of Owner: _____ GEOFF LOFTUS, COO PRESSTEK, LLC 3/13/2014

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

Signature of Developer: _____ John F Power

- 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 Code Enforcement Officer/Building Inspector must be notified within two (2) working days of any change by the individual in charge of the project.

APPLICATION IS DUE AT NOON 21 days prior to the Planning Board Meeting. (The date the Agenda is CLOSED.) Any applications received after that time will be deferred until the next available meeting.

SUBDIVISION/SITE PLAN WAIVER REQUEST FORM

Name of Subdivision/Site Plan: Parking Lot Additions

Street Address: 55 Executive Drive & Friars Drive

I James N. Petropulos (AGENT) hereby request that the Planning Board waive the requirements of item (see attached letter) of the Subdivision/Site Plan Checklist in reference to a plan presented by Hayner/Swanson, Inc. _____ (name of surveyor and engineer) dated March 17, 2014 for property tax map(s) 209 and lot(s) _____ 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):

(See attached waiver letter)

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):

(See attached waiver letter)

Signed: James N. Petropulos Pres. XSi

Applicant or Authorized Agent

Planning Board Action:

Waiver Granted: _____

Waiver Not Granted: _____

Waiver Request #3

HSPR 275-8(31) a: Landscaping Requirements – A minimum of 10% of the interior parking lot shall be set aside for landscaping.

Request: To allow proposed parking lots with less than 10% of the interior area set aside for landscaping.

Basis of Waiver: The proposed parking lot additions provide the following amounts of interior landscaping:

- **West Lot:** 4.50% provided
- **South Lot:** 5.40% provided
- **East Lot:** 4.60% provided

The proposed interior parking-lot landscape islands serve to define vehicle turning movements, provide open space and offer areas for landscaping. The proposal seeks to balance these elements with snow plowing and maintenance during winter months. As a trade-off the proposed parking lots have large perimeter open space areas on three sides. Lastly, the entire site has 61% open space where 35% is required by the Hudson Site Plan Regulations.

Waiver Request #4

HSPR 275-8(31) d: Landscaping Requirements – A minimum of 1 shrub per 200 square feet of paved area or 1.6 shrubs per parking space, whichever is greater.

Request: To allow the planting of 738 shrubs where 1650 are required.

Basis of Waiver: As can be seen on the Landscape Plans for this project there is a significant amount of trees and shrubbery being proposed, both internally and externally of the proposed parking areas. Due to the size of these proposed parking lot additions less shrubs are being proposed because they tend to get damaged during winter snow removal operations. There should be a significant amount of existing vegetation remaining on the exterior of the south and east parking lots.

In summary, it is our opinion the above waiver requests are reasonable and meet the criteria outlined in Section 275-15, Waivers of the Hudson Site Plan Regulations. Given that these requests do not adversely impact any abutting properties, it is our opinion the above requests meet the spirit and intent of the Town of Hudson Site Plan Regulations. A strict enforcement of the above regulations would pose a hardship to our Client by adding costs to perform unnecessary studies along with the added expense and maintenance of the additional shrubs and interior landscape islands.

Thank you for your consideration of these waiver requests.

HSI Hayner/Swanson, Inc.
Civil Engineers/Land Surveyors

March 17, 2014
Job No. 5248-FWI

Mr. Ed Van Der Veen, Chairman
Hudson Planning Board
12 School Street
Hudson, NH 03051

RE: Proposed Site Plan - Parking Lot Additions
55 Executive Drive and Friars Drive
Hudson, NH, NH
Tax Map 209, Lots 2 & 3

Dear Mr. Chairman:

On behalf of our client, Farley White Interests, we are respectfully requesting the following waivers from the Hudson Site Plan Regulations (HSPR):

Waiver Request #1

HSPR 275-9C: Noise Study

Request: To waive the requirement of submitting a noise study as part of the proposed Parking Lot Additions site plan application.

Basis of Request: Given the nature of the intended use, that being a "call-center" within an existing building and the fact that the nearest abutting structure is over 575 feet away, it is our opinion that there is no need to perform a noise study.

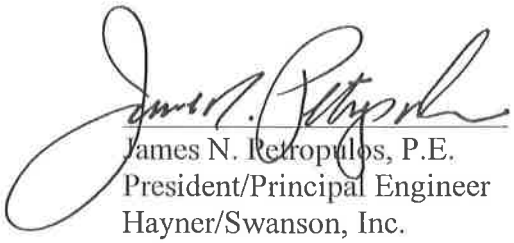
Waiver Request #2

HSPR 275-9D: Fiscal and Environmental Impact Studies

Request: To waive the requirement of submitting a fiscal and environmental studies as part of the proposed Parking Lot Addition site plan application.

Basis of Request: The proposed parking lot addition proposal will not require an expenditure of public money nor will it burden the local school system. It is our opinion that the stormwater management design is respective of the environment and that none of the proposed parking lot additions will impact any wetlands or wetland buffers.

Respectfully,



James N. Retropulos, P.E.
President/Principal Engineer
Hayner/Swanson, Inc.

cc: John Cashell – Hudson Planning Department

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:
_____ 1.	Application incomplete	_____
✓ 2.	Application complete. Include any applicable requested waivers, fees paid, routing sheet returned	3-21-14 92
_____ 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:	

_____

_____

_____

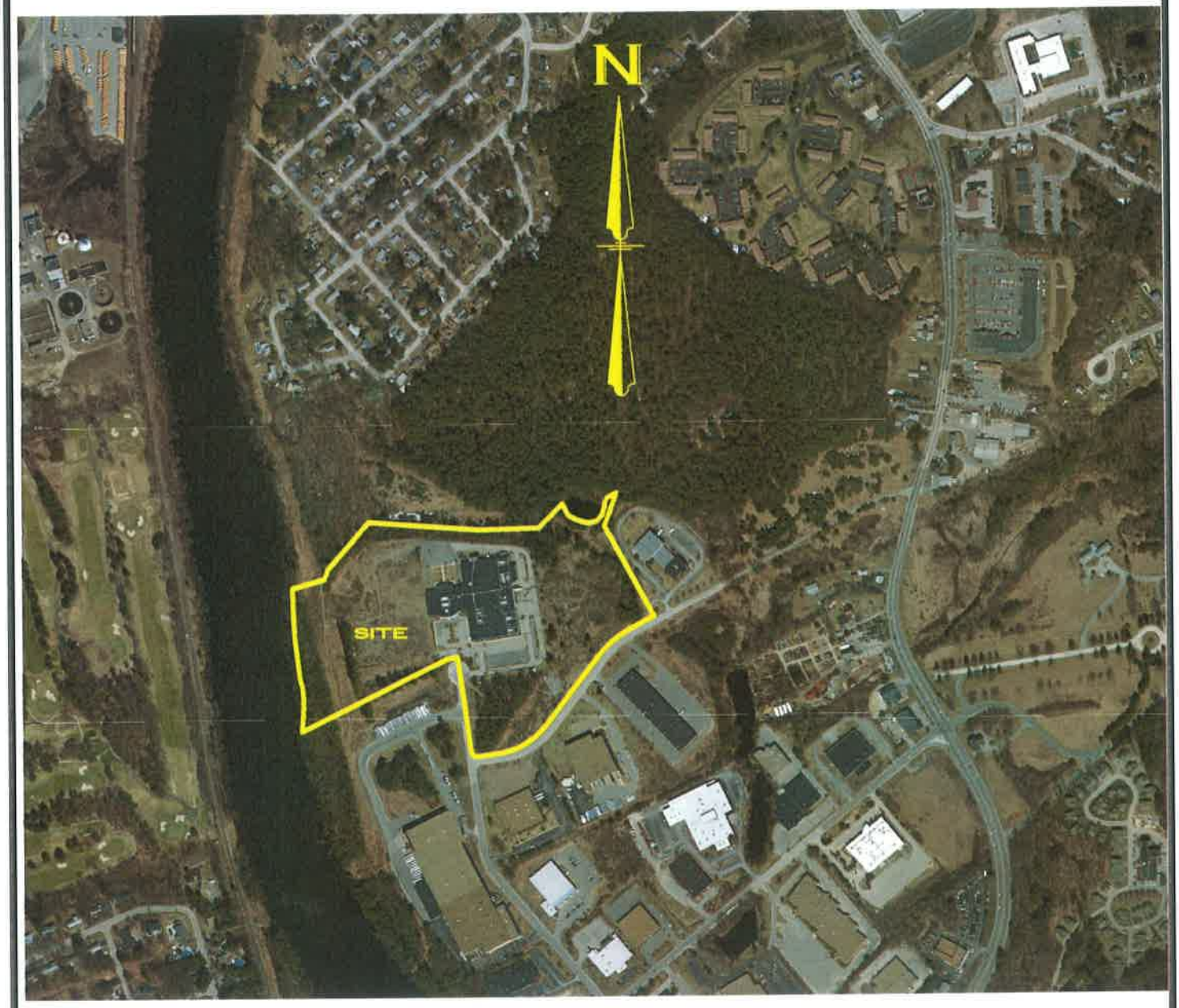
_____

_____

_____

_____

PRESSTEK



0 800 1,600 2,400 FEET

FIG.3

AERIAL MAP

PARKING LOT ADDITIONS

55 EXECUTIVE & FRIARS DR.

HUDSON, N.H.

PREPARED FOR:

FARLEY WHITE INTERESTS

155 FEDERAL ST, STE 1800 BOSTON, MA 02110

17 MARCH 2014

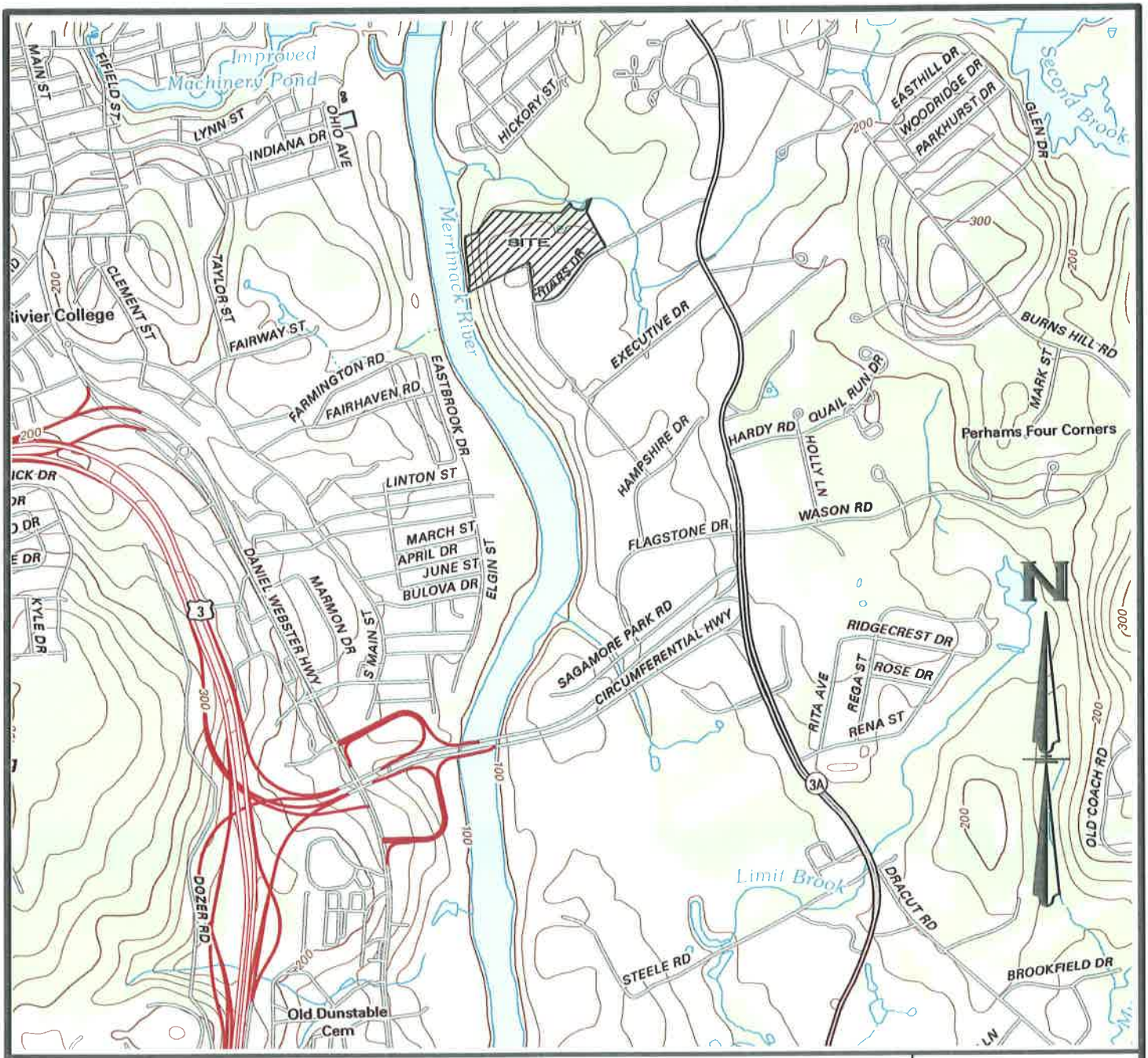
HSI Hayner/Swanson, Inc.
Three Congress Street Nashua, New Hampshire 03062-3301
Tel (603) 883-2057 www.hayner-swanson.com Fax (603) 883-5057

DRAWING: 5248 USGS

LOCATION: Q:\5248\DWG

5248-FWI

File Number



1 1/2 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 20 FEET
NORTH AMERICAN VRETICAL DATUM OF 1988

NASHUA SOUTH, NH--MA
QUAD MAP (2012)

FIG. 1

VICINITY PLAN

PARKING LOT ADDITIONS

55 EXECUTIVE & FRIARS DR.

HUDSON, N.H.

PREPARED FOR:

FARLEY WHITE INTERESTS

155 FEDERAL ST, STE 1800 BOSTON, MA 02110

17 MARCH 2014

HSI *Hayner/Swanson, Inc.*
Three Congress Street Nashua, New Hampshire 03062-3301
Tel (603) 883-2057 www.hayner-swanson.com Fax (603) 883-5057

DRAWING: 5248 USGS

LOCATION: Q:\5248\DWG

5248-FWI

File Number

0 400 800 1,200 FEET

SOIL SURVEY STAFF, NATURAL RESOURCES CONSERVATION SERVICE, UNITED STATES DEPT. OF AGRICULTURE. WEB SOIL SURVEY. AVAILABLE ONLINE AT http://websoilsurvey.nrcs.usda.gov/ ACCESSED MARCH 3, 2014.

FIG. 2

SCS SOILS

PARKING LOT ADDITIONS

55 EXECUTIVE & FRIARS DR.

HUDSON, N.H.

PREPARED FOR:

FARLEY WHITE INTERESTS

155 FEDERAL ST, STE 1800 BOSTON, MA 02110

17 MARCH 2014

HSI Hayner/Swanson, Inc.
Three Congress Street Nashua, New Hampshire 03062-3301
Tel (603) 883-2057 www.hayner-swanson.com Fax (603) 883-5057

DRAWING: 5248 USGS

LOCATION: Q:\5248\DWG

5248-FWI

File Number

"B"

CONSULTING ENGINEERS

March 31, 2014

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

Re: Town of Hudson Planning Board Review
Parking Lot Additions, 55 Executive Drive and Friars Drive
Tax Map 209, Lot 2 & 3, PO #1350-833
CLD Reference No. 03-0249.1340

Dear Mr. Cashell:

CLD Consulting Engineers, Inc. (CLD) has reviewed the first submission of the materials received on March 17, 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 note that several items could not be verified by CLD and require action by the Town.

The project appears to consist of constructing approximately 319,860-square foot of new parking lot additions and a new driveway with associated site improvements, on the previously developed site. The site will continue to be serviced by existing Municipal water and sewer.

The Master Site Plan is laid out assuming that Lots 2 and 3 have been merged. A plan note indicates that prior to issuance of a Certificate of Occupancy; the merger is to be completed. Since none of the proposed layout plans show the Lot 2/Lot 3 lot line, none of the proposed features were reviewed/checked against the proximity to lot lines, we recommend that the merger be performed prior to the Town Site Plan Approval.

The following items are noted:

1. **Site Plan Review Codes**
   a. Hudson Regulations (HR) 275-8.B. (17) The applicant has shown one temporary benchmark on the plan set. Reference to a USGS benchmark was not provided.
   b. HR 275-8.B. (20) The applicant has not provided actual building heights, only " one-story" and "two-story".
   c. HR 275-9.A. See comments below.
   d. HR 275-9.B. See comments below.

540 Commercial Street • Manchester, NH 03101 • ph: (603) 668-8223 • fx: (603) 668-8802 • www.cldengineers.com

e. HR 275-9.C. The applicant has noted on the plan set that a waiver from the Noise Study requirement has been requested.

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

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

h. HR 275-9.F. Copies of deeds or easements were not received for review. The applicant has shown several existing easements including: two cul-de-sac easements, a 20-foot wide drainage easement, a 30-foot wide PSNH and NYNEX easement, a 10-foot wide sewer easement, a temporary easement for paved turnaround, a landscape rights for paved turnaround, a public access easement, a 30-foot wide sewer easement, a drainage easement, a PSNH and NETT Easement, a 250-foot Conservation easement, and an 50-foot PSNH easement. The plan shows the proposed riprap spillway/level spreader discharging into the existing 30-foot wide sewer easement and existing drainage easement to the northeast of the site.

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

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

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

b. HR 275-8.B. (30) (a) and (b) The applicant has provided six loading spaces, where 18 are required. The Town should determine whether a waiver from the loading area Regulation is necessary as the applicant has stated that there will be minimal truck traffic.

c. HR 275-8.B. (30) (d) Large trucks will likely require the use of the entire aisle areas to maneuver the site.

d. HR 275-9.B. We have reviewed the Traffic Impact Assessment (TIA) prepared by Stephen G. Pernaw and Company, dated March 2014, and have the following comments:

1. There are no descriptions of the existing layouts (lane use, phasing, traffic control, etc.) of the intersections that were analyzed. Such descriptions would be helpful in reviewing and verifying the capacity analyses.
2. All the field traffic data, including the intersections within the industrial park, is factored by the seasonal and growth factors. Typically, the traffic data related strictly to specific land uses such as an industrial park would be held constant over seasons and time under the assumption that the trip generation is constant for that particular land use. The report notes that this was done to account for variable vacancy/occupancy of uses in the park over time, which is a reasonable approach. As a result, the projected traffic volumes for the unsignalized intersections within the industrial park should be considered conservative (high), and the subsequent capacity analyses would yield results that show poorer operations that might actually be observed in the field.

NEW HAMPSHIRE VERMONT MAINE

540 Commercial Street • Manchester, NH 03101 • ph: (603) 668-8223 • fx: (603) 668-8802 • www.cldengineers.com

3. The calculated trip generation for the Call Center assumes that:
   - All trips are inbound from 5 AM to 2 PM, and all are outbound from 3 PM to 12 Midnight, which means that all estimated trips are only by employees to and from work.
   - There is only 1 employee per vehicle (no carpooling).
   - There are no drop-offs, which would result in some additional outbound trips during the AM hours and some more inbound trips during the PM hours.
   - There is no accounting for other business or personal trips, which would result in some other inbound and outbound trips. ITE rates for General Office uses are between 3-4 trips per employee on a daily basis to account for office deliveries, vendors, and other personal trips that may occur during the course of the day.

   Based on these assumptions, the TIA concludes that the trip generation for this development during the PM peak at full occupancy would be slightly less than for the previously approved, expanded industrial facility allowed 'by right' on the site. While we would concur with this finding based on the assumptions above, some additional trips could be expected should the proposed use exhibit more typical generation characteristics. However, we anticipate that these additional trips would be a relatively small number and should not significantly affect the analyses.
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b. Although the proposed flows have been shown to be small, the Town should confirm the drainage outlet on the north side of the site that discharges directly into the sewer easement will not be a concern.

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a. The applicant should provide copies to the Town of all pertinent communication with New Hampshire Department of Environmental Services (NHDES) with respect to the required Alteration of Terrain (AoT).

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

a. The applicant should note the need for a NHDES Sewer Discharge Permit on the plan set.

b. The applicant has noted on the plan that a NHDES AoT Permit is needed for the site. The applicant should also note the status of the permit.

c. The applicant has noted on the plan that the contractor is responsible for filing of an EPA Notice of Intent (NOI) as part of the NPDES General Construction Permit.

d. The applicant should note that the intent to acquire groundwater discharge registration for building mechanical systems discharge.

e. Additional local permitting may be required.

8. Other

a. HR 275-8.B. (35) The applicant has noted that 12 handicap parking spaces are included. Although 13 have been shown on the plan, according to Americans with Disabilities Act (ADA) Standard for Accessible Design, 19 ADA parking spaces should be provided. The applicant should also provide additional slope/spot grade information for all existing and

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proposed ADA ramps/tip downs, as the current plans make it difficult to determine if the proposed ramp slopes are in compliance.

b. Lighting plan review was not performed as part of CLD's requested scope. We recommend that the Town confirm that the lighting approach is acceptable. We note; that the intent to use or not use a S1 light should be clarified near the driveway west of Friar Drive, because a label is shown without a symbol.

Please feel free to call if you have any questions.

Very truly yours,

Heidi J. Marshall, P.E.

Paul Konieczka, AICP

HJM/PK:sad

Enclosure

cc: Town of Hudson Engineering Division – File
Hayner/Swanson, Inc.
Three Congress Street
Nashua, NH 03062
Fax (603) 883-5057

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cld@cldengineers.com • www.cldengineers.com
New Hampshire • Vermont • Maine

TO: File

FROM: Kelsey M. Gagnon KMG

DATE: March 31, 2014

RE: Town of Hudson Planning Board Review
Parking Lot Additions, 55 Executive Drive and Friars Drive
Tax Map 209, Lot 2 & 3, PO #1350-833
CLD Reference No. 03-0249.1340

The following list itemizes the documents reviewed related to the current Parking Lot Additions Plan review comments.

- Various emails between Town of Hudson and CLD, between March13, and March 31, 2014.
- Letter of Transmittal from the applicant to Town of Hudson, dated and received March 17, 2014, including the following:
  1. Copy of *Preliminary and Final Site Plan Application for Plan Review*, dated March 17, 2014.
  2. Copy of *Check to Town of Hudson*, dated March 13, 2014.
  3. Copy of *Project Narrative*, not dated.
  4. Copy of *Proposed Site Plan – Parking Lot Additions* Waiver Letter, dated March 17, 2014.
  5. Copy of *Traffic Impact Assessment Study, Proposed Call Center, Hudson, New Hampshire*, prepared by Stephen G. Pernaw & Company, Inc., dated March 14, 2014.
  6. Copy of *NHDES Alteration of Terrain Application Permit Application, Parking Lot Additions*, prepared by Hayner/Swanson, Inc., dated March 2014, with no revisions noted, including the following:
     a. *Pre-Development Drainage Area Map*, Sheet 1 of 1, dated March 17, 2014.
     b. *Post Development Drainage Area Map*, Sheet 1 of 1, dated March 17, 2014.
  7. Copy of *Site Plan, Parking Lot Additions, 55 Executive Drive and Friars Drive, Hudson, New Hampshire* Plan Set, prepared by Hayner/Swanson, Inc., dated March 17, 2014, unless otherwise noted, with no revisions noted, including the following:
     a. Cover Sheet.
     b. *Master Site Plan*, Sheet 1 of 27.
     c. *Existing Conditions Plan*, Sheets 2 through 5 of 27.
     d. *Site Grading and Utility Plan*, Sheets 6 through 8 of 27.
     e. *Site Layout Plan*, Sheets 9 through 11 of 27.

f. *Drainage Profiles*, Sheets 12 through 14 of 27.

g. *Detail Sheet – General Site,* Sheets 15 through 17 of 27.

h. *Erosion Control Plan,* Sheets 18 and 19 of 27.

i. *Detail Sheet – Erosion Control,* Sheet 20 of 27.

j. *Landscape Plan*, Sheets 21 through 23 of 27, prepared by Blackwater Design.

k. *Detail Sheet – Landscape*, Sheet 24 of 27, prepared by Blackwater Design.

l. *Photometric Site Lighting Plan*, Sheets 25 through 27 of 27, prepared by Gate City Electric.

KMG:sad

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

APPLICATION FOR SITE PLAN REVIEW
TOWN OF HUDSON, NEW HAMPSHIRE

Parking Lot Additions, 55 Executive Dr. and Friars Dr.
Town of Hudson
CLD Reference No. 03-0249.1340
Reviewed March 31, 2014

Thirty (30) days prior to Planning Board Meeting, a complete site plan 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	
_____	a) 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 A.M. Tuesday the week prior to the scheduled public hearing/conceptual review date.	JL	
_____	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	c) The Master Site Plan is at a Scale of 1" = 120' and Erosion Control Plan is at a Scale of 1" = 60'
_____	d) Locus plan with 1,000' minimum radius of site to surrounding area	CLD/KMG	
_____	e) Plan date by day/month/year	CLD/KMG	
_____	f) Revision block inscribed on the plan	CLD/KMG	
_____	g) Planning Board approval block inscribed on the plan	JL	g) Language does not exactly match Regulation.
_____	h) Title of project inscribed on the plan	CLD/KMG	
_____	i) Names and addresses of property owners and their signatures inscribed on the plan	CLD/KMG	
_____	j) North point inscribed on the plan	CLD/KMG	
_____	k) Property lines: exact locations and dimensions	CLD/KMG	
_____	l) Square feet and acreage of site	CLD/KMG	
_____	m) Square feet of each building (existing and proposed)	CLD/KMG	
_____	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.	CLD/KMG	n) Abutters' names and addresses are shown on plan. Unable to verify timing of update.

Applicant Initials		Staff Initials	
_____ 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	CLD/KMG	
_____ p)	Locations of existing and proposed permanent monuments and bench marks within 200 feet of the development tract	CLD/KMG	p) 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.
_____ q)	Pertinent highway projects	LOWELL RD INTERSECTION Known JC	q) No highway projects noted.
_____ r)	Assessor's Map and Lot number(s)	CLD/KMG	
_____ 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	CLD/KMG	s) A waiver application form was provided that references attached waiver request letter.
_____ t)	Delineate zoning district on the plan	I JC	t) Zoning noted on plan; not delineated.
_____ u)	Stormwater drainage plan	CLD/KMG	
_____ v)	Topographical elevations at 2-foot intervals contours: existing and proposed	CLD/KMG	
_____ w)	Utilities: existing and proposed	JC	w) Existing sewer, electric and telephone connections have not been shown on the plan.
_____ x)	Parking: existing and proposed		x) The plan does not appear to provide adequate ADA parking spaces.
_____ y)	Parking space: length and width	CLD/KMG	
_____ z)	Aisle width/maneuvering space	CLD/KMG	
_____ aa)	Landscaping: existing and proposed	JC	aa) Waiver requested for HR 275-8B (31) (a) and HR 275-8B (31) (d).
_____ ab)	Building and wetland setback lines	CLD/KMG	
_____ ac)	Curb cuts	CLD/KMG	
_____ ad)	Rights of way: existing and proposed	CLD/KMG	
_____ ae)	Sidewalks: existing and proposed	CLD/KMG	
_____ af)	Exterior lighting plan	CLD/KMG	af) Not reviewed by CLD. EXISTING & PROPOSED LIGHTING WILL BE EXPANDED AT Meeting.
_____ ag)	Sign locations: size and design	JC	ag) No building sign details were provided.
_____ ah)	Water mains and sewerage lines	JC	ah) Sewer connections are not shown to the existing building.
_____ ai)	Location of dumpsters on concrete pads	CLD/KMG	
_____ aj)	All notes from plats	CLD/KMG	

Applicant Initials		Staff 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)	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 performed by a State of New Hampshire certified Soil Scientist, who shall affix his/her stamp and signature shall be inscribed on the plan.	N/A	am) Regulation was repealed in 2010. Soil types indicated.
____ an)	Wetlands (and poorly-drained and very poorly-drained soils, 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	
____ ao)	"Valid for one year after approval" statement inscribed on the plan	CLD/KMG	
____ ap)	Loading bays/docks	JC	ap) Required number of loading bays not provided; limited truck traffic is anticipated.
____ aq)	State of New Hampshire engineer's stamp, signature, surveyor's stamp, and signature		aq) Detail Sheet – General Site, Landscaping Plan, Detail Sheet – Landscape, Detail Sheet – Erosion Control, and Photometric Site Lighting Plan plans are not signed or stamped by a State of New Hampshire Professional Engineer. Will be provided at meeting
____ 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	CLD/KMG	
____ au)	Photographs, electronic/digital display or video of site and area	JC Provided	au) No photographs were received in CLD's package.
____ av)	Attach one (1) copy of the building elevations	CLD/KMG	av) No building elevations received. Two existing buildings, with no proposed buildings.
____ aw)	Fiscal impact study	JC Provided	aw) Not received, waiver requested.
____ ax)	Traffic study	CLD/KMG	
____ ay)	Noise study	JC Provided	ay) Not received, waiver requested.

Applicant Initials		Staff Initials	
_____ az)	Copies of any proposed or existing easements, covenants, deed restrictions, right of way agreements or other similar documents	JK (EASEMENTS RECEIVED RECORDED AT HCRD).	az) No deeds or easements received for review. Many easements have been shown on the plans.
_____ 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 • shoreland 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.	JK	ba) No permits received in package for review. Need for an AoT Permit noted on the Plan Set.
_____ bb)	Presentation plan (colored, with color coded bar chart)	JK	bb) No presentation plan received, requires a Town action.
_____ bc)	Fees paid to clerk	JK	bc) Requires Town action.
_____ 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.	JK	bd) Requires Town action.

*Under the purview of the Planning Board any and all items may be waived. _____

March 31, 2014

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

Re: Town of Hudson Planning Board Review
Parking Lot Additions, 55 Executive Drive and Friars Drive
Tax Map 209, Lot 2 & 3, PO #1350-833
CLD Reference No. 03-0249.1340

Dear Mr. Cashell:

CLD Consulting Engineers, Inc. (CLD) has reviewed the first submission of the materials received on March 17, 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 note that several items could not be verified by CLD and require action by the Town.

The project appears to consist of constructing approximately 319,860-square foot of new parking lot additions and a new driveway with associated site improvements, on the previously developed site. The site will continue to be serviced by existing Municipal water and sewer.

The Master Site Plan is laid out assuming that Lots 2 and 3 have been merged. A plan note indicates that prior to issuance of a Certificate of Occupancy; the merger is to be completed. Since none of the proposed layout plans show the Lot 2/Lot 3 lot line, none of the proposed features were reviewed/checked against the proximity to lot lines, we recommend that the merger be performed prior to the Town Site Plan Approval.

The following items are noted:

1. **Site Plan Review Codes**
   a. Hudson Regulations (HR) 275-8.B. (17) The applicant has shown one temporary benchmark on the plan set. Reference to a USGS benchmark was not provided.
   b. HR 275-8.B. (20) The applicant has not provided actual building heights, only " one-story" and "two-story".
   c. HR 275-9.A. See comments below.
   d. HR 275-9.B. See comments below.

e. HR 275-9.C. The applicant has noted on the plan set that a waiver from the Noise Study requirement has been requested.

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

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

h. HR 275-9.F. Copies of deeds or easements were not received for review. The applicant has shown several existing easements including: two cul-de-sac easements, a 20-foot wide drainage easement, a 30-foot wide PSNH and NYNEX easement, a 10-foot wide sewer easement, a temporary easement for paved turnaround, a landscape rights for paved turnaround, a public access easement, a 30-foot wide sewer easement, a drainage easement, a PSNH and NETT Easement, a 250-foot Conservation easement, and an 50-foot PSNH easement. The plan shows the proposed riprap spillway/level spreader discharging into the existing 30-foot wide sewer easement and existing drainage easement to the northeast of the site.

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

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

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

b. HR 275-8.B. (30) (a) and (b) The applicant has provided six loading spaces, where 18 are required. The Town should determine whether a waiver from the loading area Regulation is necessary as the applicant has stated that there will be minimal truck traffic.

c. HR 275-8.B. (30) (d) Large trucks will likely require the use of the entire aisle areas to maneuver the site.

d. HR 275-9.B. We have reviewed the Traffic Impact Assessment (TIA) prepared by Stephen G. Pernaw and Company, dated March 2014, and have the following comments:

1. There are no descriptions of the existing layouts (lane use, phasing, traffic control, etc.) of the intersections that were analyzed. Such descriptions would be helpful in reviewing and verifying the capacity analyses.

2. All the field traffic data, including the intersections within the industrial park, is factored by the seasonal and growth factors. Typically, the traffic data related strictly to specific land uses such as an industrial park would be held constant over seasons and time under the assumption that the trip generation is constant for that particular land use. The report notes that this was done to account for variable vacancy/occupancy of uses in the park over time, which is a reasonable approach. As a result, the projected traffic volumes for the unsignalized intersections within the industrial park should be considered conservative (high), and the subsequent capacity analyses would yield results that show poorer operations that might actually be observed in the field.

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3. The calculated trip generation for the Call Center assumes that:
   - All trips are inbound from 5 AM to 2 PM, and all are outbound from 3 PM to 12 Midnight, which means that all estimated trips are only by employees to and from work.
   - There is only 1 employee per vehicle (no carpooling).
   - There are no drop-offs, which would result in some additional outbound trips during the AM hours and some more inbound trips during the PM hours.
   - There is no accounting for other business or personal trips, which would result in some other inbound and outbound trips. ITE rates for General Office uses are between 3-4 trips per employee on a daily basis to account for office deliveries, vendors, and other personal trips that may occur during the course of the day.

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b. Although the proposed flows have been shown to be small, the Town should confirm the drainage outlet on the north side of the site that discharges directly into the sewer easement will not be a concern.

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d. The applicant has provided a detail for a straw bale barrier; however, we were unable to find proposed location(s) for use on the plans.

e. The Town should reserve the right to require additional erosion control measures during construction if needed.

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

a. HR 275-8B (31) (a) The applicant has noted on the plan set that a waiver has been requested from having to provide a minimum of 10% of the interior of a parking lot for landscaping area requirement.

b. HR 275-8B (31) (d) The applicant has noted on the plan set that a waiver has been requested from the having to meet shrub requirements.

c. The applicant should review the need for additional curbing or other protective measures along the southeast perimeter of the parking lot to the south of the 100,000-square foot building as a snow storage area conflicts with proposed landscaping and lighting that could be damaged.

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

a. The applicant should note the need for a NHDES Sewer Discharge Permit on the plan set.

b. The applicant has noted on the plan that a NHDES AoT Permit is needed for the site. The applicant should also note the status of the permit.

c. The applicant has noted on the plan that the contractor is responsible for filing of an EPA Notice of Intent (NOI) as part of the NPDES General Construction Permit.

d. The applicant should note that the intent to acquire groundwater discharge registration for building mechanical systems discharge.

e. Additional local permitting may be required.

8. Other

a. HR 275-8.B. (35) The applicant has noted that 12 handicap parking spaces are included. Although 13 have been shown on the plan, according to Americans with Disabilities Act (ADA) Standard for Accessible Design, 19 ADA parking spaces should be provided. The applicant should also provide additional slope/spot grade information for all existing and

NEW HAMPSHIRE VERMONT MAINE

540 Commercial Street • Manchester, NH 03101 • ph: (603) 668-8223 • fx: (603) 668-8802 • www.cldengineers.com

proposed ADA ramps/tip downs, as the current plans make it difficult to determine if the proposed ramp slopes are in compliance.

b. Lighting plan review was not performed as part of CLD's requested scope. We recommend that the Town confirm that the lighting approach is acceptable. We note; that the intent to use or not use a S1 light should be clarified near the driveway west of Friar Drive, because a label is shown without a symbol.

Please feel free to call if you have any questions.

Very truly yours,

Heidi J. Marshall, P.E.

Paul Konieczka, AICP

HJM/PK:sad

Enclosure

cc: Town of Hudson Engineering Division – File
Hayner/Swanson, Inc.
Three Congress Street
Nashua, NH 03062
Fax (603) 883-5057

NEW HAMPSHIRE VERMONT MAINE
540 Commercial Street • Manchester, NH 03101 • ph: (603) 668-8223 • fx: (603) 668-8802 • www.cldengineers.com

HSI Hayner/Swanson, Inc.
Civil Engineers/Land Surveyors

"D"

April 1, 2014
Job #5248-FWI

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

RE: SITE PLAN- PARKING LOT ADDITIONS
55 EXECUTIVE DRIVE and FRIARS DRIVE
HUDSON, NH

Dear John:

Please find enclosed our re-submission effort for the above referenced project. The plans (revised April 1, 2014) attempt to address the review comments provided to us by CLD Consulting Engineers in their March 31, 2014 letter and checklist review. Our responses below appear in the same order as the above referenced CLD correspondence:

1a. Note 5 of sheet 2 of 27 describes the source of the HSI referenced benchmark, which is tied to NGVD29 datum. NGVD29 is the current USGS datum.
1b. The approximate height of the existing building has been added to the Existing Conditions Plans.
1c. No response required.
1d. No response required.
1e. No response required.
1f. No response required.
1g. No response required.
1h. Copies of all existing easement deeds were provided to the Town as part of our Site Plan application.
1i. No response required.

2a. No response required.
2b. The Town shall determine if a formal waiver is required for this item.
2c. No response required.
2d. Traffic Impact Assessment comments shall be addressed by Stephen G. Pernaw and Company under a separate cover.

3a. The existing sewer service, on the north side of the building, is shown on sheet 5 of 27. Overhead power lines are shown on the west and north parts of the site.
3b. The proposed drainage outlet on the northeast portion of the site serves as an overflow outlet from Stormwater Management Area '200'. This subsurface

recharge system has the capacity to completely store/recharge up to the 50-yr storm event. The overflow pipe and outlet, if ever needed, will carry flow to the lower part of the property rather than daylighting on the top of the moderately steep slope in this part of the site.

3c. We are unaware of any non-domestic discharge locations.

3d. Sheet 5 of 27 has been revised to address this issue.

4a. A complete NHDES Alteration of Terrain Permit application package was submitted to the Town on March 17, 2014.

4b. The supporting information used to determine the design infiltration rates of the site is outlined in the Infiltration Feasibility Report, which is contained within the NHDES Alteration of Terrain application. Furthermore, a note has been added to the drainage profiles, which requires the Contractor to verify the assumed infiltration rates prior to installation of the subsurface recharge systems.

4c. We inadvertently used 3.0-inches per hour in the post-development analysis for the existing stormwater management areas A and B. The report has been revised using 4.5 inches per hour for these two areas. While the numbers didn't change, we are still providing a copy of the revised peak flow tables with this letter.

4d. We will verify the required separation between the bottom of the proposed practice and seasonal high water table with the NHDES. Furthermore, we have added notes to the drainage profiles that require the Contractor to verify this, with a test pit at the bottom of each basin subgrade when constructed, prior to installation of the recharge systems.

4e. The overflow at DMH 31 on sheet 14 of 27 has been revised to elevation 171.90 as requested.

5a. Additional silt fence has been added to sheets 18 and 19 of 27.

5b. See revised note 8 on sheet 19 of 27.

5c. Approximate stockpile areas have been added to the Erosion Control Plans.

5d. We have added a straw bale barrier to sheet 18 of 27.

5e. See note 10 added to sheet 18 of 27.

6a. No response required.

6b. No response required.

6c. We have omitted curbing in this location to promote drainage being directed into the proposed rain garden. We do not see a need for curbing in this location..

7a. The revised plans show a proposed 1500 gallon grease trap being installed in the north part of the site. The plans include a profile and a detail of this work. We asked Steve Roberts, P.E. of the NHDES Wastewater Bureau if this work required a Sewer Connection Permit and his response was that it did not.

7b. The NHDES Alteration of Terrain Permit was filed on the same day we applied to the Town. The application has been accepted by the NHDES and it is currently scheduled to be reviewed.

7c. No response required.

7d. We are unaware of any building mechanical systems discharge to the site drainage system.
7e. No response required.

8a. Six (6) additional parking spaces have been added to the plan set.
8b. Revised sheet 25 of 27 now shows the light pole in this location.

Checklist item c) No response required.
Checklist item g) The Planning Board approval block has been revised accordingly.
Checklist item n) The submitted abutters list was dated March 14, 2014.
Checklist item p) No response required.
Checklist item q) No response required.
Checklist item s) No response required.
Checklist item w) The existing sewer service connection has been added to the plan set.
Checklist item x) See response comment #8a above.
Checklist item aa) No response required.
Checklist item af) No response required.
Checklist item ag) The existing site sign will be used for this project.
Checklist item ah) The existing sewer service is shown on sheet 5 of 27.
Checklist item am) No response required.
Checklist item ap) No response required.
Checklist item aq) Landscape plans, landscape details and photometric lighting plans would not require the stamp of a professional engineer. All other sheets are stamped by a Hayner/Swanson, Inc. licensed professional.
Checklist item au) Site photographs were provided to the Town as part of the site plan application.
Checklist item aw) No response required.
Checklist item ax) No response required.
Checklist item ay) No response required.

Lastly, CLD makes the recommendation in their opening remarks that the two lots should be merged prior to Town Site Plan approval. Please note that our Client, Farley White Interests, will not be purchasing this property until thirty (30) days after the Town Site Plan approval and therefore the merger form being completed prior to the issuance of a certificate of occupancy is a more appropriate timeline.

As always, please feel free to contact me if you have any further questions regarding this project.

Respectfully,

James N. Petropulos, P.E.
President/Principal Engineer

'E'

Stephen G. Pernaw & Company, Inc.

P.O. Box 1721 • Concord, NH 03302
tel: (603) 228-5750 • fax: (866) 929-6094 • sgp@lr.net

Transportation: Engineering • Planning • Design

Ref: 1514A

To: Mr. John Cashell, Town Planner
Town of Hudson

From: Stephen G. Pernaw, P.E., PTOE

Subject: 55 Executive Drive
Hudson, New Hampshire

Date: April 1, 2014

On March 17, 2014 our office published the report entitled *"Traffic Impact Assessment – Proposed Call Center"* on behalf of Farley White Interests. We are now in receipt of the peer review letter from CLD Consulting Engineers dated March 31, 2014 that was addressed to the Town Planner. The purpose of this memorandum is to provide responses to each traffic-related comment. All CLD comments are listed under Item 2 (Driveway Review Codes), paragraph d. in their letter.

CLD Comment 1: *"There are no descriptions of the existing layouts (lane use, phasing, traffic control, etc.) of the intersections that were analyzed. Such descriptions would be helpful in reviewing and verifying the capacity analyses."*

SGP & CO. RESPONSE: The following describes the lane configuration at the three signalized study area intersections:

Lowell Road/Flagstone Drive/Wason Road
- EB Approach: One shared left-through lane, one exclusive right-turn lane
- WB Approach: One exclusive left-turn lane, one shared left-through lane, one exclusive right-turn lane
- NB Approach: One exclusive left-turn lane, two exclusive through lanes, one exclusive right-turn lane
- SB Approach: One exclusive left-turn lane, one exclusive through lane, one shared through-right lane

Lowell Road/Hampshire Drive/Oblate Road
- EB Approach: One shared left-through lane, one exclusive right-turn lane
- WB Approach: One shared left-through lane, one exclusive right-turn lane
- NB Approach: One exclusive left-turn lane, one exclusive through lane, one shared through-right lane
- SB Approach: One exclusive left-turn lane, one exclusive through lane, one shared through-right lane

Lowell Road/Executive Drive/Academy Driveway
- EB Approach: One shared left-through lane, one exclusive right-turn lane
- WB Approach: One shared left-through lane, one channelized exclusive right-turn lane
- NB Approach: One exclusive left-turn lane, one exclusive through lane, one shared through-right lane
- SB Approach: One exclusive left-turn lane, one exclusive through lane, one shared through-right lane

The signal phasing was obtained from the GPI study that was provided to us by the Town Planner, and this information is shown graphically and numerically in Appendix H.

The three unsignalized study area intersections are described photographically on Pages 15-17. The Executive Drive/Wentworth Drive intersection is a four-leg intersection with stop sign

control on each approach (sign is missing on the eastbound approach). The Hampshire Drive/Wentworth Drive intersection is a three-leg intersection with no stop signs present. The Flagstone Drive/Hampshire Drive intersection is a four-leg intersection with two-way stop control on the southbound and northbound approaches. Each of these intersections provides one approach lane and one departure lane on each leg of the intersection.

CLD Comment 2: "*All the field traffic data, including the intersections within the industrial park, is factored by the seasonal and growth factors. Typically, the traffic data related strictly to specific land uses such as an industrial park would be held constant over seasons and time under the assumption that the trip generation is constant for that particular land use. The report notes that this was done to account for variable vacancy/occupancy of uses in the park over time, which is a reasonable approach. As a result, the projected traffic volumes for the unsignalized intersections within the industrial park should be considered conservative (high), and the subsequent capacity analyses would yield results that show poorer operations that might actually be observed in the field.*"

SGP & CO. RESPONSE: We concur.

CLD Comment 3: "*The calculated trip generation for the Call Center assumes that...all trips are inbound from 5 AM to 2 PM, and all are outbound from 3 PM to 12 Midnight, which means that all estimated trips are only by employees to and from work...there is only l employee per vehicle-(no carpooling)...there are no drop-offs, which would result in some additional outbound trips during the AM hours and some more inbound trips during the PM hours...there is no accounting for other business or personal trips, which would result in some other inbound and outbound trips. ITE rates for General Office uses are between 3-4 trips per employee on a daily basis to account for office deliveries, vendors, and other personal trips that may occur during the course of the day. Based on these assumptions, the TIA concludes that the trip generation for this development during the PM peak at full occupancy would be slightly less than for the previously approved, expanded industrial facility allowed 'by right' on the site. While we would concur with this finding based on the assumptions above, some additional trips could be expected should the proposed use exhibit more typical generation characteristics. However, we anticipate that these additional trips would be a relatively small number and should not significantly affect the analyses.*"

SGP & CO. RESPONSE: We do not believe that there will be a small number of additional trips, and respectively submit that the trip generation estimates are in fact conservative on the high side. The assumption at there will be one employee per vehicle is conservative and more than offsets any drop-offs or pick-ups that may occur. Other trips for personal business or meals are expected to be minimal as this facility will contain a full cafeteria as a TDM measure, and most employees will be limited to a 30-minute break for meals. Minimal shipping/receiving activities will occur and will typically involve office supply deliveries. Further, the traffic projections assume no reductions for vacations and sick days. The call center expects actual employee attendance to be 10% less than is indicated in the study due to vacations and sick leave. Lastly, the traffic projections were intentionally based on peak-day conditions, not average or typical weekday conditions, which is commonly used in traffic impact studies. The employee count on the other six days of the week is expected to be approximately 10% lower than on the peak day.

CLD Comment 4: "*There are no capacity analyses of the 2013 (existing) conditions, which are generally reported in a TIA, or analyses of the traffic operations when the proposed call center reaches Phase 1 interim levels. Such analyses could show that different signal timings might need*

to be implemented during the first phase of the project to optimize traffic flow through the intersections under those traffic conditions."

SGP & CO. RESPONSE: Analysis of the opening year case was omitted as it will take years for the employee count to ramp up to the 800-employee level. The anticipated impacts that are identified in the study will occur gradually as number of new hires increases from 300 to 800 over time. Analysis of the opening year case would not provide meaningful results as a new traffic signal is being planned on Lowell Road, north of Wason Road (by others). The "*Design Justification Report"* prepared by GPI addresses the traffic flow on this corridor with the new signal in place.

CLD Comment 5: *"We note that the same signal timing plan is used for both the 2023 No-Build and Build conditions at the signalized intersections. There may be some timing adjustments that could be made to better optimizing signal operations and improve overall traffic flow."*

SGP & CO. RESPONSE: The signal timing/phasing plan utilized in our report was obtained from the *"Design Justification Report"* by GPI that was provided to us by the Town Planner. The signalized study area intersections utilize traffic signal controllers that are demand- responsive. This means that the actuated "green" times are capable of fluctuating to a certain degree as changes in traffic demand occur throughout the day. Priority is appropriately assigned to the through movements on Lowell Road, and this should be maintained.

CLD Comment 6: *"We note that there is no capacity analysis summary of the unsignalized intersections in the industrial park, although there is discussion of suggested improvements that can be made to the intersections to improve safety and traffic flow."*

SGP & CO. RESPONSE: The capacity analysis summaries are found in Appendix I.

CLD Comment 7: *"The TIA notes that the preferred route to and from the south is via the Flagstone Drive intersection, which already is under duress from a capacity standpoint. While this may be the better route for exiting traffic in the PM peak, consideration should be given to encourage entering traffic to use the Executive Drive intersection, which should have more reserve capacity to handle left turn entering traffic, especially in the AM peak when most of the site traffic would be arriving."*

SGP & CO. RESPONSE: At the conceptual discussion meeting with the Planning Board on February 26th, it was clearly stated that the Board's preference was to encourage the use of Flagstone Drive for access to/from points south, east and west; not Executive Drive.

"F"

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

Date of Application: March 17, 2014 Tax Map # 209 Lot # 2 & 3

Name of Project: Parking Lot Addition

Zoning District: I-Industrial (For Town Use) General SP# 05-14 (For Town Use)

ZBA Action: None

HUDSON MAR 21 2014 COMMUNITY DEVELOPMENT

	PROPERTY OWNER:	DEVELOPER:
Name:	Presstek, LLC	Farley White Interests
Address:	10 Glenville St., 3rd Floor	155 Federal Street, Suite 1800
Address:	Greenwich, CT 06831	Boston, MA 02110
Telephone #	603-402-7502	617-854-9400
Fax #		617-338-2387
Email:	rarnold@presstek.com	saltreuter@farleywhite.com

	PROJECT ENGINEER	SURVEYOR
Name:	Hayner/Swanson, Inc.	Hayner/Swanson, Inc.
Address:	3 Congress Street	3 Congress Street
Address:	Nashua, NH 03062	Nashua, NH 03062
Telephone #	603-882-2057	603-882-2057
Fax #	603-883-5057	603-883-5057
Email:	jpetropulos@hayner-swanson.com	jpetropulos@hayner-swanson.com

PURPOSE OF PLAN:

To show proposed parking lot additions with accompanying site improvements.

For Town Use

Plan Routing Date: 3/24/14 Sub/Site Date: 4/1/14 @ 10:00 AM

X I have no comments _____ I have comments (attach to form)

KB (Initials) Title: ROAD AGENT Date: 3/29/14

DEPT:

_____ Zoning _____ Engineering _____ Assessor ____ Police ____ Fire ____ Planning
_____ Consultant _____ Highway Department

Fees Paid: _____

PRELIMINARY & FINAL SITE PLAN APPLICATION
FOR PLAN REVIEW (Also for Wireless)
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Plan Routing Date: 3/24/14 Sub/Site Date: 4/1/14 @ 10:00 AM

✓ I have no comments _____ I have comments (attach to form)

JoB (Initials) Title: Deputy Chief Date: 3/25/2014

DEPT:

_____ Zoning _____ Engineering _____ Assessor ____ Police ____ Fire ____ Planning
_____ Consultant _____ Highway Department

Fees Paid: _____

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

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Zoning District: I-Industrial (For Town Use) General SP# 05-14 (For Town Use)

ZBA Action: None

HUDSON
MAR 21 2014
COMMUNITY DEVELOPMENT

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Address: Greenwich, CT 06831	Boston, MA 02110
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___ I have no comments ___ I have comments (attach to form)

JM (Initials) Title: Asst. Assessor Date: 3-25-14

DEPT:
___ Zoning ___ Engineering ___ Assessor ___ Police ___ Fire ___ Planning
___ Consultant ___ Highway Department

Fees Paid: ___

If lot consolidation occurs after April 1, 2014, both sites will remain as individual sites on tax records & tax maps until 2015. JM

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

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_____ Title: _____ Date: _____
(Initials)

DEPT:
_____ Zoning _____ Engineering _____ Assessor ✓ Police ____ Fire ____ Planning
_____ Consultant _____ Highway Department

Fees Paid: _____

PACKET 4/9/14

MAP 209 LOTS 2 & 3
SITE PLAN

PARKING LOT ADDITIONS

55 EXECUTIVE DRIVE & FRIARS DRIVE
HUDSON, NEW HAMPSHIRE

HUDSON
APR 02 2014
COMMUNITY DEVELOPMENT

PREPARED FOR

FARLEY WHITE INTERESTS

155 FEDERAL STREET, SUITE 1800
BOSTON, MASSACHUSETTS 02110
(617) 654-9400
www.farleywhite.com

RECORD OWNER

PRESSTEK, LLC

10 GLENVILLE STREET, 3RD FLOOR
GREENWICH, CONNECTICUT 06831
(603) 402-7502

17 MARCH 2014
REVISED
1 APRIL 2014

INDEX OF PLANS

SHEET No.	TITLE	
1 OF 27	MASTER SITE PLAN	1"= 120'
2-5 OF 27	EXISTING CONDITIONS PLAN	1"= 40'
6-8 OF 27	SITE GRADING & UTILITY PLAN	1"= 40'
9-11 OF 27	SITE LAYOUT PLAN	1"= 40'
12 OF 27	UTILITY PROFILES	1"=40' H 1"=4' V
13-14 OF 27	DRAINAGE PROFILES	1"=40' H 1"=4' V
15-17 OF 27	DETAIL SHEET - GENERAL SITE	
18-19 OF 27	EROSION CONTROL PLAN	1"=60'
20 OF 27	DETAIL SHEET - EROSION CONTROL	
21-23 OF 27	LANDSCAPE PLAN	1"=40'
24 OF 27	DETAIL SHEET - LANDSCAPE	
25-27 OF 27	PHOTOMETRIC SITE LIGHTING PLAN	1"=40'

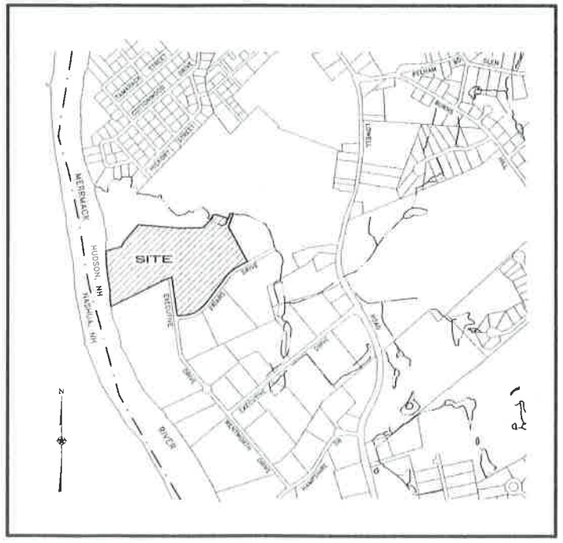
PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____

_____ SIGNATURE DATE _____

_____ SIGNATURE DATE _____

SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.



VICINITY PLAN
SCALE 1" =1000'±

STATE OF NEW HAMPSHIRE
JAMES N. PETROPULOS
No. 10274
LICENSED PROFESSIONAL ENGINEER

HSI Hayner/Swanson, Inc.
Civil Engineers/Land Surveyors
Three Congress Street Nashua, New Hampshire 03062-3301
Tel (603) 883-2057 Fax (603) 883-5057
www.hayner-swanson.com

STATE OF NEW HAMPSHIRE
NO. 960
LEE B. BACKON
LICENSED LAND SURVEYOR

4/1/14

©Hayner/Swanson, Inc.

FILE No. Q:\5248\dwg\5248-FWI\5248-S-FWI CS00

Three Congress Street Nashua, New Hampshire 03062-3301
Tel (603) 883-2057 Fax (603) 883-5057
www.hayner-swanson.com
HSI Hayner/Swanson, Inc.

*** ZONING NOTE ***

THE ZONING/BUILDING SETBACKS DEPICTED ON THIS PLAN ARE THOSE WE HAVE INTERPRETED FROM THE LATEST ZONING ORDINANCE OF THE MUNICIPALITY AND, AS SUCH, ARE ONLY OPINIONS EXPRESSED BY HAYNER/SWANSON, INC. THE FINAL INTERPRETATION OF THE ORDINANCE CAN ONLY BE MADE BY THE APPROPRIATE ZONING AUTHORITY. SINCE BUILDING ORIENTATION, PROPOSED USES, AND OTHER FACTORS CAN AFFECT THE SETBACKS, PRIOR TO ANY DEVELOPMENT OF THIS PROPERTY, THE BUILDER/OWNER MUST CONSULT WITH THE TOWN/CITY TO INSURE THE CORRECT APPLICATION OF THE ZONING ORDINANCE.

VICINITY MAP SCALE: 1" = 1,500'±

PLAN REFERENCES:

1. SUBDIVISION PLAN LAND OF PRESSTEK INC., HUDSON NH PREPARED FOR PRESSTEK PARK SCALE, 1"= 100 DATED FEBRUARY 26 1997 BY TFMORAN INC RECORDED: HCRD – PLAN No. 28865
2. SOUTHEASTERN CONTAINER INC. –ADDITION No 2 SUBDIVISION/CONSOLIDATION PLAN SCALE 1"= 100 DATED MAY 1, 1994 BY ALLAN H. SWANSON, INC RECORDED: HCRD- PLAN No 26916
3. SUBDIVISION PLAN OF LAND OF DIGITAL EQUIPMENT CORPORATION PREPARED FOR PRESSTEK/INDUSTRIAL PLANT SCALE 1"= 100 DATED JULY 25, 1996 BY TFMORAN INC RECORDED HCRD- PLAN No 28159
4. AMENDED SUBDIVISION PLAN LAND OF PRESSTEK INC PREPARED FOR PRESSTEK PARK SCALE 1" =100' DATED: FEBRUARY 26 1997 BY TFMORAN INC RECORDED: HCRD- PLAN No 28866

NOTES:

1. SITE AREA

LOT 2	23.43±	ACRES	(1,020,750± SF) *
LOT 3	12.31±	ACRES	(536,190± SF)
PARCEL 'A'	0.000	ACRES	(19 SF)
TOTAL	35.74±	ACRES	(1,556,960± SF) **

* THE AREA COMPUTED FOR LOT 2 INCLUDES THE UPLAND TO THE MEAN HIGH WATER MARK. THE UNDERLYING LAND BENEATH THE MERRIMACK RIVER IS NOT INCLUDED IN THIS CALCULATION. SEE EASEMENTS, RIGHT AND RESTRICTIONS NOTE No. 16 ON SHEET 3 OF 27

** PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY, LOTS 2, 3 AND PARCEL 'A' (AS SHOWN ON SHEET 2 OF 27) SHALL BE MERGED BY TOWN FORM TO CREATE A SINGLE LOT. THE NEW LOT SHALL HAVE AN ADDRESS OF 55 EXECUTIVE DRIVE AND SHALL BE KNOWN AS TAX MAP 209, LOT 2

2. PRESENT ZONING I; INDUSTRIAL
   - MINIMUM LOT REQUIREMENTS
     - LOT AREA 30,000 SF
     - LOT FRONTAGE 150 FT
   - MINIMUM BUILDING SETBACKS REQUIREMENTS
     - FRONT YARD 50 FT
     - SIDE YARD 15 FT
     - REAR YARD 15 FT
3. LOT NUMBERS REFER TO THE TOWN OF HUDSON ASSESSORS MAPS 209 & 215 AND NASHUA ASSESSORS MAP 22
4. SITE IS SERVICED BY MUNICIPAL WATER AND MUNICIPAL SEWER
5. PURPOSE OF PLAN
   TO SHOW THE PROPOSED PARKING LOT ADDITIONS AND ACCOMPANYING SITE IMPROVEMENTS
6. PARKING (TOTAL LOT)
   REQUIRED PROFESSIONAL OFFICES 1 SPACE/300 SF x 168,000 SF= 560 SPACES
   PROVIDED (INCLUDES 19 HANDICAP SPACES) = 938 SPACES
7. OPEN SPACE
   REQUIRED: 35 %
   PROVIDED: 61 %

NOTES – CONT'D:

8. LOADING: THERE ARE CURRENTLY SIX (6) LOADING BAYS ON THIS SITE
9. SITE LIGHTING SHALL BE AS SHOWN ON THE PLAN, DIRECTED ONTO SITE, AND SHALL CONFORM WITH ALL APPLICABLE TOWN OF HUDSON ZONING REGULATIONS
10. ALL SIGNAGE SHALL CONFORM TO THE APPLICABLE TOWN OF HUDSON REGULATIONS WITH ALL PERMITS SECURED PRIOR TO INSTALLATION
11. SITE IMPROVEMENTS DEPICTED ON THE PLAN SHALL CONFORM WITH TITLE III OF THE 2010 AMERICANS WITH DISABILITIES ACT (OR LATEST EDITION)
12. IT SHALL BE UNLAWFUL TO MODIFY, CHANGE, OR ALTER ANY STRUCTURE OR USE SHOWN ON THIS SITE PLAN IN ANYWAY WHATSOEVER, OR CONVERT OR ALTER ANY STRUCTURE OR USE SHOWN ON THIS SITE PLAN WITH THE EXCEPTION OF DECKS AND PORCHES (PROVIDED THEY CONFORM WITH THE REQUIREMENTS OF THE TOWN OF HUDSON ZONING BY-LAWS) OR CHANGE THE ABOVE USE INDICATED ON THE PLAN WITHOUT RECEIVING APPROVAL FROM THE TOWN OF HUDSON PLANNING BOARD
13. TRASH PICK-UP SHALL NOT OCCUR EARLIER THAN 7:00 AM NOR LATER THAN 7:00 PM, MONDAY THRU SATURDAY ONLY
14. CONSTRUCTION HOURS ARE MONDAY THRU SATURDAY 7:00 AM TO 7:00 PM WITH NO CONSTRUCTION ACTIVITIES OCCURRING ON SUNDAYS. IF LOT DEVELOPMENT INVOLVES BLASTING AND/OR RAMMING OF BEDROCK MATERIALS, SAID ACTIVITIES SHALL BE LIMITED TO THE HOURS OF 7:00 AM AND 5:00 PM, MONDAY THRU FRIDAY ONLY. SAID BLASTING/RAMMING ACTIVITIES SHALL BE PROHIBITED ON SATURDAYS AND SUNDAYS
15. SHEET 1 OF 27 SHALL BE RECORDED AT THE HILLSBOROUGH REGISTRY OF DEEDS. A COMPLETE SET OF PLANS IS ON FILE WITH THE TOWN OF HUDSON COMMUNITY DEVELOPMENT DEPARTMENT
16. A PORTION OF THIS PARCEL APPEARS TO BE LOCATED WITHIN THE SPECIAL FLOOD HAZARD ZONE 'AE' AS DETERMINED FROM THE FLOOD INSURANCE RATE MAP(FIRM) HILLSBOROUGH COUNTY TOWN OF HUDSON NH COMMUNITY No 330092 PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY MAP NUMBER 33011C0652E REVISED DATE APRIL 18, 2011 AND MAP NUMBER 33011C056D DATED SEPTEMBER 25, 2009
17. PRIOR TO ISSUANCE OF A FINAL CERTIFICATE OF OCCUPANCY A LICENSED LAND SURVEYOR CERTIFIED 'AS-BUILT' SITE PLAN SHALL BE PROVIDED TO TOWN OF HUDSON COMMUNITY DEVELOPMENT DEPARTMENT CONFIRMING THAT THE SITE CONFORMS WITH THE PLANNING BOARD APPROVED SITE PLAN
18. SNOW REMOVAL TO BE PLACED IN OPEN AREAS OF THE SITE AS SHOWN ON SHEETS 9-11 OF 27. IF NEEDED, EXCESS SNOW SHALL BE TRUCKED FROM THE SITE AND DISPOSED OF IN A LEGAL MANNER
19. PRESENT OWNER OF RECORD
    MAP 209 LOTS 2 AND 3
    PRESSTEK LLC
    10 GLENVILLE STREET, 3RD FLOOR
    GREENWICH, CONNECTICUT 06831
    BK 5747 PG 1811

CERTIFICATION

I HEREBY CERTIFY, TO MY KNOWLEDGE, INFORMATION AND BELIEF, THAT THIS PLAN SHOWS THE RESULTS OF AN ON THE GROUND "STANDARD PROPERTY SURVEY" AND THAT SAID SURVEY MEETS THE MINIMUM PRECISION AND/OR ACCURACY MEASUREMENTS FOR SURVEY CLASSIFICATION "U" (URBAN) AS SET FORTH IN TABLE 500.1 OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS ADOPTED 08/23/01, EFFECTIVE 01/01/09.

I FURTHER CERTIFY THAT THIS PLAN IS THE RESULT OF AN ACTUAL FIELD SURVEY MADE ON THE GROUND AND HAS A MAXIMUM ERROR OF CLOSURE OF ONE PART IN FIFTEEN THOUSAND ON ALL PROPERTY LINES WITHIN AND BORDERING THE SUBJECT PROPERTY.

PURSUANT TO RSA 676:18,III AND RSA 672:14

I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN.

4/1/14
DATE

STATE OF NEW HAMPSHIRE LICENSED LAND SURVEYOR No. 860 LEE D. GAGNON SIGNATURE

WAIVERS REQUESTED:

1. 275-C NOISE STUDY
2. 275-9D FISCAL AND ENVIRONMENTAL IMPACT STUDY
3. 275-8(31)a 10% INTERIOR PARKING LOT LANDSCAPING
4. 275-8(31)d SHRUBS

OTHER PERMIT:

1. NHDES - ALTERATION OF TERRAIN PERMIT No. ____________
   DATED ____________

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

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: ____________

____________ SIGNATURE DATE ____________

____________ SIGNATURE DATE ____________

SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

STATE OF NEW HAMPSHIRE JAMES N PETROPULOS No. 10274 LICENSED PROFESSIONAL ENGINEER

FOR FARLEY WHITE INTERESTS — JOHN T. POWER, PRINCIPAL — 3/14/2014 DATE

GEOFF LOFTUS, COO — FOR PRESSTEK, LLC — 3/13/2014 DATE

No.	DATE	REVISION	BY
1	04/01/14	ADDRESS STAFF AND PEER REVIEW COMMENTS	JNP

MASTER SITE PLAN
(MAP 209, LOTS 2 & 3)

PARKING LOT ADDITIONS

55 EXECUTIVE DRIVE & FRIARS DRIVE
HUDSON, NEW HAMPSHIRE

PREPARED FOR:

FARLEY WHITE INTERESTS

155 FEDERAL STREET, SUITE 1800 BOSTON, MA 02110 (617) 654-9400

RECORD OWNER:

PRESSTEK, LLC

10 GLENVILLE STREET, 3RD FLOOR GREENWICH, CT 06831 (603) 402-7502

120 0 120 240 360 480 FEET
40 0 40 80 120 METERS
SCALE: 1"=120 Feet
1"=36.576 Meters

17 MARCH 2014

HSI Hayner/Swanson, Inc.
Civil Engineers/Land Surveyors
Three Congress Street Nashua, New Hampshire 03062-3301
Tel (603) 883-2057 Fax (603) 883-5057
www.hayner-swanson.com

FIELD BOOK: 1193 | DRAWING NAME: 5248-S-FW F061 | 5248-FWI File Number | 1 OF 27 Sheet

DRAWING LOCATION: Q:\5248\DWG\5248-FW

©Hayner/Swanson, Inc.

MATCH LINE

SEE SHEET 3 OF 27

-2-
23.43± ACRES
(1,020,750± SF)

-3-
12.31± ACRES
(536,190± SF)

PARCEL 'A'
SEE DETAIL

EXECUTIVE DRIVE

FRIARS DRIVE

TRM No. 1021
TOP OF STONE BOUND
ELEV= 179.08
(NGVD29)

TRM No. 1015
TOP OF STONE BOUND
ELEV= 171.41

MAP 215 LOT 4

MAP 209 LOT 7

MAP 209 LOT 6

MAP 209 LOT 5

S63°29'59"W

S82°08'15"W 50.00'

S82°08'15"W 470.00'

S82°08'15"W 466.72'

S82°08'15"W 104.31'

N07°51'45"W 100.00'

N07°51'45"W 118.82'

S27°08'15"W

R=50.00'
Δ=20°52'45"
L=18.22'

R=30.00'
Δ=90°00'00"
L=47.12'

R=375.00'
Δ=45°00'00"
L=294.62'

R=525.00'
Δ=24°31'52"
L=224.78'

443.66'

50 FT WIDE PUBLIC ROW ACCORDING TO PLAN No. 5815 BK 58 PG 36

50 FT WIDE SEWER EASEMENT WITH RIGHTS TO INSTALL, MAINTAIN, REPAIR & REPLACE SEWER LINES AS FOUND IN BK 5556 PG 359

EXISTING 20 FT WIDE DRAINAGE EASEMENT BK 5556 PG 359

50 FT WIDE SEWER EASEMENT WITH RIGHTS TO INSTALL, MAINTAIN, REPAIR & REPLACE SEWER LINES AS FOUND IN BK 5556 PG 359 & BK 5815 PG 36

50 FT WIDE WATER EASEMENT NO FURTHER INFORMATION OR DOCUMENTATION WAS FOUND

CB
RIM = 176.32
INV. IN = 163.24 (15")
INV. IN = 160.15
INV. IN = 170.52± (12")
INV. OUT = 160.02

HW
INV. OUT = 159.89

CB (UNDER SNOW BANK)

APPROX. ROOF DRAIN

BIT PAVEMENT

CONC. WALK

APPROX. DMH (BURIED IN ICE)

TEMPORARY CONCRETE BARRIERS

24" PVC

15" PVC

30" RCP

15" RCP

APPROX. 4" WATER

APPROX. 12" WATER

GAS RISER

LEACHING BASIN (BURIED IN ICE)

EXISTING FIRE PUMP HOUSE

WITNESS POST

BROKEN-UP BITUMINOUS PAVEMENT

HYD

SH-TP-1 SH-TP-2 SH-TP-3 SH-TP-4 SH-TP-5 SH-TP-6 SH-TP-7 SH-TP-101 SH-TP-103 SH-TP-105 SH-TP-106 SH-TP-107

HsB WdB WdA

N

NH STATE PLANE

NAD83/86

SHEET 5 SHEET 3 SHEET 4 SHEET 2

EXISTING CONDITIONS SHEET KEY
NOT TO SCALE

SURVEY NOTES:

1. TOPOGRAPHY SHOWN IS BASED ON AERIAL PHOTOGRAPHY BY EASTERN TOPOGRAPHIC USING PHOTOGRAPHIC IMAGERY FROM 2006. HORIZONTAL AND VERTICAL CONTROLLED BY HAYNER/SWANSON, INC. IN MARCH 2014 AND FIELD VERIFIED IN AREAS OF PROPOSED IMPROVEMENTS BY CONVENTIONAL METHODS.
2. UTILITIES SHOWN ARE BASED ON OBSERVED EVIDENCE AND RECORD PLANS.
3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE ACCURACY OF THE EXISTING TOPOGRAPHY PRIOR TO EARTHWORK OPERATIONS. NO CLAIM FOR EXTRA WORK DUE TO TOPOGRAPHIC INACCURACY SHALL BE CONSIDERED AFTER EARTHWORK HAS COMMENCED.
4. SURVEY CONTROL
   HORIZONTAL DATUM: NAD83/86 *
   PROJECTION: NH STATE PLANE
   VERTICAL DATUM: NGVD29 *
   SCALE FACTOR APPLIED: 1.000000
   UNITS: US SURVEY FEET
5. * VERTICAL AND HORIZONTAL DATUM WAS VERIFIED USING GPS (KEYNET NETWORK) BY TAKING OBSERVATIONS ON SITE AND ON NGS (FORMERLY USGS) "DISK D-26" LOCATED ON THE NORTHERLY SIDE OF RTE 101A APPROXIMATELY 4.5 MILES WEST OF THE NASHUA LIBRARY.
6. THE CONTRACTOR SHALL ONLY USE BENCHMARKS AS PROVIDED BY THE ENGINEER.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION. THE ENGINEER 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 CONTACTING "DIG SAFE" AT 1-888-344-7233 AT LEAST 72 HOURS BEFORE DIGGING.

NO.	DATE	REVISION	BY
1	04/01/14	ADDRESS STAFF AND PEER REVIEW COMMENTS	JSP

EXISTING CONDITIONS PLAN
(MAP 209, LOTS 2 & 3)

PARKING LOT ADDITIONS

55 EXECUTIVE DRIVE & FRIARS DRIVE
HUDSON, NEW HAMPSHIRE

PREPARED FOR:
FARLEY WHITE INTERESTS
155 FEDERAL STREET, SUITE 1800 BOSTON, MA 02110 (617) 654-9400

RECORD OWNER:
PRESSTEK, LLC
10 GLENVILLE STREET, 3RD FLOOR GREENWICH, CT 06831 (603) 402-7502

40 0 40 80 120 160 FEET
20 0 20 40 METERS
SCALE 1"=40 Feet
1"=12.192 Meters

17 MARCH 2014

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Three Congress Street Nashua, New Hampshire 03062-3301
Tel (603) 883-2057 Fax (603) 883-5057
www.hayner-swanson.com

FIELD BOOK 1193	DRAWING NAME: 5248-S-FW EC41	5248-FWI	2 OF 27
DRAWING LOCATION: G:\5248\DWG\5248-FW		File Number	Sheet

PARCEL 'A' DETAIL
NOT TO SCALE

R=25.00'
Δ=59°15'35"
L=25.42'

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

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____

_____ SIGNATURE DATE _____

_____ SIGNATURE DATE _____

SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

THIS IS TO CERTIFY THAT THE WETLANDS HAVE BEEN DELINEATED IN ACCORDANCE WITH THE PROCEDURES OUTLINED IN THE 1987 CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL (TECHNICAL REPORT Y-87-1).

WETLAND DELINEATION PREPARED BY:
ROBERT PROKOP
CERTIFIED WETLAND SCIENTIST No. 063

STATE OF NEW HAMPSHIRE ROBERT PROKOP No. 063 CERTIFIED WETLAND SCIENTIST

3/14/14

811 DigSafe MA.ME.NH.RI.VT
CONTACT DIG SAFE 72 HOURS PRIOR TO CONSTRUCTION
digsafe.com
DIAL 811 or
1-888-DIG SAFE
1-888-344-7233

CERTIFICATION

I HEREBY CERTIFY, TO MY KNOWLEDGE, INFORMATION AND BELIEF, THAT THIS PLAN SHOWS THE RESULTS OF AN ON THE GROUND "STANDARD PROPERTY SURVEY" AND THAT SAID SURVEY MEETS THE MINIMUM PRECISION AND/OR ACCURACY MEASUREMENTS FOR SURVEY CLASSIFICATION "U" (URBAN) AS SET FORTH IN TABLE 500.1 OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS ADOPTED 08/23/01, EFFECTIVE 01/01/09.

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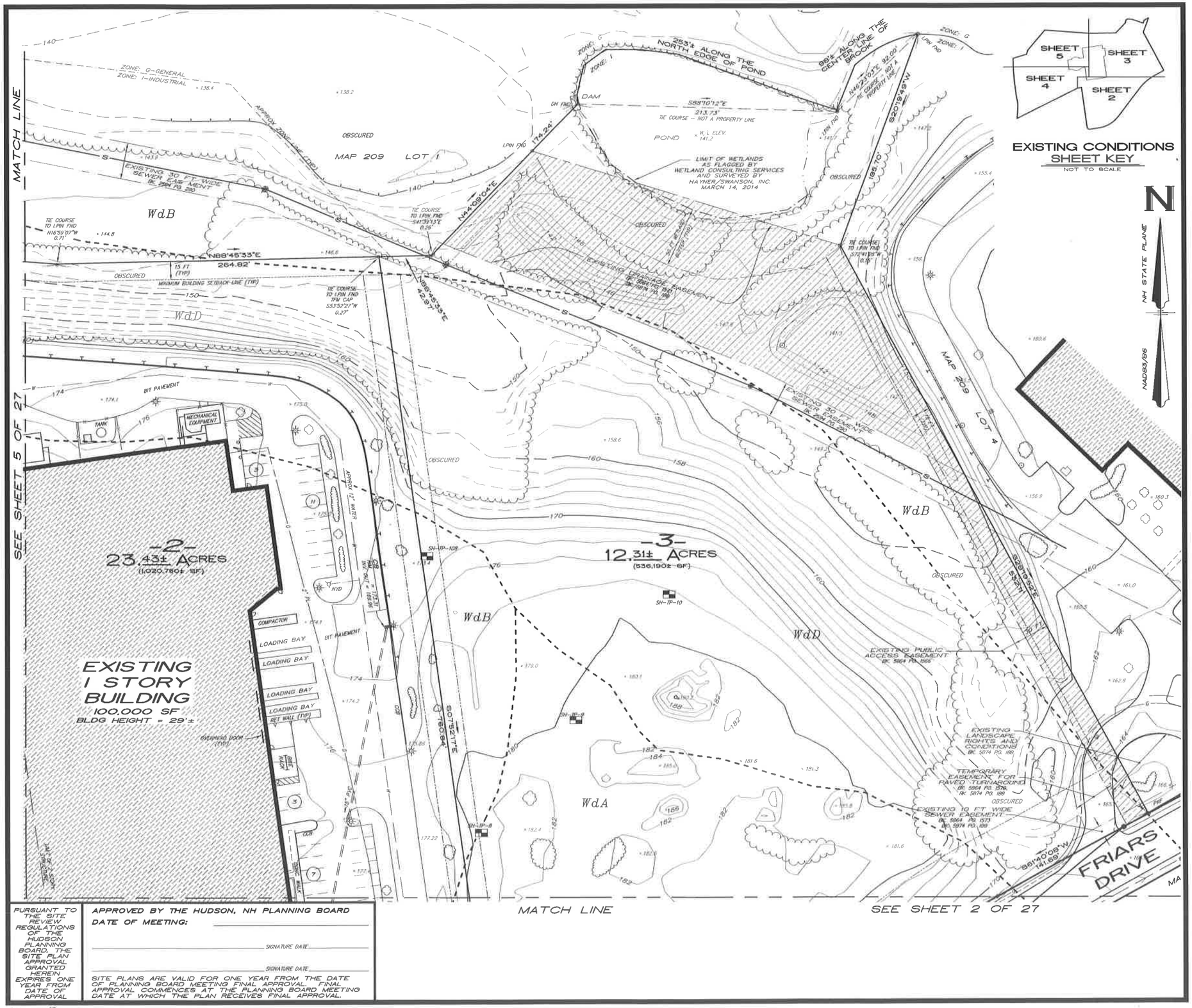
4/1/14
DATE

STATE OF NEW HAMPSHIRE NO. 850 VEE ED CAGNON LICENSED LAND SURVEYOR

©Hayner/Swanson, Inc.



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

APPROVED BY THE HUDSON, NH PLANNING BOARD

DATE OF MEETING: _____

_____ SIGNATURE DATE _____

_____ SIGNATURE DATE _____

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UTILITY NOTE

THE UNDERGROUND UTILITIES DEPICTED HEREON HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND PLOTTED FROM EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES DEPICTED COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND PORTIONS OF THE UTILITIES.

EASEMENTS, RIGHTS AND RESTRICTIONS:

1. 150 FOOT WIDE PSNH EASEMENT, ,HCRD BK. 2054 PG. 116.
2. 100 FOOT WIDE PSNH EASEMENT, ,HCRD BK. 1249 PG. 462.
3. CONDEMNATION BY THE TOWN OF HUDSON FOR A 30 FOOT WIDE SEWER EASEMENT WITH RIGHTS OF ACCESS AND MAINTENANCE, HCRD BK. 2594 PG. 290.
4. 15 FOOT WIDE SEWER EASEMENT OVER LOT 1, MAP 209 TO BENEFIT LOT 2, MAP 209, HCRD BK. 5747 PG. 1811.
5. EXECUTIVE DRIVE IS A 50 FOOT WIDE PUBLIC RIGHT OF WAY DEDICATED BY PLAN AND CONVEYED TO THE TOWN OF HUDSON WITH CUL-DE-SAC EASEMENTS AND REVERSIONARY RIGHTS, HCRD BK. 5810 PG. 1606.
6. FRIARS DRIVE HAS BEEN DEDICATED BY PLAN BUT NO RECORD WAS FOUND CONVEYING THE RIGHTS TO THE TOWN OF HUDSON. THE TOWN HAS INDICATED THAT THE ROAD IS A PUBLIC WAY.
7. CONSERVATION EASEMENT, HCRD BK. 5747 PG. 1825.
8. PUBLIC ACCESS EASEMENT, HCRD PLAN No. 28865, HCRD BK. 5864 PG. 1566.
9. 25 FOOT WIDE PSNH AND NET&T EASEMENT, HCRD BK. 5809 PG. 1619, HCRD PLAN No. 28533.
10. DEVELOPMENT AGREEMENT BETWEEN PRESSTEK, INC AND THE TOWN OF HUDSON, HCRD BK. 5864 PG. 1554, HCRD PLAN No. 28865.
11. TEMPORARY EASEMENT FOR A PAVED TURN AROUND, HCRD BK. 5864 PG. 1570, HCRD PLAN No. 28865.
12. DRAINAGE AND SEWER EASEMENTS, HCRD BK. 5864 PG. 1573, HCRD PLAN No. 28866.
13. DRAINAGE RIGHTS TO BENEFIT LOT 4, MAP 209 OVER LOT 3, MAP 209, HCRD BK. 5874 PG. 188.
14. SEWER EASEMENT WITHIN A PORTION OF FRIARS DRIVE TO THE TOWN OF HUDSON, HCRD BK 5883 PG. 790, SEE ALSO HCRD PLAN No. 28866.
15. LOT 2 IS SUBJECT TO THE SHORELAND WATER QUALITY PROTECTION ACT RSA 483-B.
16. THIS PORTION OF THE MERRIMACK RIVER IS INCLUDED IN THE OFFICIAL LIST OF PUBLIC WATERS BY THE NH DEPARTMENT OF ENVIRONMENTAL SERVICES. BY COMMON LAW AND THE PUBLIC TRUST DOCTRINE, THE STATE OF NH HOLDS AN EASEMENT IN TRUST FOR THE PUBLIC PURPOSES. THE LAND UNDERLYING THE RIVER REMAINS IN THE OWNERSHIP OF THE ABUTTING PRIVATE PROPERTY OWNERS OR THE ORIGINAL PARENT TRACT.

NO.	DATE	REVISION	BY
1	04/01/14	ADDRESS STAFF AND PEER REVIEW COMMENTS	JNP

EXISTING CONDITIONS PLAN
(MAP 209, LOTS 2 & 3)

PARKING LOT ADDITIONS

55 EXECUTIVE DRIVE & FRIARS DRIVE
HUDSON, NEW HAMPSHIRE

PREPARED FOR:

FARLEY WHITE INTERESTS

155 FEDERAL STREET, SUITE 1800 BOSTON, MA 02110 (617) 654-9400

RECORD OWNER:

PRESSTEK, LLC

10 GLENVILLE STREET, 3RD FLOOR GREENWICH, CT 06831 (603) 402-7502

40 0 40 80 120 160 FEET
20 0 20 40 METERS

SCALE: 1"=40 Feet
1"=12.192 Meters

17 MARCH 2014

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Civil Engineers/Land Surveyors
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www.hayner-swanson.com

FIELD BOOK: 1193	DRAWING NAME: 5248-S-FW EC41	5248-FW	3 OF 27
DRAWING LOCATION: Q:\5248\DWG\5248-FW		File Number	Sheet

SEE SHEET 5 OF 27

MATCH LINE

SEE SHEET 3 OF 27

N

NAD83/2011 NH STATE PLANE

APPROXIMATE CENTERLINE OF MERRIMACK RIVER

HUDSON, NH / NASHUA, NH

TOWN LINE / CITY LINE

MERRIMACK RIVER

-2-
23.43± ACRES
(1,020,750± SF)

MAP 215 LOT 4

HsB

WdB

WdD

Om

W

50 FT WETLAND BUFFER (TYP)

100 YEAR FLOOD ZONE AE

100 YEAR FLOOD WAY

750' MORE OR LESS ALONG MEAN HIGH WATER LINE MARCH 2014

250 FT SHORELAND PROTECTION LIMIT

EXISTING CONSERVATION EASEMENT BK 5747 PG 1825

150 FT EXISTING EASEMENT BK 2054 PG 115 BK 1249 PG 462

EXIST PSNH AND NETT EASEMENT BK 5909 PG 1819 HCRD PLAN 26853

OHW

OBSCURED

LIMIT OF WETLANDS AS FLAGGED BY WETLAND CONSULTING SERVICES AND SURVEYED BY HAYNER/SWANSON, INC. MARCH 14, 2014.

LEACHING BASIN (BURIED IN ICE)

INV. A 166.24

MINIMUM BUILDING SETBACK LINE (TYP)

15 FT (TYP)

840.3'±

870'±

29.9'±

N55°10'00"W 741.47'

S63°29'59"W

S82°08'15"W 50.00'

N07°51'45"W 150.00'

TEMPORARY CONCRETE BARRIERS

SH-TP-1

SH-TP-103

SH-TP-104

POLE BASE

CB (UNDER SNOW BANK)

APPROX ROOF DRAIN

LARGE ROOF DRAIN

CONC WALK

BIT PAVEMENT

APPROX 4" WATER

APPROX DMH (BURIED IN ICE)

24" PVC

TBM No. 1021
TOP OF STONE BOUND
ELEV= 179.98
= 167.9 (NGVD29)

GAS 177 RISER

EXISTING 20' WIDE GAS EASEMENT BK 1249 PG 462

EXISTING 20' WIDE GAS EASEMENT BK 1249 PG 462

APPROX

WITNESS POST

CB RIM = 178.52
INV. W. = 163.74 (15")
INV. N. = 162.15
INV. W. = 170.54 (12")
INV. OUT = 160.05

HW

SOIL SURVEY STAFF, NATURAL RESOURCES CONSERVATION SERVICE, UNITED STATES DEPT. OF AGRICULTURE. WEB SOIL SURVEY. AVAILABLE ONLINE AT http://websoilsurvey.nrcs.usda.gov/ ACCESSED MARCH 3, 2014.

SOILS DATA

HsB	HINCKLEY LOAMY SAND
Om	OCCUM FINE SANDY LOAM
WdA	WINDSOR LOAMY SAND
WdB	WINDSOR LOAMY SAND
WdC	WINDSOR LOAMY SAND
WdD	WINDSOR LOAMY SAND
W	WATER
----	SOIL BOUNDARY

SHEET 5 / SHEET 3 / SHEET 4 / SHEET 2

EXISTING CONDITIONS SHEET KEY
NOT TO SCALE

NO.	DATE	REVISION	BY
1	04/01/14	ADDRESS STAFF AND PEER REVIEW COMMENTS	JNP

EXISTING CONDITIONS PLAN
(MAP 209, LOTS 2 & 3)

PARKING LOT ADDITIONS

55 EXECUTIVE DRIVE & FRIARS DRIVE
HUDSON, NEW HAMPSHIRE

PREPARED FOR:

FARLEY WHITE INTERESTS

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RECORD OWNER:

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40 0 40 80 120 160 FEET
20 0 20 40 METERS
SCALE: 1"=40 Feet
1"=12.192 Meters

17 MARCH 2014

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

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____

_____ SIGNATURE DATE _____

_____ SIGNATURE DATE _____

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FIELD BOOK: 1193	DRAWING NAME: 5248-S-FWI EC41	5248-FWI	4 OF 27
DRAWING LOCATION: Q:\5248\DWG\5248-FWI		File Number	Sheet

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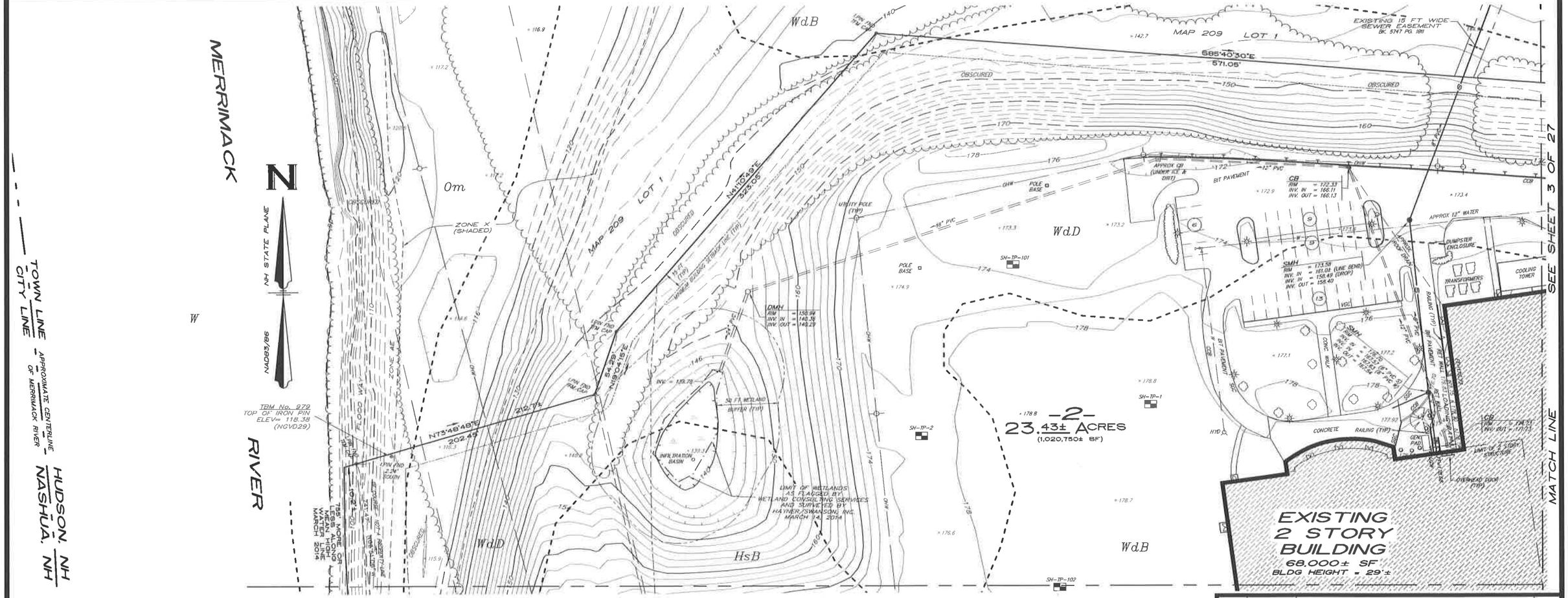

LEGEND

-100	EXISTING GROUND CONTOUR
-100 (OBSCURED)	EXISTING GROUND CONTOUR (OBSCURED)
x100.5	EXISTING SPOT ELEVATION
100	PROPOSED GRADE
+100.5	PROPOSED SPOT GRADE
	STORM DRAIN & CATCH BASIN
	STORM DRAIN & MANHOLE
	STORM DRAIN & HEADWALL
	SANITARY SEWER & MANHOLES
W	WATER MAIN & HYDRANT
W GV	WATER MAIN & GATE VALVE
G GV	GAS LINE & GATE VALVE
	UTILITY POLE WITH GUY SUPPORT
	LIGHT POLE
OHW	OVERHEAD WIRES
	SIGN
	TREE LINE
SBI	STONE BOUND
LPIN	IRON PIN FOUND
LPIPE	IRON PIPE
RR SPK	RAILROAD SPIKE
DH	DRILL HOLE
	BUILDING SETBACK LINE
	WETLAND FLAGGING LIMIT
	WETLAND BUFFER LINE
	FENCE
CCB	CAPE COD BERM
VGC	VERTICAL GRANITE CURBING
SGC	SLOPE GRANITE CURBING
10	PARKING SPACE COUNT
	HANDICAP PARKING SPACE
TP-1	TEST PIT LOCATION & IDENTIFIER
	RETAINING WALL
	EXISTING GUARD RAIL
	PROPOSED GUARD RAIL
	REINFORCED CONCRETE
	PROPOSED FULL-DEPTH PAVEMENT
	PROPOSED PAVEMENT OVERLAY
	RIPRAP / STONE

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

APPROVED BY THE HUDSON, NH PLANNING BOARD
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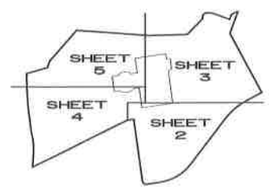

EXISTING CONDITIONS
SHEET KEY
NOT TO SCALE

No.	DATE	REVISION	BY
1	04/01/14	ADDRESS STAFF AND PEER REVIEW COMMENTS	JNP

EXISTING CONDITIONS PLAN
(MAP 209, LOTS 2 & 3)

PARKING LOT ADDITIONS

55 EXECUTIVE DRIVE & FRIARS DRIVE
HUDSON, NEW HAMPSHIRE

PREPARED FOR:
FARLEY WHITE INTERESTS
155 FEDERAL STREET, SUITE 1800 BOSTON, MA 02110 (617) 654-9400

RECORD OWNER:
PRESSTEK, LLC
10 GLENVILLE STREET, 3RD FLOOR GREENWICH, CT 06831 (603) 402-7502

40 0 40 80 120 160 FEET
20 0 20 40 METERS
SCALE: 1"=40 Feet
1"=12.192 Meters

17 MARCH 2014

HSI Hayner/Swanson, Inc.
Civil Engineers/Land Surveyors
Three Congress Street Nashua, New Hampshire 03062-3301
Tel (603) 883-2057 Fax (603) 883-5057
www.hayner-swanson.com

FIELD BOOK: 1193	DRAWING NAME: 5248-S-FWI EC41	5248-FWI	5 OF 27
DRAWING LOCATION: Q:\5248\DWG\5248-FWI		File Number	Sheet

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PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL	APPROVED BY THE HUDSON, NH PLANNING BOARD DATE OF MEETING: ______ ______ SIGNATURE DATE ______ ______ SIGNATURE DATE ______ SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

STATE OF NEW HAMPSHIRE – JAMES N. PETROPULOS No. 10274 LICENSED – PROFESSIONAL ENGINEER

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TOWN OF HUDSON CONTACTS

1. **PLANNING DEPARTMENT**
   HUDSON PLANNING DEPT.
   12 SCHOOL STREET
   HUDSON, NH 03051

   ATT: JOHN CASHELL
   (603) 886-6008

2. **ENGINEERING DEPARTMENT**
   HUDSON ENGINEERING DEPT.
   12 SCHOOL STREET
   HUDSON, NH 03051

   (603) 886-6008

3. **FIRE DEPARTMENT**
   HUDSON FIRE DEPARTMENT
   12 SCHOOL STREET
   HUDSON, NH 03051

   ATT: STEVEN DUBE, FIRE PREVENTION OFFICER
   (603) 886-6005

CONSULTANT CONTACT

1. **SURVEYOR/CIVIL ENGINEER**
   HAYNER/SWANSON, INC.
   3 CONGRESS STREET
   NASHUA, NH 03062

   ATT: JAMES N. PETROPULOS, PE
   (603) 883-2057, EXT 129

2. **GEOTECHNICAL ENGINEER**
   SANBORN, HEAD & ASSOCIATES, INC.
   1 TECHNOLOGY PARK DRIVE
   WESTFORD, MA 01886

   ATT: VERN KOKOSA, PE
   (978) 392-0900

SITE GRADING & UTILITY
SHEET KEY
NOT TO SCALE

No.	DATE	REVISION	BY
1	04/01/14	ADDRESS STAFF AND PEER REVIEW COMMENTS	JNP

SITE GRADING & UTILITY PLAN
(MAP 209, LOTS 2 & 3)

PARKING LOT ADDITIONS

55 EXECUTIVE DRIVE & FRIARS DRIVE
HUDSON, NEW HAMPSHIRE

PREPARED FOR:

FARLEY WHITE INTERESTS
155 FEDERAL STREET, SUITE 1800 BOSTON, MA 02110 (617) 654-9400

RECORD OWNER:

PRESSTEK, LLC
10 GLENVILLE STREET, 3RD FLOOR GREENWICH, CT 06831 (603) 402-7502

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20 0 20 40 METERS
SCALE: 1"=40 Feet
1"=12.192 Meters

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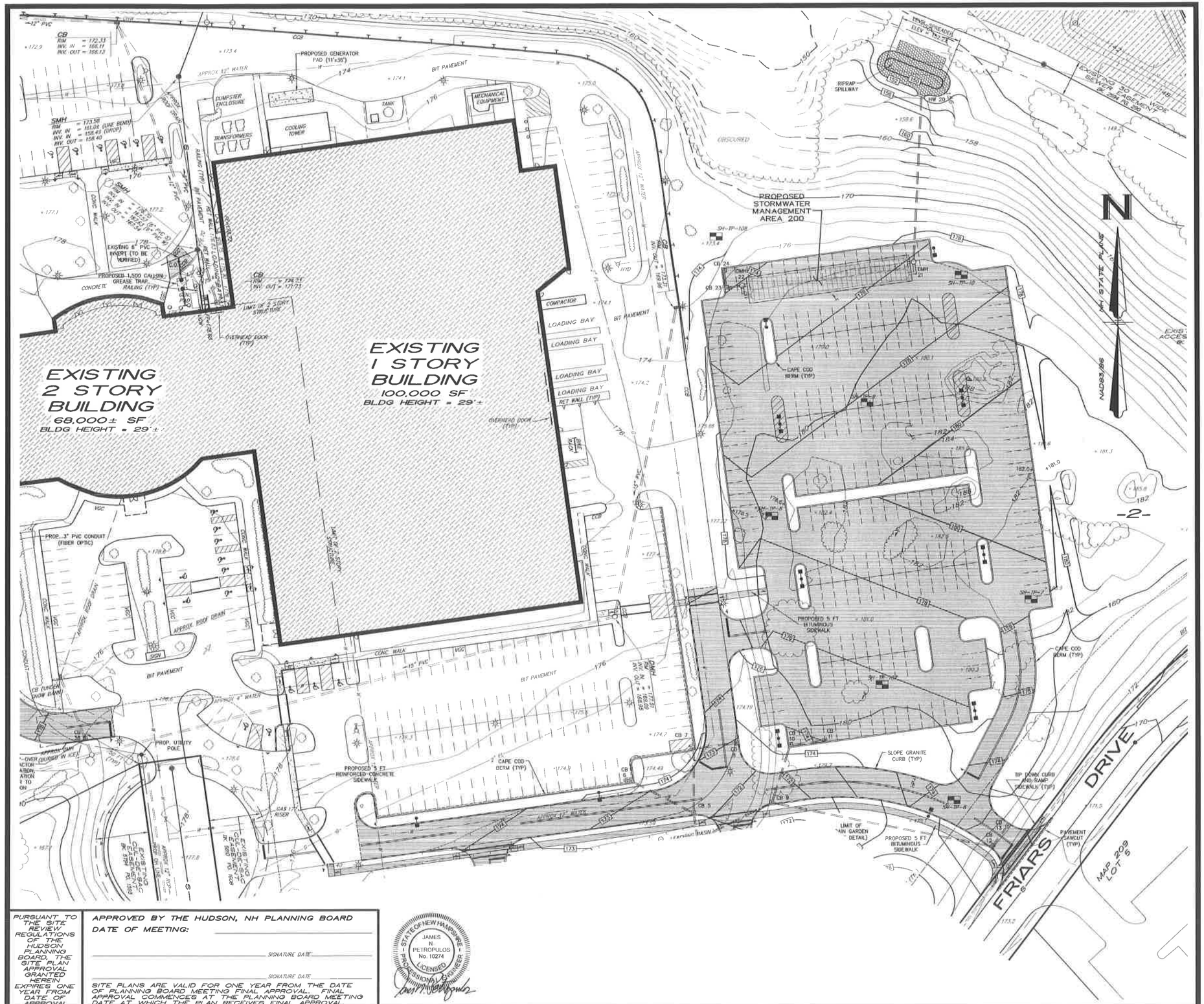
DRAWING LOCATION: Q:\5248\DWG\5248-FWI			



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STATE OF NEW HAMPSHIRE – JAMES N. PETROPULOS No. 10274 LICENSED PROFESSIONAL ENGINEER

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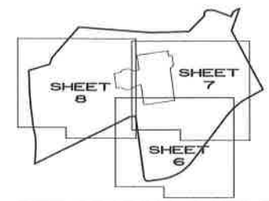
CONSTRUCTION NOTES:

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 ROAD AND BRIDGE CONSTRUCTION, STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION, APPROVED AND ADOPTED 2010 ARE HEREBY INCORPORATED BY REFERENCE.
2. 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 DEPT., HUDSON, NEW HAMPSHIRE. ALL DRAINAGE PIPES SHALL BE CLASS IV 3000 D (RCP OR ADS-HP). CATCH BASINS SHALL BE TYPE B, AND HAVE 4 FT SUMPS UNLESS OTHERWISE NOTED.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION. THE ENGINEER 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 CONTACTING "DIG SAFE" AT 1-888-344-7233 AT LEAST 72 HOURS BEFORE DIGGING.
4. ALL DRAINAGE PIPE SHALL BE FURNISHED AND INSTALLED WITH FLEXIBLE GASKETS. JOINTS SHALL BE MADE WITH OIL RESISTANT COMPRESSION RINGS OF AN ELASTOMERIC MATERIAL CONFORMING TO ASTM C-443. MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL BE FOLLOWED.
5. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE AND MAINTAINED THROUGH THE CONSTRUCTION PROCESS UNTIL STABILIZATION OCCURS.
6. STUMPS SHALL BE DISPOSED OF OFF-SITE IN A LEGAL MANNER.



SITE GRADING & UTILITY SHEET KEY

NOT TO SCALE

No.	DATE	REVISION	BY
1	04/01/14	ADDRESS STAFF AND PEER REVIEW COMMENTS	JNP

SITE GRADING & UTILITY PLAN
(MAP 209, LOTS 2 & 3)

PARKING LOT ADDITIONS

55 EXECUTIVE DRIVE & FRIARS DRIVE
HUDSON, NEW HAMPSHIRE

PREPARED FOR:

FARLEY WHITE INTERESTS
155 FEDERAL STREET, SUITE 1800 BOSTON, MA 02110 (617) 654-9400

RECORD OWNER:

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DRAWING LOCATION: Q:\5248\DWG\5248-FW		File Number	Sheet

N

NH STATE PLANE

NAD83/96

MERRIMACK RIVER

EXISTING 2 STORY BUILDING
68,000± SF
BLDG HEIGHT = 29'±

PROPOSED STORMWATER MANAGEMENT AREA 400

PROPOSED STORMWATER MANAGEMENT AREA 300

INFILTRATION BASIN

50 FT WETLAND BUFFER (TYP)

LIMIT OF WETLANDS AS FLAGGED BY WETLAND CONSULTING SERVICES AND SURVEYED BY HAYNER/SWANSON, INC. MARCH 14, 2014

EXIST PSNH AND NETT EASEMENT BK 5809 PG 1019 HCRD PLAN 29953

150 FT EXISTING PSNH EASEMENT BK 2094 PG 115 BK 1249 PG 462

EXISTING CONSERVATION EASEMENT BK 5747 PG 1025

250 FT SHORELAND PROTECTION LIMIT

PROPOSED GUARDRAIL (SEE DETAIL)

PROPOSED 5 FT REINFORCED CONCRETE CURB AND SIDEWALK (SEE DETAIL)

CAPE COD BERM (TYP)

CAPE COD DORM (TYP)

PROPOSED DROP-OVER (BURIED IN ICE) CB 38, CONTRACTOR TO VERIFY LOCATION, SIZE AND ELEVATION OF PIPE PRIOR TO CONSTRUCTION

PROPOSED 1,500 GALLON GREASE TRAP

EXISTING 8" PVC INVERT (TO BE VERIFIED)

PROP. 3" PVC CONDUIT (FIBER OPTIC)

TEMPORARY CONCRETE BARRIERS

LEACHING BASIN (BURIED IN ICE)

ZONE X (SHADED)

ZONE AE

FLOOD WAY

MAP 209 LOT 1

MAP 215 LOT 4

OBSCURED

PAVEMENT SAWCUT (TYP)

APPROX CB (UNDER ICE & DIRT)

BIT PAVEMENT

CONC WALK

CONCRETE RAILING (TYP)

CONDUIT

HYD

PROP. UTILITY POLE

APPROX. EDGE OF WATER

CB 42 — RIM = 172.33, INV. IN = 160.11, INV. OUT = 166.13

SMH — RIM = 173.58, INV. IN = 161.04 (LINE BEND), INV. IN = 158.49 (DROP), INV. OUT = 158.40

DMH 37 — RIM = 155.58, INV. IN = 140.38, INV. OUT = 140.29

HW INV. OUT = 159.83

CB 36 INV. OUT = 160.02

CB 38 INV. IN = 163.24 (15"), INV. IN = 160.15, INV. IN = 170.54 (12"), INV. OUT = 160.02

SHEET 8 | SHEET 7 | SHEET 6

SITE GRADING & UTILITY SHEET KEY
NOT TO SCALE

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SITE GRADING & UTILITY PLAN
(MAP 209, LOTS 2 & 3)

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STATE OF NEW HAMPSHIRE — JAMES N. PETROPULOS No. 10274 — PROFESSIONAL ENGINEER — LICENSED

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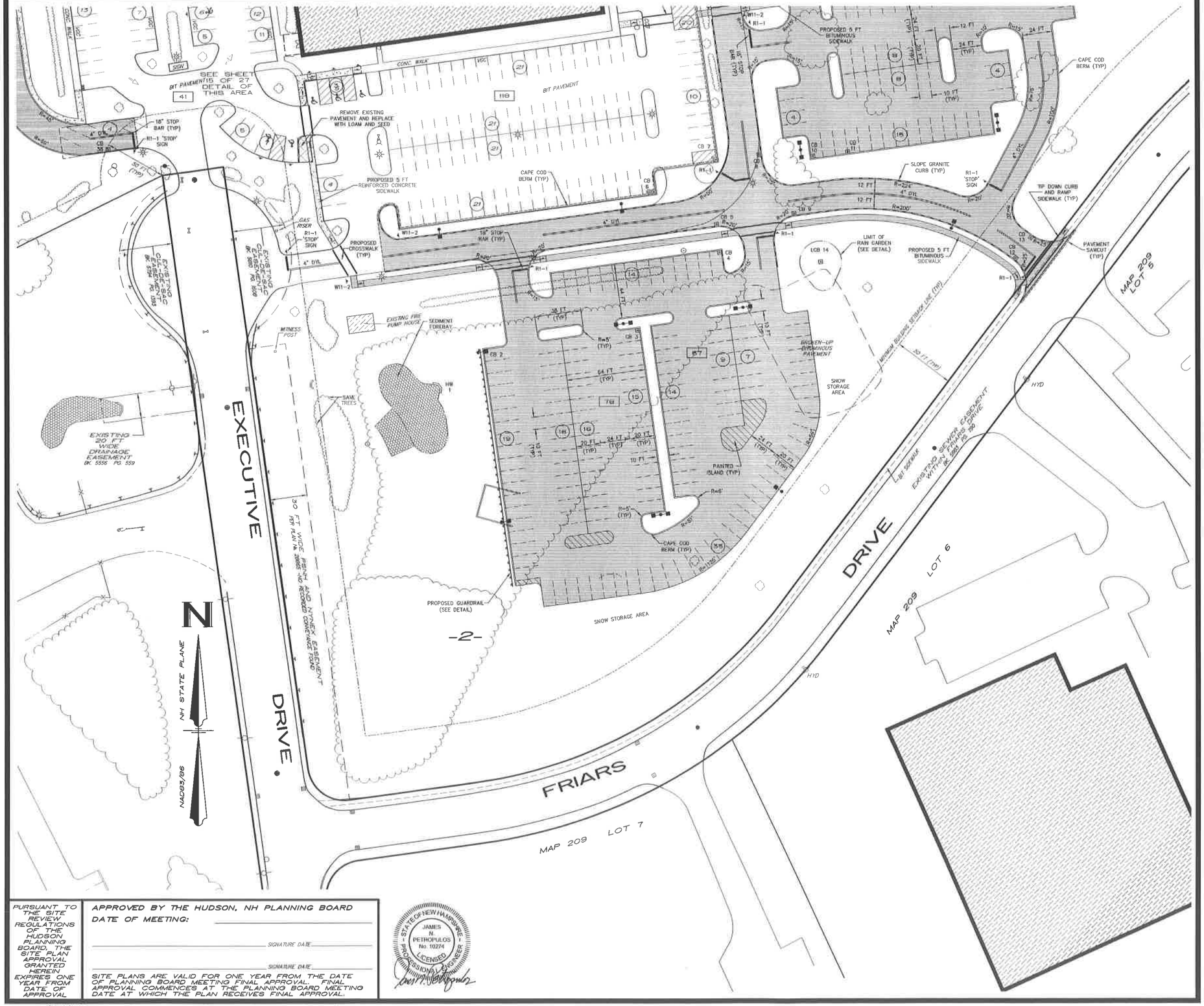

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STATE OF NEW HAMPSHIRE – JAMES N. PETROPULOS No. 10274 LICENSED PROFESSIONAL ENGINEER

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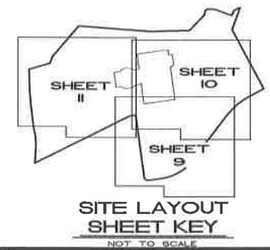
CONSTRUCTION NOTES:

1. ALL TRAFFIC SIGNS SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
2. DIMENSIONS TO CURB AND GUTTERS INDICATE EDGE OF PAVING UNLESS OTHERWISE NOTED.
3. EXISTING PAVEMENT SHALL BE SAW-CUT AS NECESSARY. CONTRACTOR SHALL ENSURE A SMOOTH TRANSITION BETWEEN NEW AND EXISTING PAVEMENT.

LEGEND

4" DYL	DOUBLE YELLOW LINE
18" SWL	SOLID WHITE LINE STOP BAR
	PROPOSED TRAFFIC SIGN
	PEDESTRIAN CROSSWALK
	SLOPE GRANITE CURB
	CAPE COD BERM
	REINFORCED CONCRETE SIDEWALK AND CURB
	RAMP



SITE LAYOUT SHEET KEY

NOT TO SCALE

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(MAP 209, LOTS 2 & 3)

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HUDSON, NEW HAMPSHIRE

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FARLEY WHITE INTERESTS
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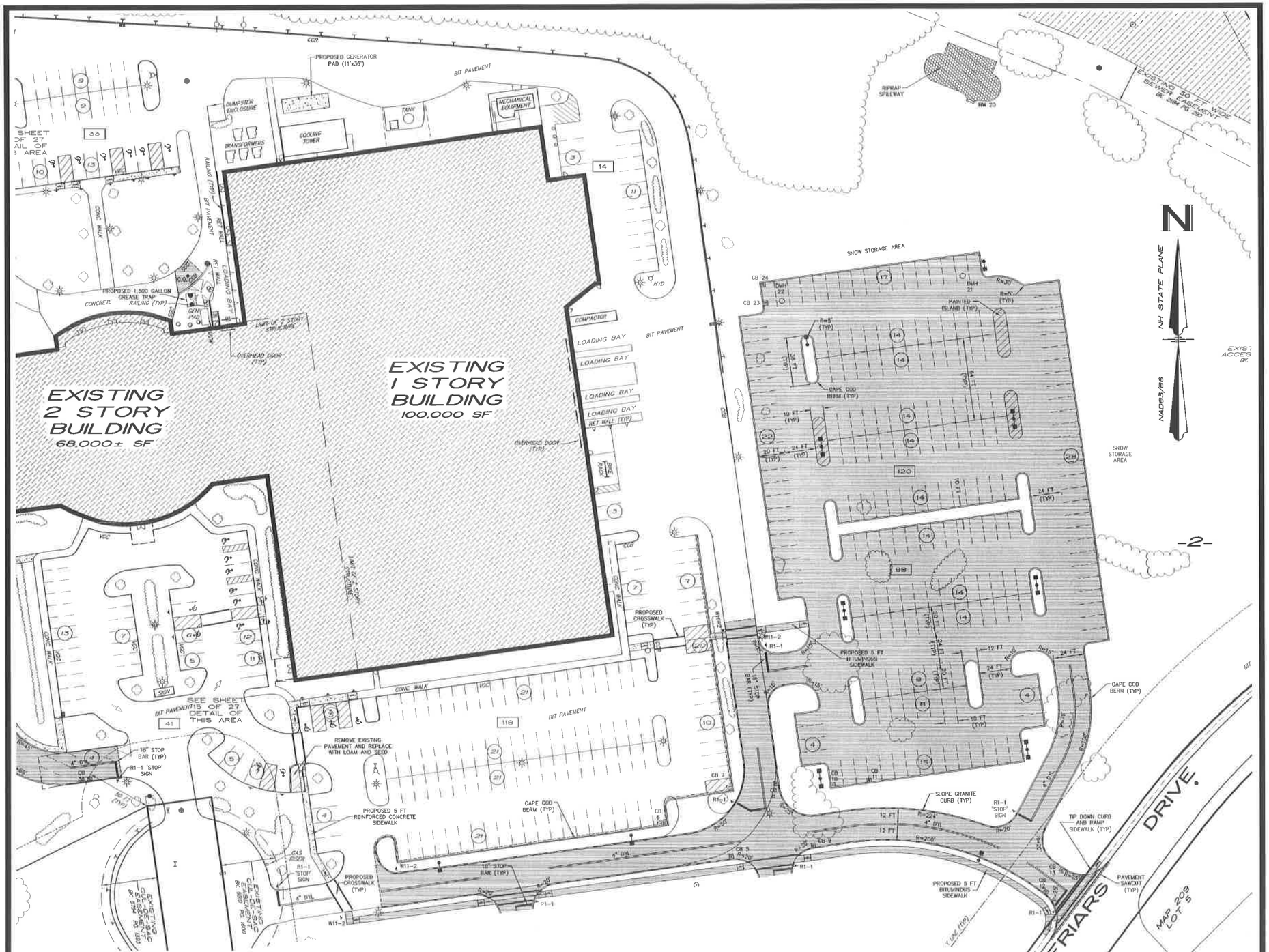

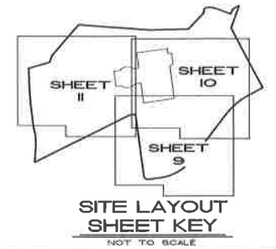

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(MAP 209, LOTS 2 & 3)

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STATE OF NEW HAMPSHIRE
JAMES N. PETROPULOS
No. 10274
LICENSED PROFESSIONAL ENGINEER

HSI Hayner/Swanson, Inc.
Civil Engineers/Land Surveyors
Three Congress Street Nashua, New Hampshire 03062-3301
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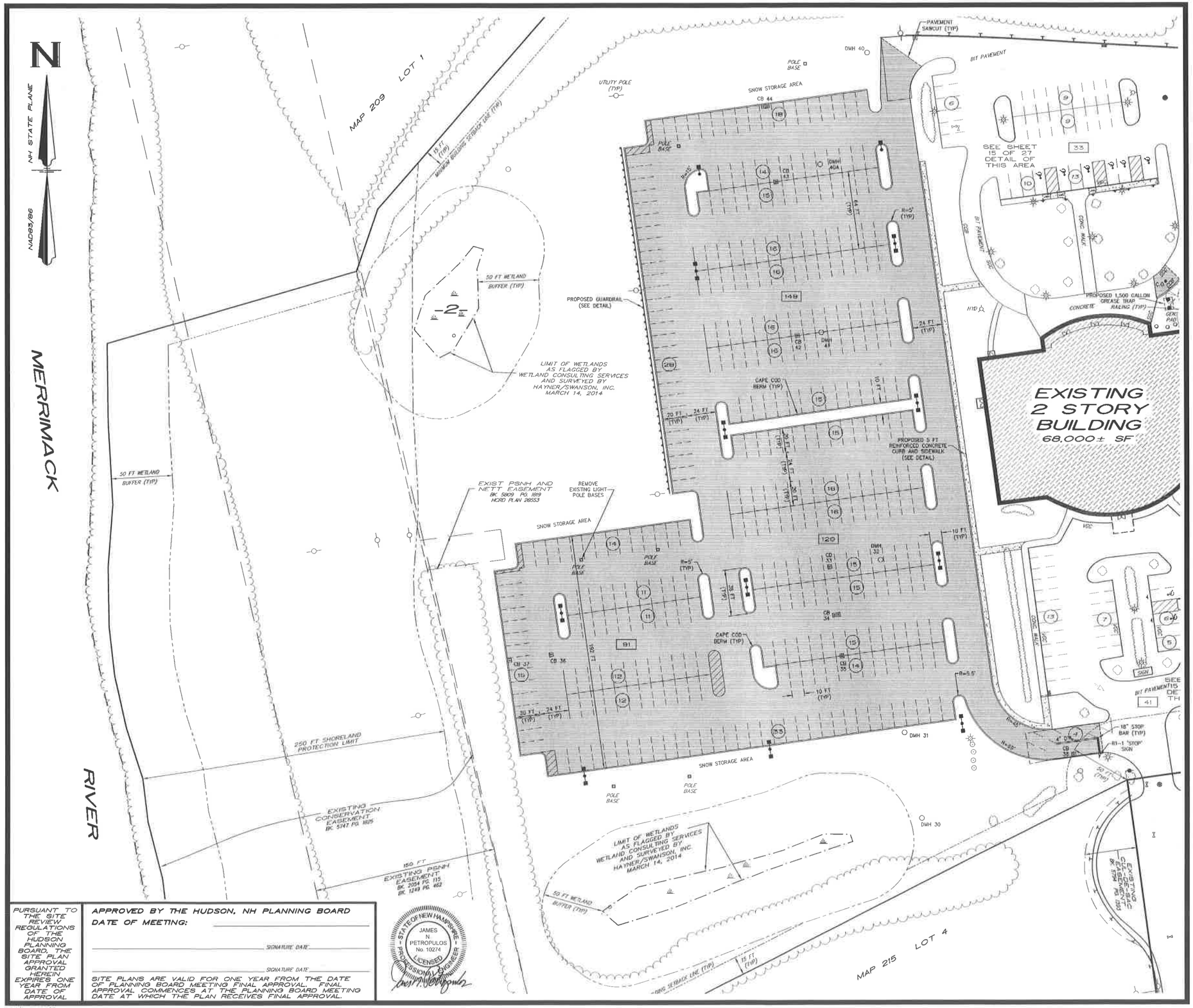

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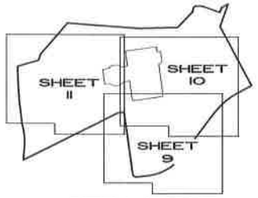

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(MAP 209, LOTS 2 & 3)

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PREPARED FOR:

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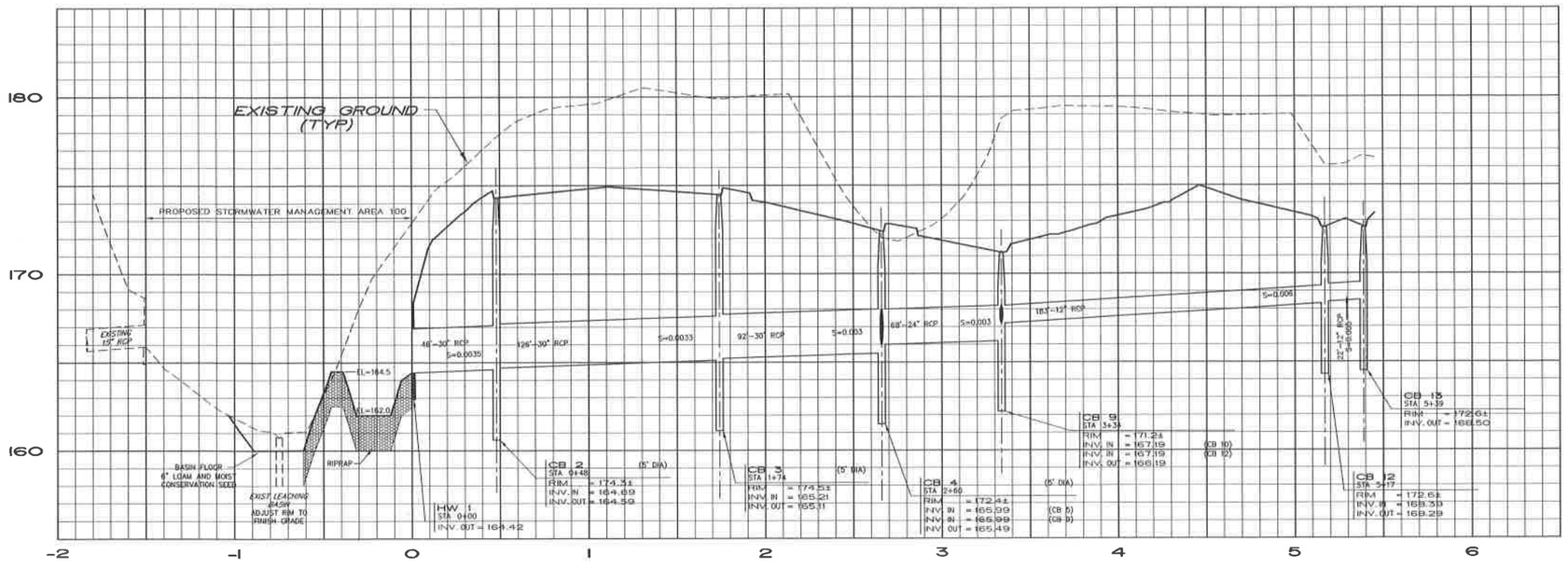

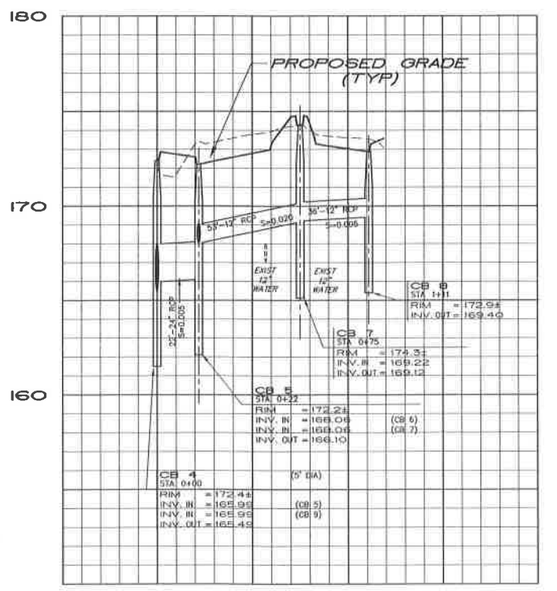

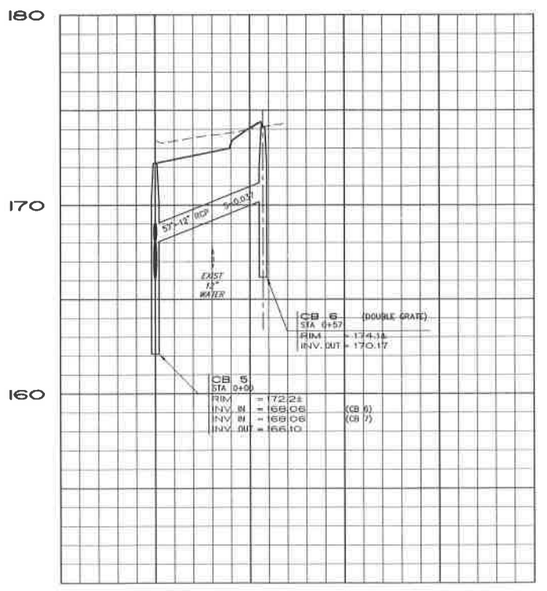

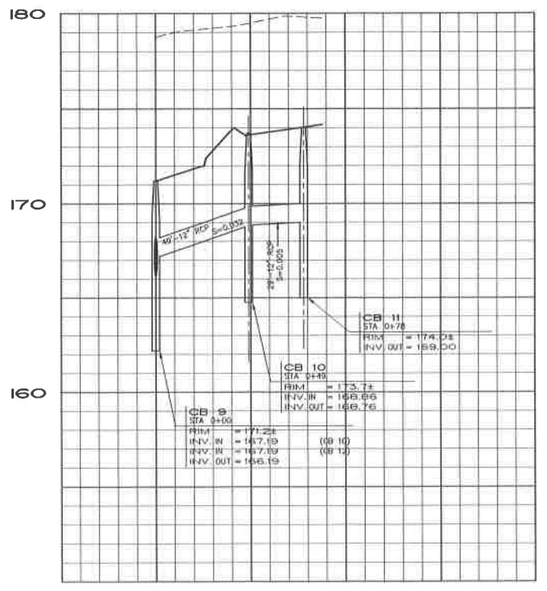

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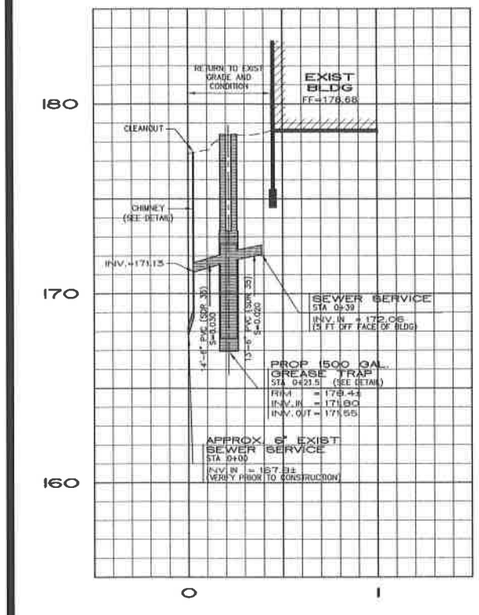

SANITARY SEWER

No.	DATE	REVISION	BY
1	04/01/14	ADDRESS STAFF AND PEER REVIEW COMMENTS	JNP

UTILITY PROFILES
(MAP 209, LOTS 2 & 3)

PARKING LOT ADDITIONS

55 EXECUTIVE DRIVE & FRIARS DRIVE
HUDSON, NEW HAMPSHIRE

PREPARED FOR:

FARLEY WHITE INTERESTS
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RECORD OWNER:

PRESSTEK, LLC
10 GLENVILLE STREET, 3RD FLOOR GREENWICH, CT 06831 (603) 402-7502

SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'

17 MARCH 2014

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FIELD BOOK: 1193	DRAWING NAME: 5248-5-FW.FY41	5248-FWi	12 OF 27
DRAWING LOCATION: Q:\5248\DWG\5248-FW		File Number	Sheet

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

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____
_____ SIGNATURE DATE _____
_____ SIGNATURE DATE _____
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STATE OF NEW HAMPSHIRE – JAMES N. PETROPULOS No. 10274 LICENSED PROFESSIONAL ENGINEER

NOTES
1. STRUCTURE DIAMETERS AS SHOWN ON DRAINAGE PROFILES ARE CONSIDERED TO BE MINIMUM INSIDE DIMENSIONS. LARGER STRUCTURES MAY BE NECESSARY DUE TO ALIGNMENT AND/OR PIPE SIZES. STRUCTURE MANUFACTURER SHALL DETERMINE FINAL SIZE.
2. PIPE LENGTHS ARE MEASURED FROM CENTERLINE OF STRUCTURE TO CENTERLINE OF STRUCTURE.

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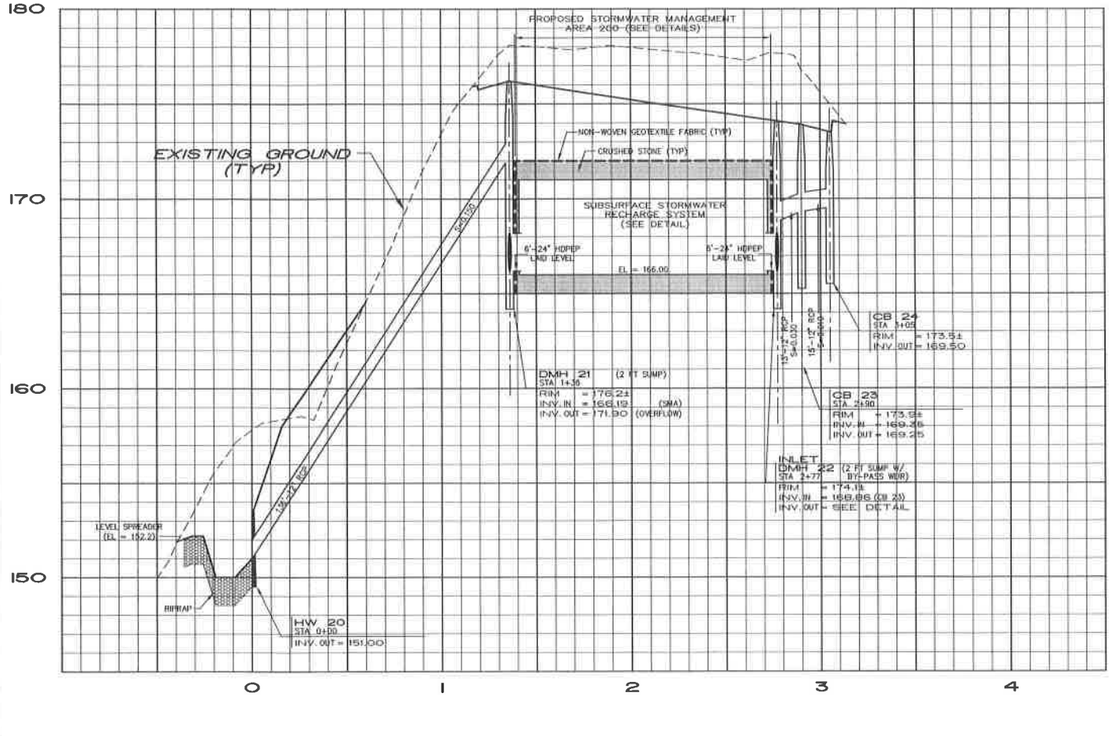
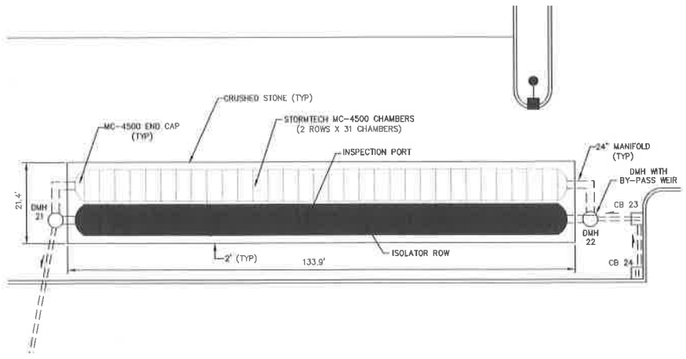


PROPOSED STORMWATER MANAGEMENT AREA 200

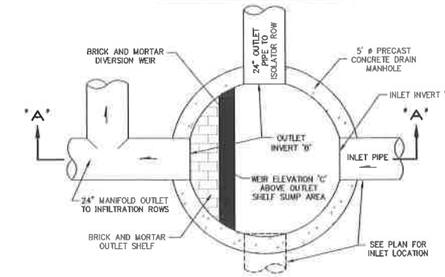
SCALE: 1" = 20'



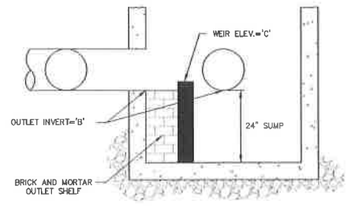
NOTE

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PERFORM A TEST PIT AT THE SUBGRADE OF EACH PROPOSED STORMWATER MANAGEMENT AREA IN ORDER TO VERIFY 1) THE FIELD INFILTRATION RATE AT THE SUBGRADE OF EACH PRACTICE SHALL BE GREATER THAN OR EQUAL TO THE DESIGN INFILTRATION RATE OF 4.5 INCHES PER HOUR, AND 2) THE SEPARATION BETWEEN THE BOTTOM OF EACH PRACTICE AND THE ESTIMATED SEASONAL HIGH WATER TABLE SHALL BE A MINIMUM OF 3 FEET. ALL TEST PITS SHALL BE WITNESSED BY THE ENGINEER.

LOCATION	INLET INVERT 'A'	OUTLET INVERT 'B'	WEIR ELEVATION 'C'
DMH 22	166.66	166.19	167.00
DMH 32	169.35	168.19	168.00
DMH 41	168.50	165.19	166.25



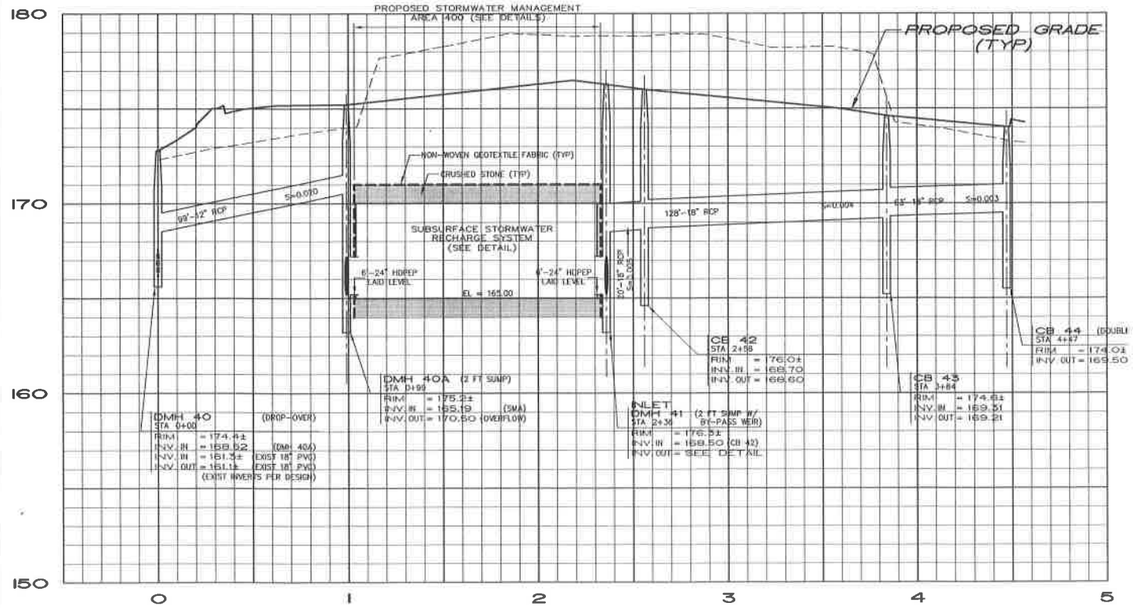
PLAN VIEW

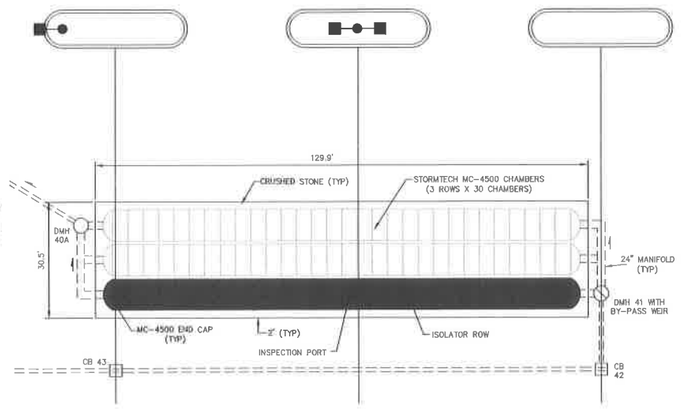


SECTION 'A'-'A' VIEW

INLET DRAIN MANHOLE DETAIL

NOT TO SCALE





PROPOSED STORMWATER MANAGEMENT AREA 400

SCALE: 1" = 20'

NOTES

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STATE OF NEW HAMPSHIRE — JAMES N PETROPULOS No. 10274 LICENSED PROFESSIONAL ENGINEER

No.	DATE	REVISION	BY
1	04/01/14	ADDRESS STAFF AND PEER REVIEW COMMENTS	JNP

DRAINAGE PROFILES
(MAP 209, LOTS 2 & 3)

PARKING LOT ADDITIONS

55 EXECUTIVE DRIVE & FRIARS DRIVE

HUDSON, NEW HAMPSHIRE

PREPARED FOR:

FARLEY WHITE INTERESTS

155 FEDERAL STREET, SUITE 1800 BOSTON, MA 02110 (617) 654-9400

RECORD OWNER:

PRESSTEK, LLC

10 GLENVILLE STREET, 3RD FLOOR GREENWICH, CT 06831 (603) 402-7502

SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'

17 MARCH 2014

HSI Hayner/Swanson, Inc.

Civil Engineers/Land Surveyors
Three Congress Street Nashua, New Hampshire 03062-3301
Tel (603) 883-2057 Fax (603) 883-5057
www.hayner-swanson.com

FIELD BOOK: 1193	DRAWING NAME: 5248-5-FWI F141	5248-FWI	13 OF 27
DRAWING LOCATION: Q:\5248\DWG\5248-FWI		File Number	Sheet

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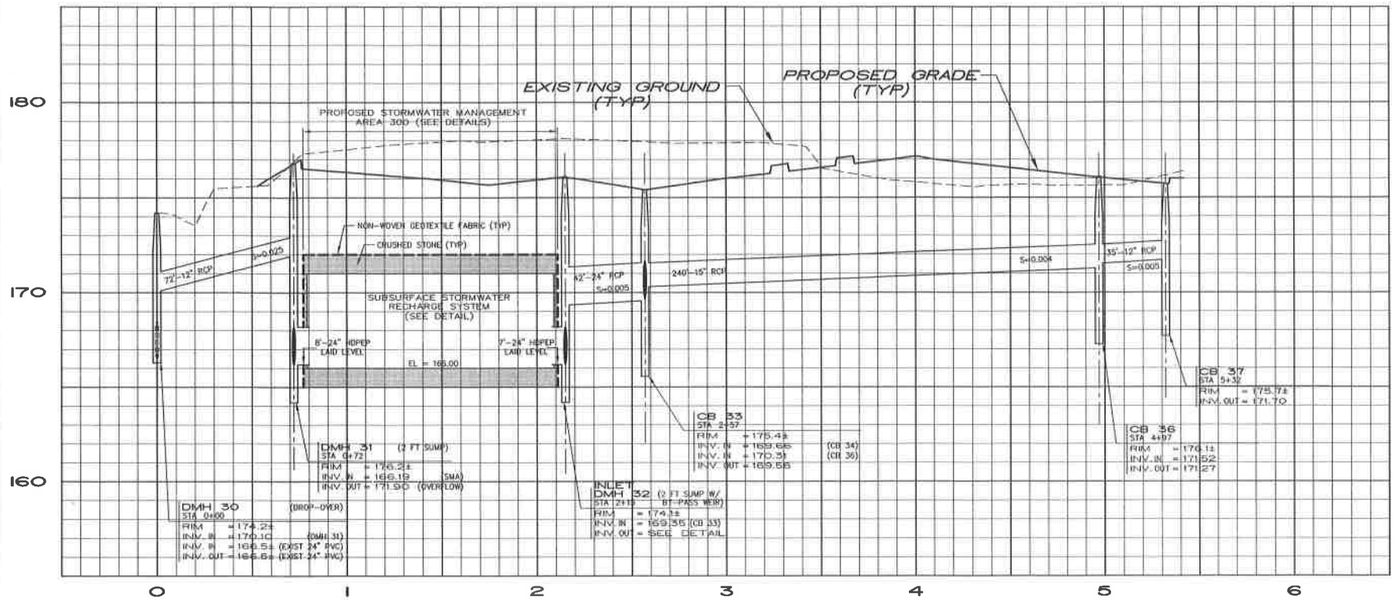

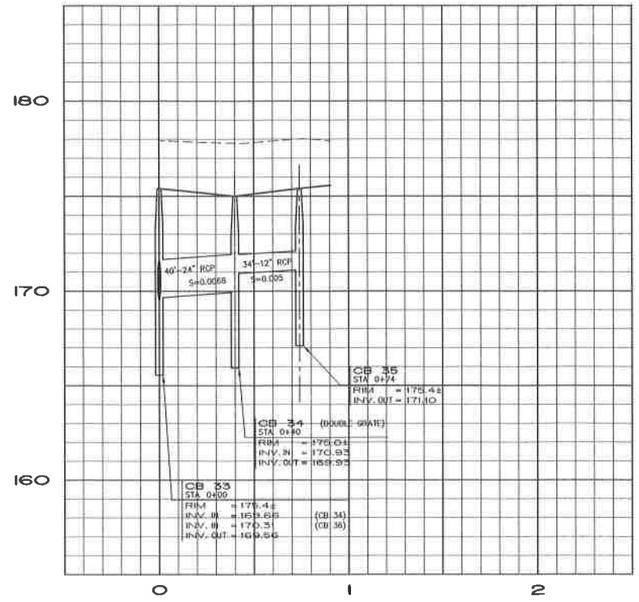

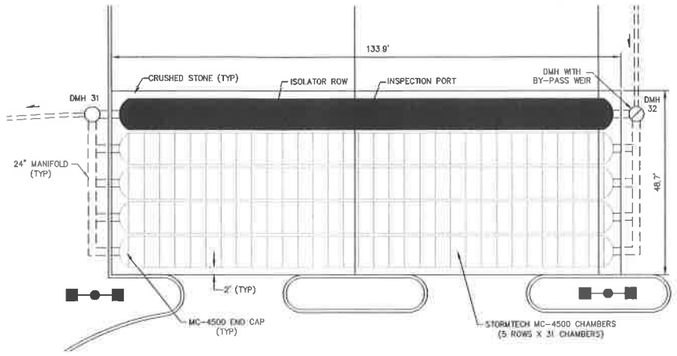

PROPOSED STORMWATER MANAGEMENT AREA 300

SCALE: 1" = 20'

NOTE

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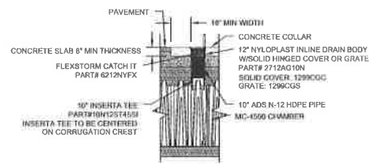
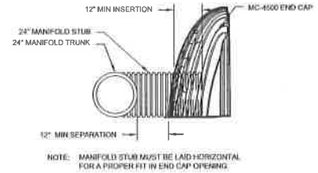
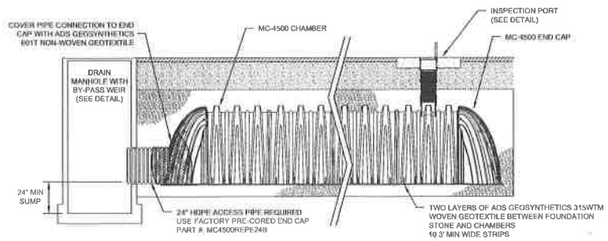


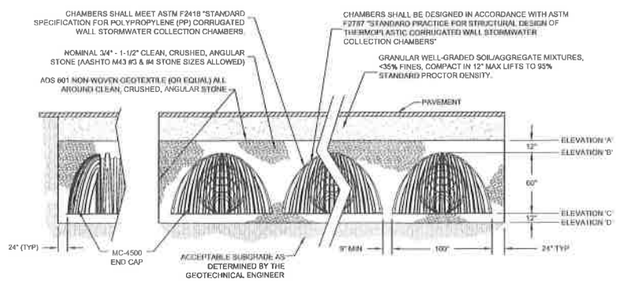
INSPECTION PORT DETAIL



END CAP DETAIL



ISOLATOR ROW DETAIL



TYPICAL CROSS SECTION DETAIL

STORMTECH MC-4500 CHAMBER SYSTEM DETAILS

NOT TO SCALE

STORMTECH NOTES:

1. CHAMBERS SHALL BE STORMTECH MC-4500, OR APPROVED EQUAL.
2. CHAMBERS SHALL BE MANUFACTURED FROM VIRGIN POLYPROPYLENE OR POLYETHYLENE RESINS TESTED USING ASTM STANDARDS.
3. CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12 ARE MET FOR:
   A. LONG-DURATION DEAD LOADS; AND
   B. SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCE.
6. ONLY CHAMBERS THAT ARE APPROVED BY THE ENGINEER WILL BE ALLOWED. THE CONTRACTOR SHALL SUBMIT (3 SETS) OF THE FOLLOWING TO THE ENGINEER FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:
   STRUCTURAL EVALUATION BY A REGISTERED STRUCTURAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12 ARE MET. THE 50-YEAR CREEP MODULUS DATA SPECIFIED IN ASTM F2922 MUST BE USED AS A PART OF THE AASHTO STRUCTURAL EVALUATION TO VERIFY LONG-TERM PERFORMANCE.
7. CHAMBERS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.
8. ALL DESIGN SPECIFICATIONS FOR CHAMBERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S LATEST DESIGN MANUAL.
9. THE INSTALLATION OF CHAMBERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S LATEST INSTALLATION INSTRUCTIONS.
10. THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12 FOR EARTH AND LIVE LOADS, WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.

STORMWATER MANAGEMENT AREA	ELEVATION 'A'	ELEVATION 'B'	ELEVATION 'C'	ELEVATION 'D'
SMA 200	172.00	171.00	166.00	165.00
SMA 300	172.00	171.00	166.00	165.00
SMA 400	171.00	170.00	165.00	164.00

NOTES

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DRAINAGE PROFILES
(MAP 209, LOTS 2 & 3)

PARKING LOT ADDITIONS

55 EXECUTIVE DRIVE & FRIARS DRIVE
HUDSON, NEW HAMPSHIRE

PREPARED FOR:

FARLEY WHITE INTERESTS
155 FEDERAL STREET, SUITE 1800 BOSTON, MA 02110 (617) 654-9400

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SCALE: HORIZ. 1" = 40'
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DRAWING LOCATION: O:\5248\DWG\5248-FW		File Number	Sheet

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STATE OF NEW HAMPSHIRE JAMES N. PETROPULOS No. 10274 LICENSED PROFESSIONAL ENGINEER

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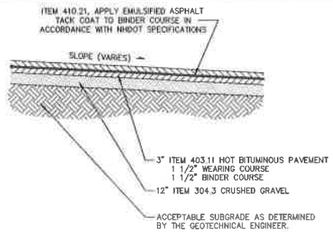
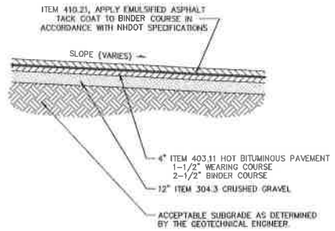


PARKING AREA TYPICAL PAVEMENT SECTION

NOT TO SCALE

NOTE
PAVEMENT SECTIONS PROVIDED BY SANBORN, HEAD & ASSOCIATES, INC.

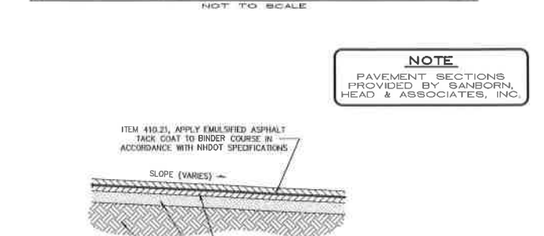


ACCESS DRIVE TYPICAL PAVEMENT SECTION

NOT TO SCALE

TYPICAL SECTION BITUMINOUS SIDEWALK

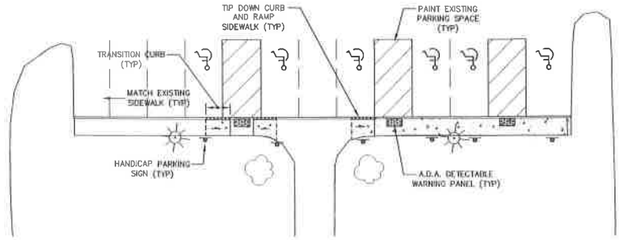
NOT TO SCALE



NOTE:
1/2" THICK EXPANSION JOINT AND FABRIC TO BE SET 6 FT. ON CENTER

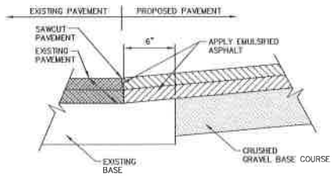
CONCRETE SIDEWALK AND CURB DETAIL

NOT TO SCALE



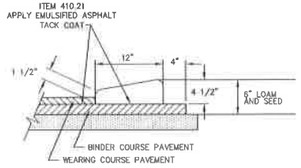
HANDICAP PARKING PLAN

SCALE: 1" = 20'



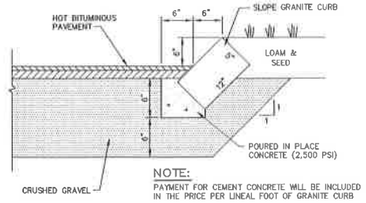
SAWCUT PAVEMENT DETAIL

NOT TO SCALE



CAPE COD BERM DETAIL

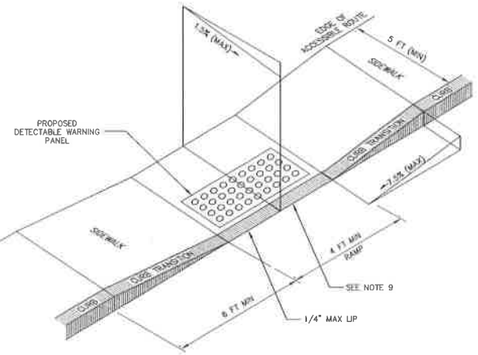
NOT TO SCALE



NOTE:
PAYMENT FOR CEMENT CONCRETE WILL BE INCLUDED IN THE PRICE PER LINEAL FOOT OF GRANITE CURB

SLOPE GRANITE CURB DETAIL

NOT TO SCALE

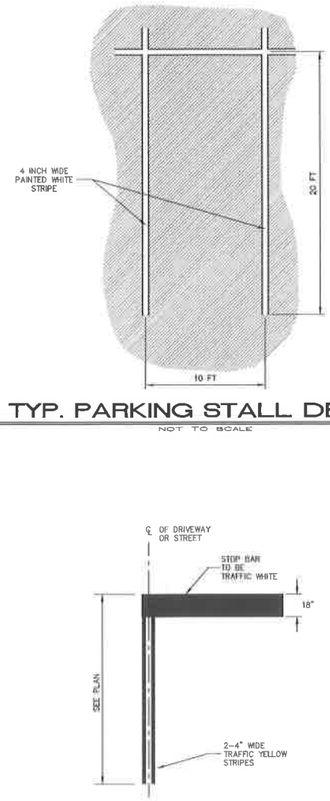


NOTES

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

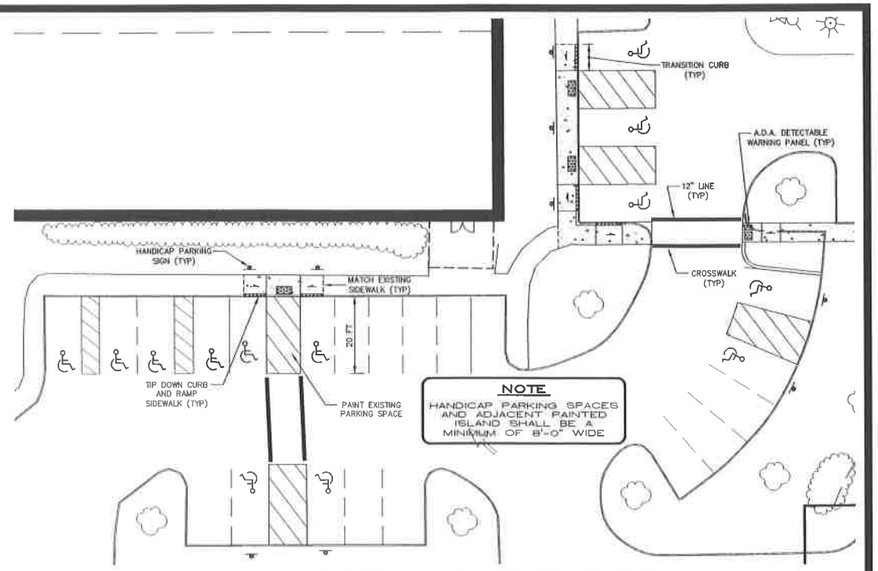
HANDICAP ACCESSIBLE CURB RAMP DETAIL

NOT TO SCALE



TYP. PARKING STALL DETAIL

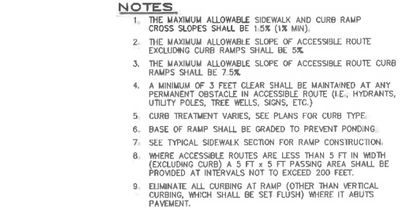
NOT TO SCALE



NOTE
HANDICAP PARKING SPACES AND ADJACENT PAINTED ISLAND SHALL BE A MINIMUM OF 8'-0" WIDE

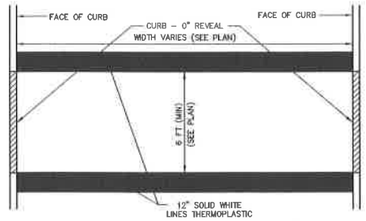
HANDICAP PARKING PLAN

SCALE: 1" = 20'



STOP BAR DETAIL

NOT TO SCALE



TYPICAL CROSSWALK DETAIL

NOT TO SCALE

No.	DATE	REVISION	BY
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DETAIL SHEET - GENERAL SITE
(MAP 209, LOTS 2 & 3)

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HUDSON, NEW HAMPSHIRE

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RECORD OWNER:
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SCALE AS SHOWN

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STATE OF NEW HAMPSHIRE JAMES N. PETROPULOS No. 10274 LICENSED PROFESSIONAL ENGINEER

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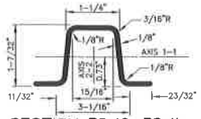
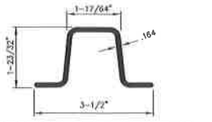
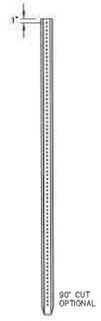


SECTION P2-10, P2-11

LENGTH: P2-10, 10'-0", P2-11, 11'-0"
WEIGHT PER LINEAR FOOT: 3.00 LBS
HOLES: 3/8" DIA. 1" C-C FULL LENGTH
STEEL: SHALL CONFORM TO ASTM A-499 (GRADE 60) OR ASTM A-5761 (GRADE 1070-1080).
FINISH: SHALL BE PAINTED WITH TWO COATS OF BAKED ON OR AIR DRIED, PAINT OF WEATHER RESISTANT QUALITY. ALL FABRICATION SHALL BE COMPLETE BEFORE PAINTING. PAINT SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT.



SECTION P-11 THRU P-16

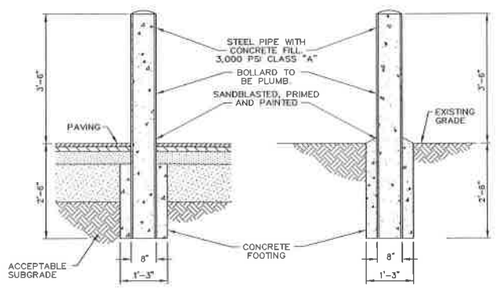


P2-10, P2-11
P-11, P-12, P-14, P-16
POSTS

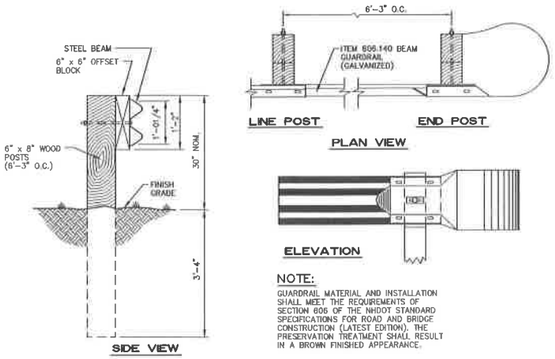
LENGTH: P-11", 11'-0", P-12', 12'-0", P-14, 14'-0", P-16, 16'-0"
WEIGHT PER LINEAR FOOT: 3.00 LBS
STEEL: SAME AS FOR P2-10, P2-11
FINISH: SAME AS FOR P2-10, P2-11

DIMENSIONS SHOWN ARE NOMINAL. ALTERNATE SECTIONS MUST BE APPROVED PRIOR TO USE.

TRAFFIC SIGN SUPPORT DETAIL
NOT TO SCALE

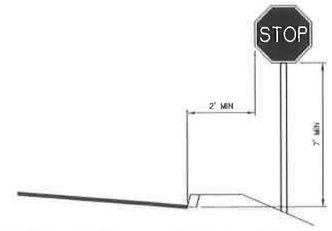


BOLLARD DETAIL
NOT TO SCALE

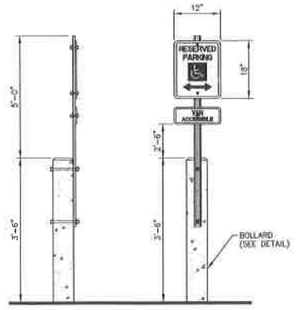


NOTE:
GUARDRAIL MATERIAL AND INSTALLATION SHALL MEET THE REQUIREMENTS OF SECTION 606 OF THE NHDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION). THE PRESERVATION TREATMENT SHALL RESULT IN A BROWN FINISHED APPEARANCE.

WOOD POST/BEAM TYPE GUARDRAIL DETAIL
NOT TO SCALE



STOP SIGN LOCATION DETAIL
NOT TO SCALE



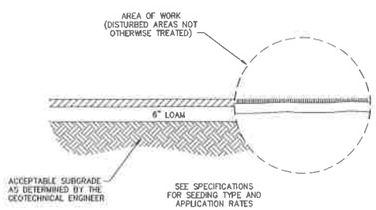
HANDICAP PARKING SIGN DETAIL
NOT TO SCALE

SIGN LEGEND

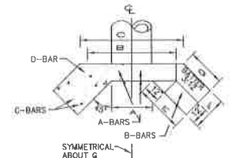
TEXT (SEE MUTCD FOR TEXT DIMENSIONS)	IDENTIFICATION NUMBER	SIZE WIDTH/HEIGHT
	TEXT DIMENSIONS	
STOP	R1-1	30"/30"
	SEE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS	
	W11-2	30"/30"
	SEE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS	

NOTE
ALL TRAFFIC CONTROL SIGNS SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.

SIGN LEGEND

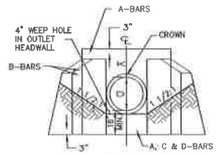


LOAM AND SEED DETAIL
NOT TO SCALE

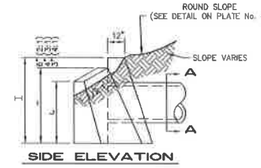


HALF PLAN OF BOTTOM STEEL

HALF PLAN OF TOP STEEL



SIDE ELEVATION



SIDE ELEVATION

ITEM 209 GRANULAR BACKFILL WHEN LESS THAN 4' OF FILL OVER CROWN OF PIPE

SECTION A-A

NOTE:
ALL LIKE BARS IN EACH HEADWALL ARE SAME SIZE. EACH STD. HEADER HAS 4A, B & C BARS, AND 2 D-BARS.

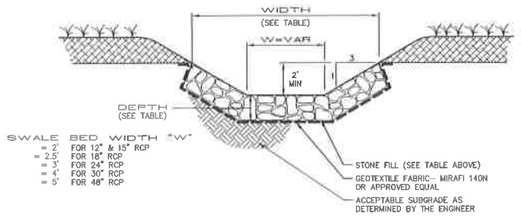
3 : 1 SLOPE

DIA. D INCHES	AREA OF PIPE Sq. Ft.	QUANTITIES IN CU. YD. PER HEADER CONC.	STEEL LB.	PIPE EXC. (CL. 1 FOR 1' DEPTH)	PIPE EXC. FOR 1' DEPTH	ITEM 209 COM. C LENGTH	DIMENSIONS A	B	C	E	F	G	H	I	J	K	REINFORCING STEEL SIZE	LENGTH A BARS	B BARS	C BARS	D BARS	G	G1 B
30	4.91	3.31	49	2.22	185	0.56	3'-1"	2'-11"	7'-8"	4'-3"	2'-2"	3'-3"	2'-6"	5'-3"	4'-3"	1'-8"	1/2"ø	5'-7"	5'-0"	4'-8"	6'-3"	2'-8"	3'-7"

CONCRETE HEADWALL WITH 45° WINGS FOR R.C. PIPE - (HW 1)
NOT TO SCALE
(NHDOT STANDARD)

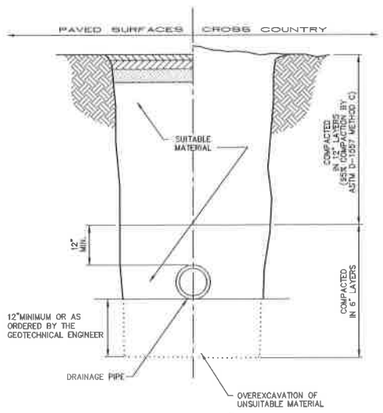
RIPRAP OUTLET PROTECTION SPECIFICATION TABLE

LOCATION	WIDTH (FT)	LENGTH (FT)	DEPTH (FT)	d_{50} (IN)	MATERIAL
HEADWALL 1	22	37	2	6	ITEM 583.1 RIPRAP 'A'

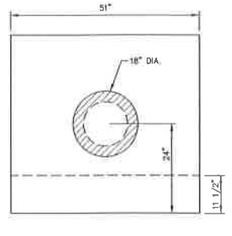


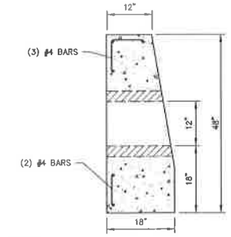
SWALE BED WIDTH "W"
= 2' FOR 12" & 15" RCP
= 2.5' FOR 18" RCP
= 3' FOR 24" RCP
= 4' FOR 30" RCP
= 5' FOR 48" RCP

RIPRAP AT HEADWALL/OUTLET DETAIL
NOT TO SCALE



TYPICAL DRAINAGE TRENCH SECTION
NOT TO SCALE





GENERAL NOTES
1. STEEL REINFORCEMENT CONFORMS TO LATEST ASTM SPECIFICATIONS: ASTM-A615 GRADE 60 REBAR.
2. CONCRETE: Fc = 4,000 PSI @ 28 DAYS MINIMUM.
3. EST WEIGHT: 3,000 LBS.

PRECAST HEADWALL - (HW 20)
NOT TO SCALE

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

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____
_____ SIGNATURE DATE _____
_____ SIGNATURE DATE _____
SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

STATE OF NEW HAMPSHIRE — JAMES N. PETROPULOS No. 10274 LICENSED PROFESSIONAL ENGINEER

No.	DATE	REVISION	BY
1.	04/01/14	ADDRESS STAFF AND PEER REVIEW COMMENTS	JNP

DETAIL SHEET - GENERAL SITE
(MAP 209, LOTS 2 & 3)

PARKING LOT ADDITIONS

55 EXECUTIVE DRIVE & FRIARS DRIVE
HUDSON, NEW HAMPSHIRE

PREPARED FOR:
FARLEY WHITE INTERESTS
155 FEDERAL STREET, SUITE 1800 BOSTON, MA 02110 (617) 654-9400

RECORD OWNER:
PRESSTEK, LLC
10 GLENVILLE STREET, 3RD FLOOR GREENWICH, CT 06831 (603) 402-7502

SCALE AS SHOWN

17 MARCH 2014

HSI Hayner/Swanson, Inc.
Civil Engineers/Land Surveyors
Three Congress Street Nashua, New Hampshire 03062-3301
Tel (603) 883-2057 Fax (603) 883-5057
www.hayner-swanson.com

FIELD BOOK: 1193	DRAWING NAME: 5248-S-FW DET1	5248-FWI	16 OF 27
DRAWING LOCATION: Q:\5248\DWG\5248-FWI		File Number	Sheet

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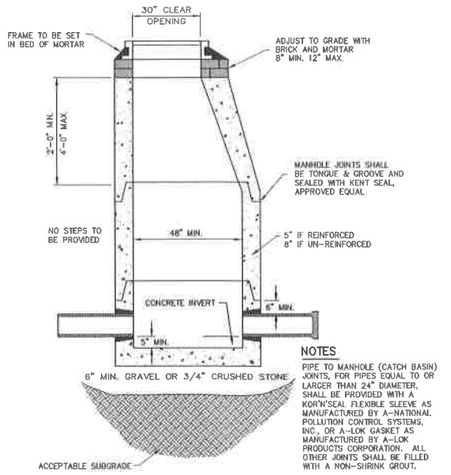
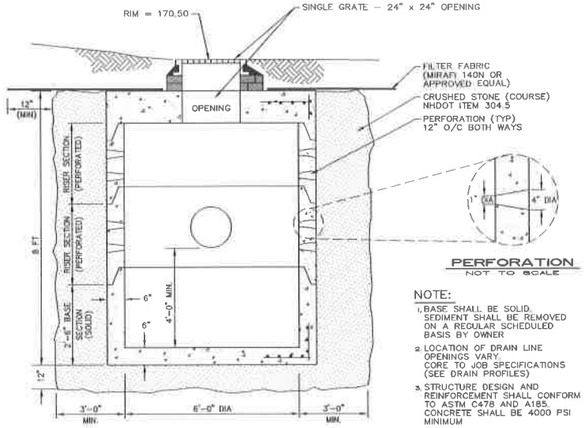


NOTES

PIPE TO MANHOLE (CATCH BASIN) JOINTS, FOR PIPES EQUAL TO OR LARGER THAN 24" DIAMETER, SHALL BE PROVIDED WITH A KORI'N'SEAL FLEXIBLE SLEEVE AS MANUFACTURED BY A-NATIONAL POLLUTION CONTROL SYSTEMS, INC., OR A-LOK GASKET AS MANUFACTURED BY A-LOK PRODUCTS CORPORATION. ALL OTHER JOINTS SHALL BE FILLED WITH A NON-SHRINK GROUT.

DRAIN MANHOLE DETAIL

NOT TO SCALE



PERFORATION

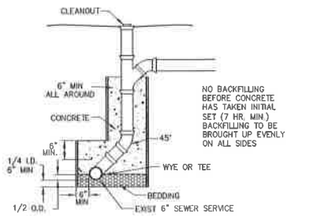
NOT TO SCALE

NOTE:

1. BASE SHALL BE SOLID. SEDIMENT SHALL BE REMOVED ON A REGULAR SCHEDULED BASIS BY OWNER
2. LOCATION OF DRAIN LINE OPENINGS VARY. CORE TO JOB SPECIFICATIONS (SEE DRAIN PROFILES)
3. STRUCTURE DESIGN AND REINFORCEMENT SHALL CONFORM TO ASTM C478 AND A185. CONCRETE SHALL BE 4000 PSI MINIMUM
4. FILTER FABRIC MUST BE PLACED OVER CRUSHED STONE AND OVERLAP EXISTING MATERIAL BY 12" TO PREVENT PAVEMENT BASE COURSE MATERIALS FROM MIGRATING INTO THE CRUSHED STONE.

LEACHING CATCH BASIN 14

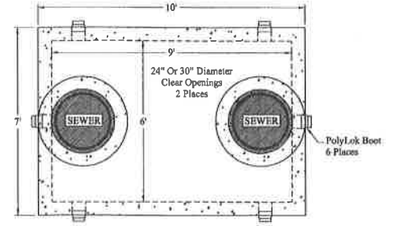
NOT TO SCALE

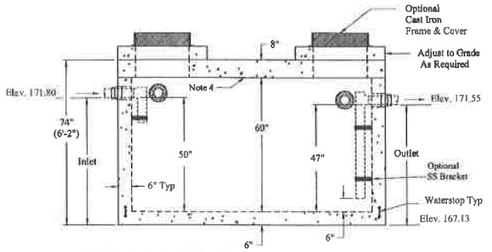


NO BACKFILLING BEFORE CONCRETE HAS TAKEN INITIAL SET (7 HR. MIN.) BACKFILLING TO BE BROUGHT UP EVENLY ON ALL SIDES

CHIMNEY DETAIL

NOT TO SCALE





Liquid Levels: 6' x 9' = 405 Gals/VF
6" PVC = 1,588 Gals Inverts: Inlet-56" Outlet-53"

General Notes:

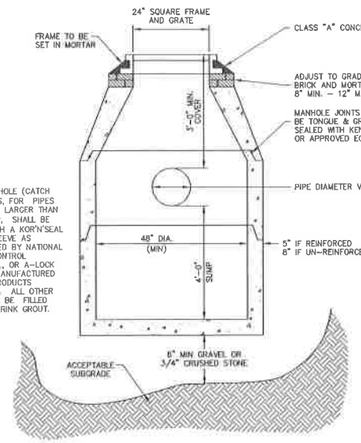
1. Steel Reinforcement Conforms to Latest ASTM Specifications: ASTM-A615 Grade 60 Rebar
2. Concrete: fc = 5,000 psi @ 28 Days Minimum
3. Flexible Sleeves Provided On All Pipe Connections
4. Butyl Rubber Joint Sealant Provided
5. Internal PVC Baffles Available Upon Request
   Inlet: Shall Penetrate at Least 9" Below the Liquid Level, But Not Deeper Than the Outlet Baffle.
   Outlet: Shall Extend Below the Surface of the Liquid to 6" From the Floor. (ENV_WQ 1012.02)
6. Design Loading: AASHTO-HS20-44, ASTM C-890-06
7. Design Specified As: ASTM C-1227-08, ASTM C-913-08
8. Other Inlet/Outlet Pipe Sizes Available

Est Weights:
Top Slab - 6,300 Lbs
Base - 17,000 Lbs
Total: 23,300 Lbs

Phoenix Precast Products
77 Regional Drive
Concord, NH 03301
1-800-639-2199
Fax (603) 224-2927

1500 GALLON H-20 GREASE TRAP DETAIL

NOT TO SCALE

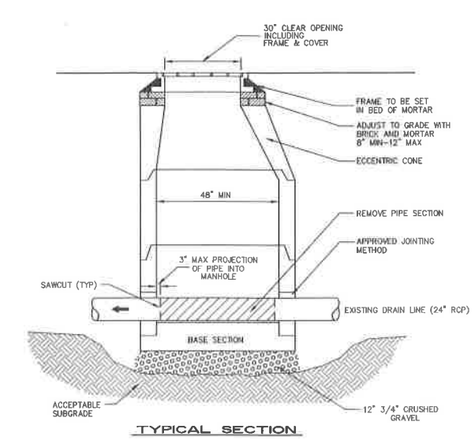


NOTE:

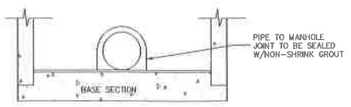
PIPE TO MANHOLE (CATCH BASIN) JOINTS, FOR PIPES EQUAL TO OR LARGER THAN 24" DIAMETER, SHALL BE PROVIDED WITH A KORI'N'SEAL FLEXIBLE SLEEVE AS MANUFACTURED BY NATIONAL POLLUTION CONTROL SYSTEMS, INC., OR A-LOCK GASKET AS MANUFACTURED BY A-LOK PRODUCTS CORPORATION. ALL OTHER JOINTS SHALL BE FILLED WITH NON-SHRINK GROUT.

CATCH BASIN DETAIL

NOT TO SCALE



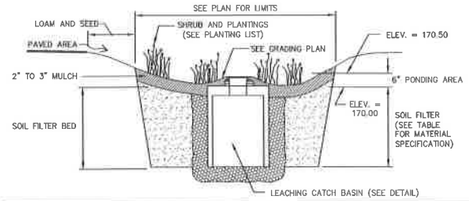
TYPICAL SECTION



CROSS SECTION

DROP-OVER DRAIN MANHOLE

NOT TO SCALE



RAIN GARDEN MATERIAL TABLE FOR BIORETENTION FILTER MEDIA

COMPONENT MATERIAL	PERCENT OF MIXTURE BY VOLUME	GRADATION OF MATERIAL	
		SIEVE No.	PERCENT BY WEIGHT PASSING STANDARD SIEVE
FILTER MEDIA OPTION A			
ASTM C-33 CONCRETE SAND	50 TO 55		
LOAMY SAND TOPSOIL, WITH FINES AS INDICATED	20 TO 30	200	15 to 25
MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH, WITH FINES AS INDICATED	20 TO 30	200	< 5
FILTER MEDIA OPTION B			
MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH, WITH FINES AS INDICATED	20 TO 30	200	< 5
LOAMY COARSE SAND	70 TO 80	10	85 to 100
		20	70 to 100
		60	15 to 40
		200	8 to 15

RAIN GARDEN NOTES

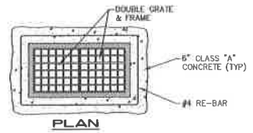
1. DO NOT PLACE THE RAIN GARDENS INTO SERVICE UNTIL THE BMP HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
2. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUNOFF, WATER FROM EXCAVATIONS) TO THE RAIN GARDEN DURING ANY STAGE OF CONSTRUCTION.
3. DO NOT EXPOSE SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION COMPONENTS OF THE SYSTEM.
4. IF FINE MATERIAL THAT WOULD PERCH THE WATER TABLE IS ENCOUNTERED DURING THE CONSTRUCTION OF RAIN GARDEN, THE UNSUITABLE MATERIAL SHALL BE REMOVED AND REPLACED WITH COARSE GRAVEL (NHDOT ITEM No. 304.2).

TYPICAL SECTION-RAIN GARDEN

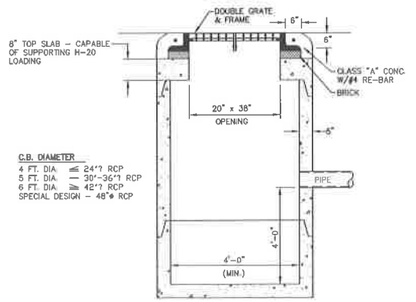
NOT TO SCALE

NOTES:

1. GRATES SHALL BE TYPE "B". FRAMES SHALL HAVE THREE SIDES FLANGED & SECURED TOGETHER BY 6" CLASS A CONCRETE.
2. TOP SLAB, BASE & RISER SECTIONS SHALL BE MANUFACTURED AND INSTALLED FOR H-20 LOADING. CONCRETE SHALL BE CLASS A.



PLAN



C.B. DIAMETER
4 FT. DIA. ≤ 24"ø RCP
5 FT. DIA. = 30"-36"ø RCP
6 FT. DIA. ≥ 42"ø RCP
SPECIAL DESIGN – 48"ø RCP

CROSS SECTION

DOUBLE GRATE CATCH BASIN DETAIL

NOT TO SCALE

NO.	DATE	REVISION	BY
1	04/01/14	ADDRESS STAFF AND PEER REVIEW COMMENTS	JAP

DETAIL SHEET - GENERAL SITE
(MAP 209, LOTS 2 & 3)

PARKING LOT ADDITIONS

55 EXECUTIVE DRIVE & FRIARS DRIVE
HUDSON, NEW HAMPSHIRE

PREPARED FOR:

FARLEY WHITE INTERESTS
155 FEDERAL STREET, SUITE 1800 BOSTON, MA 02110 (617) 654-9400

RECORD OWNER:

PRESSTEK, LLC
10 GLENVILLE STREET, 3RD FLOOR GREENWICH, CT 06831 (603) 402-7502

SCALE AS SHOWN

17 MARCH 2014

HSI Hayner/Swanson, Inc.
Civil Engineers/Land Surveyors
Three Congress Street Nashua, New Hampshire 03062-3301
Tel (603) 883-2057 Fax (603) 883-5057
www.hayner-swanson.com

FIELD BOOK: 1193	DRAWING NAME: 5248-S-FWI DET1	5248-FWI	17 OF 27
DRAWING LOCATION: Q:\5248\DWG\5248-FWI		File Number	Sheet

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

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____

_____ SIGNATURE DATE _____

_____ SIGNATURE DATE _____

SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

STATE OF NEW HAMPSHIRE – JAMES N PETROPULOS No. 10274 – LICENSED PROFESSIONAL ENGINEER

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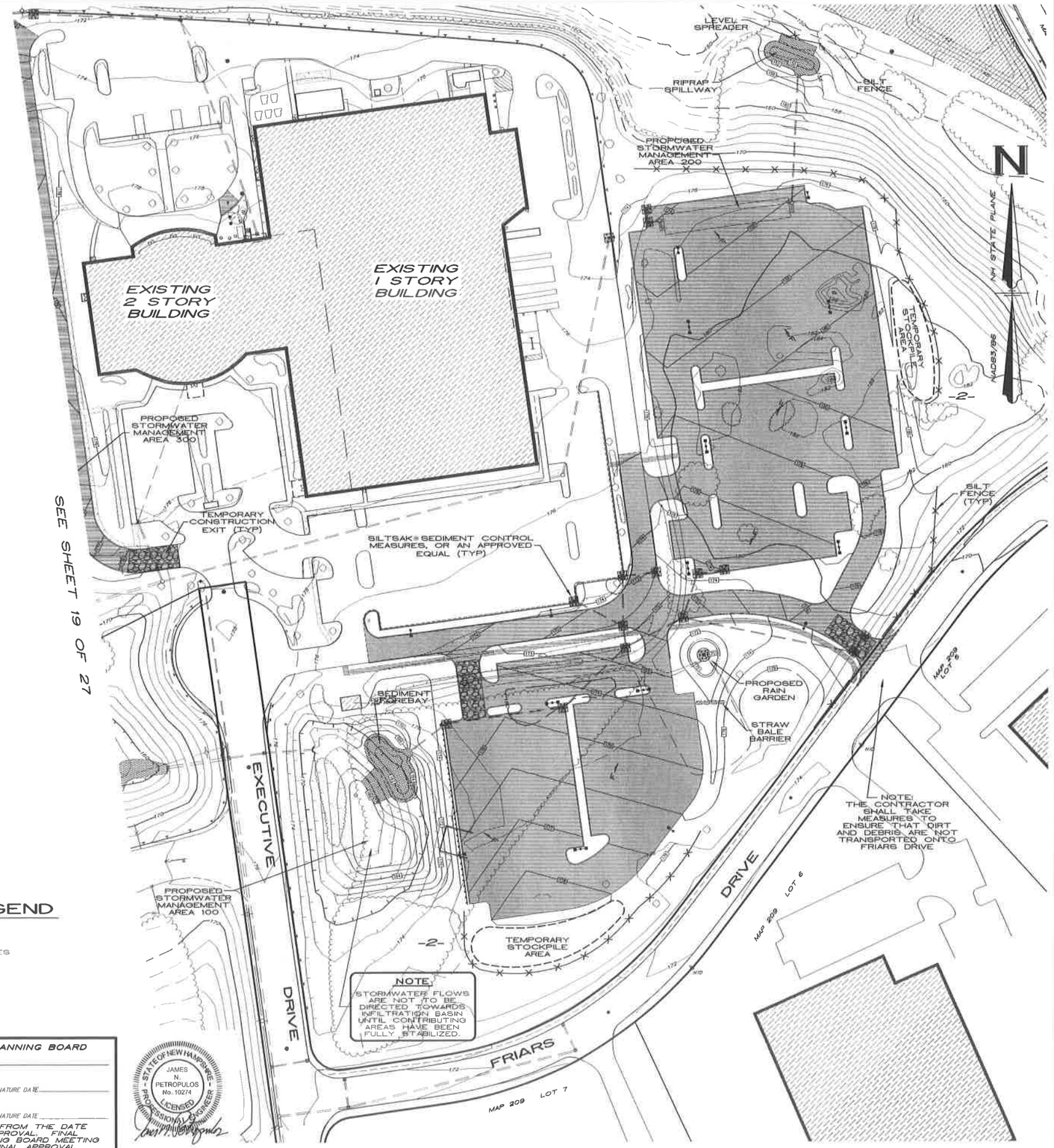

EROSION CONTROL LEGEND

- SILT FENCE
- SILT-SACK INLET PROTECTION DEVICES
- GRAVEL CONSTRUCTION EXIT
- RUNOFF DIRECTION
- STRAW BALE BARRIER

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

APPROVED BY THE HUDSON, NH PLANNING BOARD
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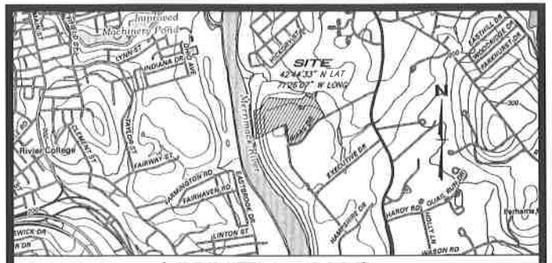
STATE OF NEW HAMPSHIRE — JAMES N. PETROPULOS No. 10274 — LICENSED PROFESSIONAL ENGINEER



VICINITY MAP

GENERAL NOTES:

1. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORMWATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) CONSTRUCTION GENERAL PERMIT (CGP) AND BECOME FAMILIAR WITH THEIR CONTENTS.
2. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY SITE CONDITIONS AT NO ADDITIONAL COST OF OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
3. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
4. STOCKPILE AREAS SHALL BE SURROUNDED BY SILT FENCE AND RE-SEEDED IF THEY ARE LEFT UNTOUCHED FOR MORE THAN TEN (10) DAYS.
5. ALL MEASURES STATED ON THIS EROSION CONTROL PLAN, AND IN THE STORMWATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETE PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT.
6. SILT FENCE SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM SILT FENCES WHEN IT REACHED ONE-QUARTER THE HEIGHT OF THE SILT FENCE.
7. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING OR DETERIORATION.
8. ALL SEEDED AREAS SHALL BE CHECK REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED AND RESEEDED AS NEEDED.
9. THE CONSTRUCTION EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHT-OF WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION EXIT AS CONDITIONS DEMAND.
10. THE TOWN OF HUDSON RESERVES THE RIGHT TO REQUIRE ADDITIONAL EROSION CONTROL MEASURES DURING CONSTRUCTION IF NEEDED.

No.	DATE	REVISION	BY
1	04/01/14	ADDRESS STAFF AND PEER REVIEW COMMENTS	JNP

EROSION CONTROL PLAN
(MAP 209, LOTS 2 & 3)

PARKING LOT ADDITIONS

55 EXECUTIVE DRIVE & FRIARS DRIVE
HUDSON, NEW HAMPSHIRE

PREPARED FOR:

FARLEY WHITE INTERESTS
155 FEDERAL STREET, SUITE 1800 BOSTON, MA 02110 (617) 654-9400

RECORD OWNER:

PRESSTEK, LLC
10 GLENVILLE STREET, 3RD FLOOR GREENWICH, CT 06831 (603) 402-7502

60 0 60 120 180 240 FEET
20 0 20 40 60 METERS
SCALE: 1"=60 Feet
1"=18.288 Meters

17 MARCH 2014

HSI Hayner/Swanson, Inc.
Civil Engineers/Land Surveyors
Three Congress Street Nashua, New Hampshire 03062-3301
Tel (603) 883-2057 Fax (603) 883-5057
www.hayner-swanson.com

FIELD BOOK: 1193	DRAWING NAME: 5248-5-FWI ER01	5248-FWI	18 OF 27
DRAWING LOCATION: Q:\5248\DWG\5248-FWI		File Number	Sheet

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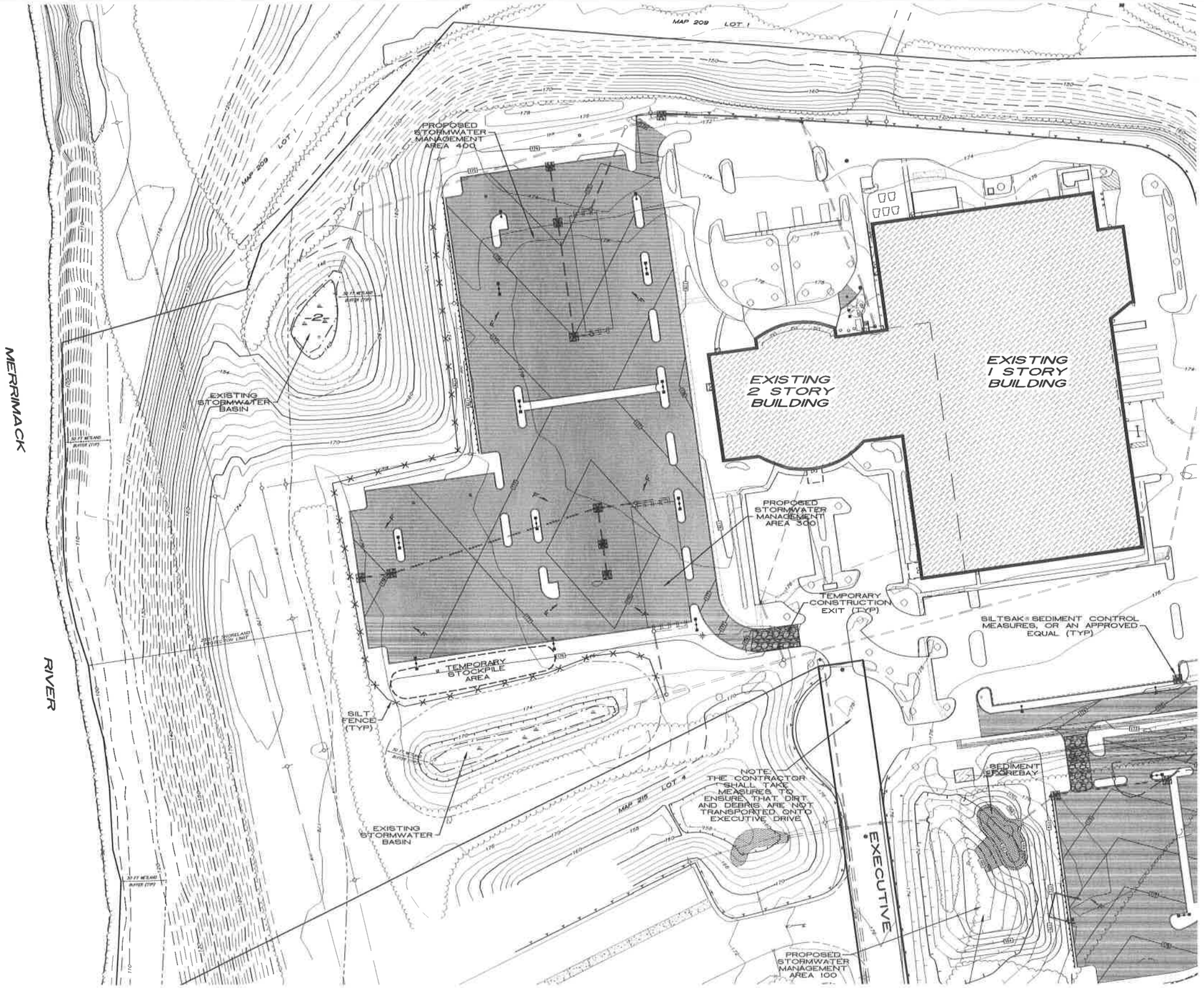

SEE SHEET 18 OF 27

CONSTRUCTION SEQUENCE:

1. INSTALL SILT FENCING AND CONSTRUCT STABILIZED CONSTRUCTION EXITS AS SHOWN ON THE PLAN.
2. CLEAN & GRUB SITE ACCORDING TO PLAN. CUT AND DISPOSE OF ANY DEBRIS PRODUCED DURING THE CLEARING AND GRUBBING ACTIVITY.
3. PERFORM SITE GRADING OF THE PROPOSED PARKING AREAS. ALL SIDE SLOPES SHALL BE LOAMED AND SEEDED AND MULCHED IMMEDIATELY AFTER BEING CONSTRUCTED.
4. BEGIN PARKING LOT ADDITION CONSTRUCTION.
5. INSTALL SITE UTILITIES IN ACCORDANCE WITH THE PLAN.
6. INSTALL INLET PROTECTION AROUND ALL STORM DRAIN STRUCTURES. INSTALLATION OF UNDERGROUND UTILITIES AND CATCH BASINS SHALL BE PROTECTED FROM SEDIMENT IN ACCORDANCE WITH THE 'SILTSACK DETAIL'. THE CONTROL SHALL REMAIN UNTIL THE SITE IS SUFFICIENTLY STABILIZED.
7. PREPARE SITE FOR PAVING
8. AS THE PARKING ADDITIONS ARE COMPLETED, ALL DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED. NO PORTION OF THE PROJECT SHALL BE LEFT DISTURBED AND UNSTABILIZED FOR A PERIOD OF 30 DAYS.
9. LOAM AND SEED ALL REMAINING DISTURBED AREAS. COMPLETED AREAS SHALL BE STABILIZED 72 HOURS AFTER BEING CONSTRUCTED.
10. FINAL PAVING OF PARKING LOT.
11. INSPECTION OF ALL SEDIMENT AND EROSION CONTROL MEASURES.
12. SITE LANDSCAPING ALONG WITH PERMANENT SEEDING OF DISTURBED AREAS.
13. REMOVE ANY TEMPORARY EROSION CONTROL MEASURES NOT NEEDED.

EROSION CONTROL LEGEND

- SILT FENCE
- SILT-SACK INLET PROTECTION DEVICES
- GRAVEL CONSTRUCTION EXIT
- RUNOFF DIRECTION

No.	DATE	REVISION	BY
1	04/01/14	ADDRESS STAFF AND PEER REVIEW COMMENTS	JAP

EROSION CONTROL PLAN
(MAP 209, LOTS 2 & 3)

PARKING LOT ADDITIONS

55 EXECUTIVE DRIVE & FRIARS DRIVE
HUDSON, NEW HAMPSHIRE

PREPARED FOR:

FARLEY WHITE INTERESTS

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17 MARCH 2014

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

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____

_____ SIGNATURE DATE _____

_____ SIGNATURE DATE _____

SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

STATE OF NEW HAMPSHIRE — JAMES N PETROPULOS No. 10274 LICENSED PROFESSIONAL ENGINEER

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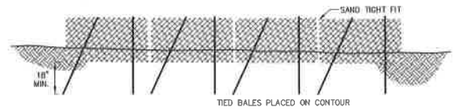
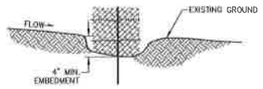


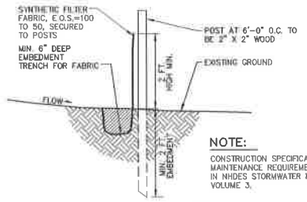
NOTES:

1. 2 STAKES PER BALE TO BE NO. 4 REBAR, STEEL PIPE, OR 2" X 2" WOOD.
2. ANGLE FIRST STAKE TOWARD PREVIOUSLY LAID BALE.
3. CONSTRUCTION SPECIFICATIONS AND MAINTENANCE REQUIREMENTS SHOWN IN NHDES STORMWATER MANUAL VOLUME 3.



STRAW BALE BARRIER DETAIL

NOT TO SCALE

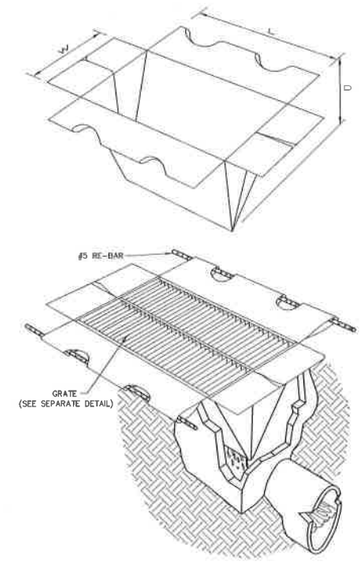


NOTE:

CONSTRUCTION SPECIFICATIONS AND MAINTENANCE REQUIREMENTS SHOWN IN NHDES STORMWATER MANUAL VOLUME 3.

SILT FENCE DETAIL

NOT TO SCALE



SILTSAK® NOTES

1.0 THE SILTSAK® SHALL BE MANUFACTURED FROM WOVEN POLYPROPYLENE AND SEWN BY A DOUBLE NEEDLE MACHINE, USING A HIGH STRENGTH NYLON THREAD.

2.0 THE SILTSAK® SEAMS SHALL HAVE A CERTIFIED AVERAGE WIDE WIDTH STRENGTH PER ASTM D-4884 STANDARDS AS FOLLOWS:

SILTSAK® STYLE	TEST METHOD	TEST METHOD
REGULAR FLOW	ASTM D 4884	165.0 LBS/IN
HI-FLOW	ASTM D-4884	114.6 LBS/IN

3.0 THE SILTSAK® WILL BE MANUFACTURED TO FIT THE OPENING OF THE CATCH BASIN OR DROP INLET. THE SILTSAK® WILL HAVE THE FOLLOWING FEATURES. TWO DUMP STRAPS ATTACHED AT THE BOTTOM TO FACILITATE THE EMPTYING OF THE SILTSAK®. THE SILTSAK® SHALL HAVE LIFTING LOOPS AS AN INTEGRAL PART OF THE SYSTEM TO BE USED TO LIFT THE SILTSAK® FROM THE BASIN; THE SILTSAK® SHALL HAVE A RESTRAINT CORD APPROXIMATELY HALFWAY UP THE SACK TO KEEP THE SIDES AWAY FROM THE CATCH BASIN WALLS, THIS YELLOW CORD IS ALSO A VISIBLE MEANS OF INDICATING WHEN THE SACK SHOULD BE EMPTIED, CLEANED, AND PLACED BACK INTO THE BASIN.

4.0 THE GEOTEXTILE FABRIC SHALL BE WOVEN POLYPROPYLENE FABRIC WITH THE FOLLOWING PROPERTIES:

SILTSAK® REGULAR FLOW

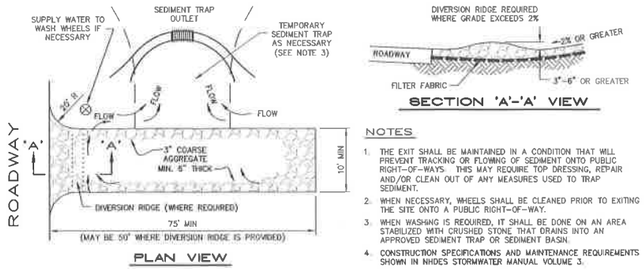
PROPERTY	TEST METHOD	TEST RESULT
GRAB TENSILE	ASTM D-4632	300 LBS
GRAB ELONGATION	ASTM D-4631	20%
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	90%
APPARENT OPENING	ASTM D 4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/FT2
PERMITTIVITY	ASTM D 4491	0.55 SEC

OR SILTSAK® HI-FLOW

PROPERTY	TEST METHOD	TEST RESULT
GRAB TENSILE	ASTM D-4632	265 LBS
GRAB ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90%
APPARENT OPENING	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/FT2
PERMITTIVITY	ASTM D-4491	1.5 SEC

SILTSAK® DETAIL

NOT TO SCALE



PLAN VIEW

SECTION 'A'-'A' VIEW

NOTES

1. THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO EXITING THE SITE ONTO A PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
4. CONSTRUCTION SPECIFICATIONS AND MAINTENANCE REQUIREMENTS SHOWN IN NHDES STORMWATER MANUAL VOLUME 3.

TEMPORARY GRAVEL CONSTRUCTION EXIT

NOT TO SCALE

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

APPROVED BY THE HUDSON, NH PLANNING BOARD

DATE OF MEETING: _____

_____ SIGNATURE DATE _____

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STATE OF NEW HAMPSHIRE — JAMES N. PETROPULOS No. 10274 — LICENSED PROFESSIONAL ENGINEER

EPA

THE CONTRACTOR SHALL FILE THE EPA NOTICE OF INTENT (NOI) FORM AT LEAST 14 DAYS PRIOR TO CONSTRUCTION

GENERAL NOTES

1. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH STANDARDS AND SPECIFICATIONS THEREOF IN NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES STORMWATER MANUALS, VOLUME 1-3, LATEST EDITION.
2. THE WORK AREA SHALL BE GRADED, SHAPED, AND OTHERWISE DRAINED IN SUCH A MANNER AS TO MINIMIZE SOIL EROSION, SILTATION OF DRAINAGE CHANNELS, DAMAGE TO EXISTING VEGETATION, AND DAMAGE TO PROPERTY OUTSIDE THE LIMITS OF THE WORK AREA. SILT FENCES, STRAW BALES AND/OR DETENTION BASINS WILL BE NECESSARY TO ACCOMPLISH THIS END.
3. STRIPPED TOPSOIL SHALL BE STOCKPILED, WITHOUT COMPACTION, AND STABILIZED AGAINST EROSION IN ACCORDANCE WITH "TEMPORARY STABILIZATION OF DISTURBED AREAS", AS OUTLINED IN NOTE No. 4.
4. TEMPORARY STABILIZATION OF DISTURBED AREAS:
   SEED BED PREPARATION: 10-10-10 FERTILIZATION TO BE SPREAD AT THE RATE OF 7 LBS PER 1,000 SF AND AGRICULTURAL LIMESTONE AT A RATE OF 90 LBS PER 1,000 SF AND INCORPORATED INTO THE SOIL. THE SOIL, FERTILIZER AND LIMESTONE SHALL BE TILLED TO PREPARE FOR SEEDING.
   A. SEED MIXTURE: USE ANY OF THE FOLLOWING:

SPECIES	RATE PER 1,000 SF	DEPTH	SEEDING DATES
WINTER RYE	2.5 LBS	1"	08/15 TO 09/15
OATS	2.5 LBS	1"	04/15 TO 10/15
ANNUAL RYE GRASS	1.0 LBS	0.25"	08/15 TO 09/15

   B. MULCHING: MULCH SHOULD BE USED ON HIGHLY ERODABLE AREAS, AND WHERE CONSERVATION OF MOISTURE WILL FACILITATE PLANT ESTABLISHMENT AS FOLLOWS:

TYPE	RATE PER 1,000 SF	USE & COMMENTS
STRAW	70 TO 90 LBS	MAY BE USED WITH PLANTINGS, MUST BE ANCHORED TO BE USED ALONE
WOOD CHIPS OR BARK MULCH	460 TO 920 LBS	USED WITH TREE AND SHRUB PLANTINGS
FIBROUS MATTING	AS RECOMMENDED BY MANUFACTURER	MUST BE BIODEGRADABLE, USE IN SLOPE AREAS AND AREAS DIFFICULT TO VEGETATE.
CRUSHED STONE ¼" TO 1 ½" DIA	SPREAD TO GREATER THAN ¼" THICKNESS	USE IN SPECIFIC AREAS AS SHOWN ON PLAN OR AS NEEDED.

5. PERMANENT STABILIZATION OF DISTURBED AREAS:
   A. ALL ROADWAYS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
   B. ALL CUT AND FILL SLOPES SHALL BE SEEDED/LOAMED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
6. THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, BUT IN NO CASE SHALL EXCEED 5 ACRES AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED.
7. AN AREA SHALL BE CONSIDERED STABILIZED IF ONE OF THE FOLLOWING HAS OCCURRED:
   A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED.
   B. A MINIMUM OF 85% VEGETATIVE GROWTH HAS BEEN ESTABLISHED.
   C. A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED.
   D. OR, EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED
8. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
9. SITE LOCATION:
   42° 44' 33" N LATITUDE, 71° 28' 07" W LONGITUDE (PER GOOGLE EARTH)
10. TOTAL AREA OF DISTURBED SOILS: 494,730 SF
11. REFERENCE IS MADE TO THE LATEST EDITION OF THE FEDERAL REGISTER (63 FR 7857), ENVIRONMENTAL PROTECTION AGENCY NPDES GENERAL PERMITS FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES. FOR ADDITIONAL INFORMATION CONTACT (202) 564-9545 OR www.epa.gov/npdes/stormwater.
12. THE ENTIRE CONTENTS OF THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE RETAINED ON-SITE FOR THE DURATION OF THE CONTRACT AND BE MADE AVAILABLE TO LOCAL, STATE AND FEDERAL CODE ENFORCEMENT PERSONNEL.
13. THIS PROJECT SHALL BE MANAGED TO MEET THE REQUIREMENTS AND INTENT OF RSA 430:53 AND AGR 3800 RELATIVE TO INVASIVE SPECIES; AND FUGITIVE DUST IS CONTROLLED IN ACCORDANCE WITH ENV-A 1000.

WINTER CONDITION NOTES

1. 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 INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE PLACEMENT OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOR OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
2. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
3. AFTER NOVEMBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES SHALL BE PROTECTED WITH A MINIMUM OF 3-INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3.

NOTE

AS THIS PROJECT WILL BE DISTURBING MORE THAN 5 ACRES AT ANY ONE TIME THE PERMIT FOR THIS PROJECT WILL INCLUDE THE FOLLOWING REQUIREMENTS:

1. A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL OR A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE ("MONITOR") SHALL BE EMPLOYED TO INSPECT THE SITE FROM THE START OF ALTERATION OF TERRAIN ACTIVITIES UNTIL THE SITE IS IN FULL COMPLIANCE WITH THE ALTERATION OF TERRAIN PERMIT ("PERMIT").
2. DURING THIS PERIOD, THE MONITOR SHALL INSPECT THE SUBJECT SITE AT LEAST ONCE A WEEK, AND IF POSSIBLE, DURING ANY ½ INCH OR GREATER RAIN EVENT (i.e. ½ INCH OF PRECIPITATION OR MORE WITHIN A 2 HOUR PERIOD). IF UNABLE TO BE PRESENT DURING SUCH A STORM, THE MONITOR SHALL INSPECT THE SITE WITHIN 24 HOURS OF THIS EVENT.
3. THE MONITOR SHALL PROVIDE TECHNICAL ASSISTANCE AND RECOMMENDATIONS TO THE CONTRACTOR ON THE APPROPRIATE BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL REQUIRED TO MEET THE REQUIREMENTS OF RAS 485-1:17 AND ALL APPLICABLE DES PERMIT CONDITIONS.
4. WITHIN 24 HOURS OF EACH INSPECTION, THE MONITOR SHALL SUBMIT A REPORT TO DES VIA EMAIL (TO EMILY LUCAS AT: emily.lucas@des.state.nh.gov).
5. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR'S NAME, ADDRESS, AND PHONE NUMBER SHALL BE SUBMITTED TO DES VIA EMAIL (SEE ABOVE).

INSPECTION & MAINTENANCE NOTES FOR STORMTECH CHAMBERS

STEP 1 INSPECT ISOLATOR ROW FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2 CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3 REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4 INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

SITE MAINTENANCE/INSPECTION PROGRAM

THE FOLLOWING PROVIDES AN ITEMIZATION OF SPECIFIC SITE MAINTENANCE PRACTICES THAT WILL BE EMPLOYED ON THE SITE TO MINIMIZE POLLUTANT GENERATION AND TRANSPORT FROM THE SITE. THE SITE MAINTENANCE PROGRAM INCLUDES ROUTINE INSPECTIONS, PREVENTATIVE MAINTENANCE AND "GOOD HOUSEKEEPING" PRACTICES.

ROUTINE INSPECTIONS

1. THE CONTRACTOR SHALL INSPECT ALL CONTROL MEASURES AT LEAST ONCE A WEEK AND WITHIN TWELVE (12) HOURS OF THE END OF A STORM WITH RAINFALL AMOUNT GREATER THAN 0.6 INCHES. THE INSPECTIONS WILL VERIFY THAT THE STRUCTURAL BMPs DESCRIBED IN THE PLANS ARE IN GOOD CONDITION AND ARE MINIMIZING EROSION. A MAINTENANCE INSPECTION REPORT WILL BE MADE WITH EACH INSPECTION. COMPLETED INSPECTION FORMS SHALL BE KEPT ON-SITE FOR THE DURATION OF THE PROJECT. FOLLOWING CONSTRUCTION, THE COMPLETED FORMS SHALL BE RETAINED AT THE CONTRACTOR'S OFFICE FOR A MINIMUM OF ONE YEAR.

PREVENTATIVE MAINTENANCE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL TEMPORARY AND PERMANENT CONTROLS THROUGHOUT THE DURATION OF THIS CONTRACT. MAINTENANCE PRACTICES SHALL INCLUDE, BUT ARE NOT LIMITED TO:

1. CLEANING OF CATCH BASINS TWICE PER YEAR OR MORE FREQUENTLY AS DICTATED BY QUARTERLY INSPECTIONS.
2. CLEANING OF SEDIMENT AND DEBRIS FROM STORMWATER MANAGEMENT AREA FOREBAY TWICE PER YEAR OR MORE FREQUENTLY AS DICTATED BY MONTHLY INSPECTIONS.
3. IMPLEMENTATION OF OTHER MAINTENANCE OR REPAIR ACTIVITIES AS DEEMED NECESSARY BASED UPON WEEKLY INSPECTIONS.
4. REMOVAL OF BUILT UP SEDIMENT ALONG SILT FENCES AND/OR HAY BALE BARRIERS.
5. REMOVAL OF BUILT UP SEDIMENT IN BOTH TEMPORARY AND PERMANENT CONTROLS SUCH AS GRASS SWALES, SEDIMENT FOREBAYS AND RECHARGE/DETENTION BASINS.
6. RECONSTRUCTING THE TEMPORARY GRAVEL CONSTRUCTION EXIT IF NOT WORKING PROPERLY.
7. TREATMENT OF NON-STORM WATER DISCHARGES SUCH AS WATER FROM WATER LINE FLUSHINGS OR GROUNDWATER FROM DEWATERING EXCAVATIONS. SUCH FLOWS SHOULD BE DIRECTED TO A TEMPORARY SEDIMENTATION BASIN OR STORMWATER MANAGEMENT AREA.
8. SWEEP PARKING LOTS AND DRIVES REGULARLY TO MINIMIZE SEDIMENT ACCUMULATION. FREQUENCY WILL VARY SEASONALLY ACCORDING TO SEDIMENT ACCUMULATION ON PAVE SURFACES (E.G., MORE FREQUENT SWEEPING DURING THE WINTER AND SPRING).

GOOD HOUSEKEEPING PRACTICES

1. THE CONTRACTOR SHALL EMPLOY MEASURES AND PRACTICES TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS TO STORM AND WATER RUNOFF. THE CONTRACTOR SHALL PAY SPECIAL ATTENTION TO THE HANDLING, USE AND DISPOSAL OF MATERIALS SUCH AS PETROLEUM PRODUCTS, FERTILIZERS AND PAINTS TO ENSURE THAT THE RISK ASSOCIATED WITH THE USE OF THESE PRODUCTS IS MINIMIZED. THE FOLLOWING "GOOD HOUSEKEEPING" PRACTICES SHALL BE FOLLOWED DURING CONSTRUCTION OF THE PROJECT:
   - A. AN EFFORT SHALL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB.
   - B. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE.
   - C. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THEIR MANUFACTURERS' LABELS.
   - D. WHENEVER POSSIBLE, ALL OF A PRODUCT SHALL BE USED BEFORE DISPOSING OF THE CONTAINER.
   - E. MANUFACTURERS' RECOMMENDATIONS FOR PROPER USE AND DISPOSAL SHALL BE FOLLOWED.
   - F. THE CONTRACTOR SHALL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS.

SPILL PREVENTION AND CLEANUP PRACTICES

A. MANUFACTURERS' RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.

B. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ON-SITE. EQUIPMENT AND MATERIAL WILL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.

C. ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.

D. THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.

E. SPILLS OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE.

F. THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM RECCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED.

NO.	DATE	REVISION	BY
1	04/01/14	ADDRESS STAFF AND PEER REVIEW COMMENTS	JNP

DETAIL SHEET - EROSION CONTROL
(MAP 209, LOTS 2 & 3)

PARKING LOT ADDITIONS

55 EXECUTIVE DRIVE & FRIARS DRIVE
HUDSON, NEW HAMPSHIRE

PREPARED FOR:

FARLEY WHITE INTERESTS
155 FEDERAL STREET, SUITE 1800 BOSTON, MA 02110 (617) 654-9400

RECORD OWNER:

PRESSTEK, LLC
10 GLENVILLE STREET, 3RD FLOOR GREENWICH, CT 06831 (603) 402-7502

SCALE AS SHOWN

17 MARCH 2014

HSI Hayner/Swanson, Inc.
Civil Engineers/Land Surveyors
Three Congress Street Nashua, New Hampshire 03062-3301
Tel (603) 883-2057 Fax (603) 883-5057
www.hayner-swanson.com

FIELD BOOK: 1193	DRAWING NAME: 5248-S-FWI DET1	5248-FWI	20 OF 27
DRAWING LOCATION: Q:\5248\DWG\5248-FWI		File Number	Sheet

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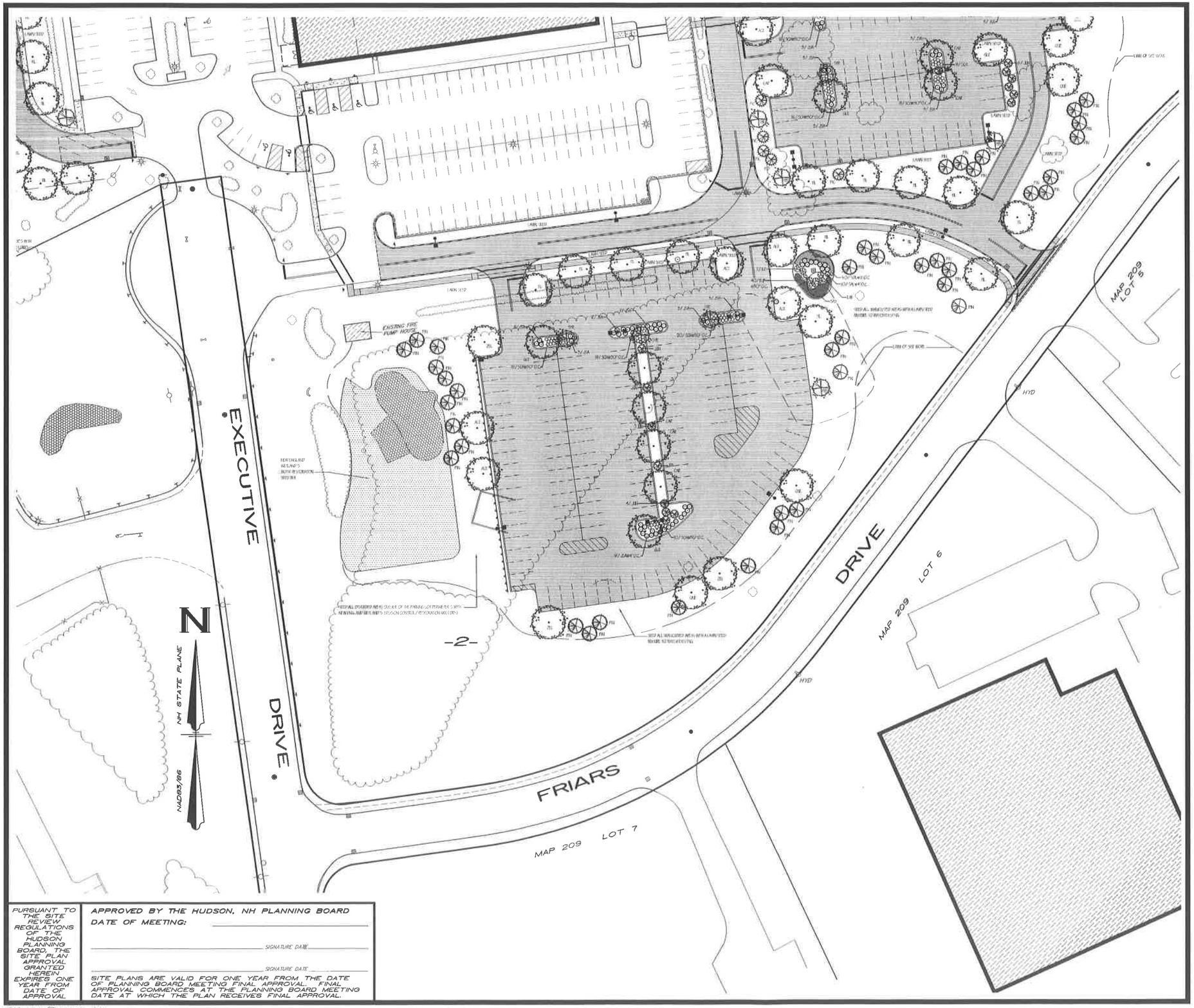

PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL

APPROVED BY THE HUDSON, NH PLANNING BOARD

DATE OF MEETING: _____

_____ SIGNATURE DATE _____

_____ SIGNATURE DATE _____

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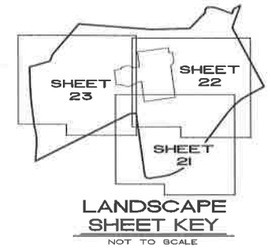
NOTES:

1. TREES:
   REQUIRED (WHICH EVER IS GREATER):
   1 TREE/1,600 SF PAVED AREA x 330,000 SF = 207 TREES
   1 TREE/5 PARKING SPACES x 714 SPACES = 143 TREES
   PROVIDED: = 231 TREES

2. SHRUBS:
   REQUIRED (WHICH EVER IS GREATER):
   1 SHRUB/200 SF PAVED AREA x 330,000 SF = 1,850 SHRUBS
   1.6 SHRUB/PARKING SPACES x 714 SPACES = 1,142 SHRUBS
   PROVIDED: = 736 SHRUBS

   * A WAIVER HAS BEEN REQUESTED TO THE HUDSON PLANNING BOARD FOR THIS ITEM



LANDSCAPE SHEET KEY
NOT TO SCALE

No.	DATE	REVISION	BY
1	01/01/14	ADDRESS STAFF AND PEER REVIEW COMMENTS	JNP

LANDSCAPE PLAN
(MAP 209, LOTS 2 & 3)

PARKING LOT ADDITIONS

55 EXECUTIVE DRIVE & FRIARS DRIVE
HUDSON, NEW HAMPSHIRE

PREPARED FOR:

FARLEY WHITE INTERESTS

155 FEDERAL STREET, SUITE 1800 BOSTON, MA 02110 (617) 654-9400

RECORD OWNER:

PRESSTEK, LLC

10 GLENVILLE STREET, 3RD FLOOR GREENWICH, CT 06831 (603) 402-7502

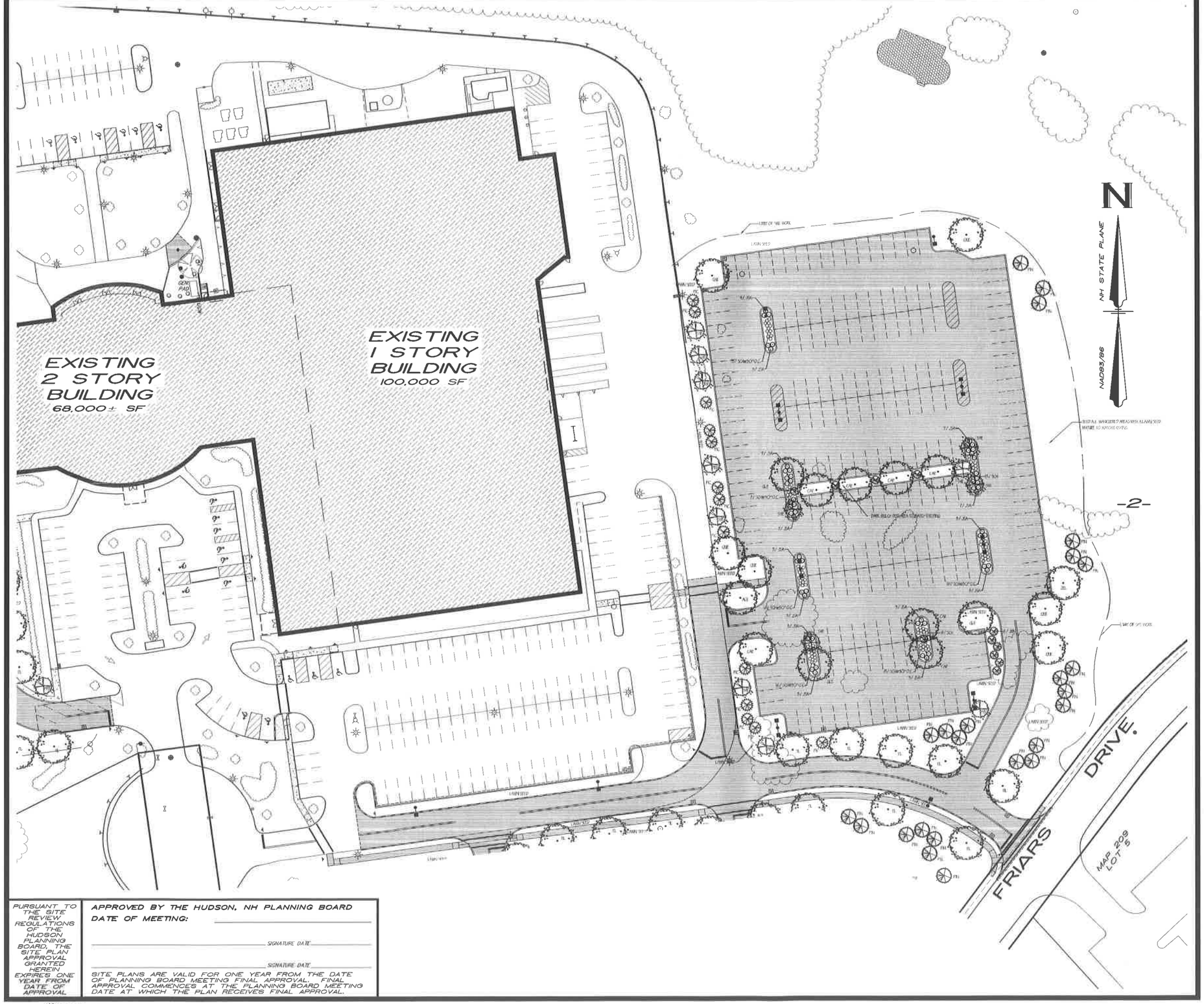
40 0 40 80 120 160 FEET
20 0 20 40 METERS
SCALE: 1"=40 Feet
1"=12.192 Meters

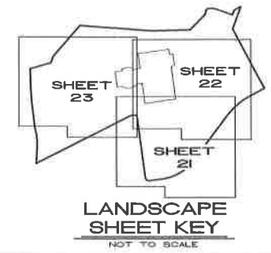
17 MARCH 2014

PREPARED BY :

BLACKWATER DESIGN
PHONE (603) 648 - 6500 FAX (603) 648 - 6506
Land Planning - Landscape Architecture
85 Frost Lane - Webster, NH 03303

FIELD BOOK: 1193	DRAWING NAME: 5248-S-FWI LS41	5248-FWI	21 OF 27
DRAWING LOCATION: Q:\5248\DWG\5248-FWI		File Number	Sheet





LANDSCAPE
SHEET KEY
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(MAP 209, LOTS 2 & 3)

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DRAWING LOCATION: Q:\5248\DWG\5248-FWI		File Number	Sheet

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N

NH STATE PLANE

NAD83/96

MERRIMACK

MAP 209 LOT 1

RIVER

MAP 215 LOT 4

EXISTING
2 STORY
BUILDING
68,000± SF

SEE ALL DISTURBED AREAS OUTSIDE OF THE PARKING LOT PERIMETER WITH NEW ENGLAND WETLAND'S (REVEGETATION/SEED/RESTORATION MIX) (TYP)

POLE BASE

SHEET 23 | SHEET 22 | SHEET 21

LANDSCAPE
SHEET KEY
NOT TO SCALE

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(MAP 209, LOTS 2 & 3)

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General Specifications

1. The contractor shall at his expense furnish all the materials, supplies, machinery, equipment, tool, superintendent, labor, insurance, & other accessories and services necessary to complete the said project within the unit costs stated within the bid price.

2. The work to be done under this contract is as shown and described on the drawings. Each bidder shall make a careful examination of the plans and specifications (the plan shall dictate quantities) and acquaint himself with all conditions before making his proposal. He will be held responsible for errors in his proposal resulting from his failure to make such an examination. All bidders shall visit the site and inform themselves of all conditions.

3. The bids shall be based on materials and equipment complying with the drawings and the specifications. The contractor shall be responsible under this contract price, for furnishing and installing materials confirming to the bid items. Under no circumstances may a species `hybrid' be substituted or size changed without written consent of the landscape architect.

4. The contractor shall be responsible for the protection of such existing utilities as water mains, sewer systems, gas mains, electrical conduits, telephone lines and any other utilities and if any damage or destruction may occur to these utilities, he shall be responsible for their repair and/or replacement at his expense.

5. The contractor shall make payment for all damages to buildings, structures, trees, shrubs and/or any other property outside the construction area or located within those limits but not designated for removal or reconstructed providing such damage shall result from accident caused by negligence for which the contractor shall be legally liable.

6. If additional labor and/or materials is requested or required, the contractor shall submit a price to the owner. If the owner approves the price he shall prepare a change order for approval and signature. The contractor shall not proceed without a written authorization from the owner for the additional work. If the contractor proceeds with the additional work without this authorization he shall forfeit any claim for additional compensation.

7. The landscape architect shall reserve the right to inspect the project work at any time deemed necessary to insure that the specifications and plans and any other contract documents are being followed.

8. The L.A. shall have the right to reject any plant on-site based upon condition, size, or incorrect species or hybrid. LA must be contacted prior to install, to inspect materials delivered to the site, and to insure that soil amendments, bark mulch, roof ballust, etc. are to the written specifications.

9. All seeded areas shall receive a minimum 6" topsoil blanket (by site contractor) w/site preparation, raking and general clean up prior to application. Operations shall include a preemergence type herbicide,12 -25 -12 granular fertilizer @ 10 lbs./1000 sf., and pelletized limestone @ 25 lbs. /1000 s/f power raked into the top 2" of soil prior to hydro-seeding. Ratios & application rates may change based upon the required soil analysis.

10. Contractor is responsible for establishing a thick, weed free lawn. Seed shall be spread @ 4lbs./1000. Lawn germination shall be 95% free of noxious weeds for acceptance. Define differences in seed mixes (if applicable) with irrigation flagging until 2nd mowing. Site review by LA is required.

11. Review of the installed irrigation system by the designer is required prior to release of final payment.

12. Hydroseeding operations shall be a one part process with a paper fiber mulch; a tackifier shall be applied on all slopes greater than 3:1, Excelsor Drainage mat shall be applied to all 2:1 slopes and drainage swales per plan.

13. Contractor shall maintain, from acceptance date, the lawn areas through the first mowing. Contractor is not responsible for the first mowing.

14. All plant materials shall be installed in accordance with A.L.C.C. specifications and per plan details. Per details deciduous trees (excluding crabapples and/or smaller profile specimens); shall be guyed in a tripod fashion using plastic cinch ties & 2" x 2" x 8' hardwood stakes; trees and shrubs shall have appropriate soil mixtures, fertilizer and soil retention granules.

15. If the soil conditions are extremely sandy, all trees shall have a 6" layer of compacted topsoil (verify with Landscape Architect) placed in the base of the plant pit as a moisture retention layer. The plant pit sidewalls shall be over excavated by an additional 12" beyond the normal outside radius of the hole. A topsoil planting mixture shall be used to backfill as per spec # 22.

16. Landscape architect shall have the right to reject and have ground removed any plant material not of proper size or of weak quality, ie. thin, no lower branching, etc. Contractor must submit shipping lists (billing invoices) for verification, prior to installation.

17. All plant material shall be guaranteed for a period of one (1) year from date of installation. Any material which dies or does not show a healthy appearance within this time shall be replaced at the contractors expense; with same warranty requirements as the original. Warranty does not cover loss due mechanical damage, ie. snow storage. Contractor should protect susceptable species from insect infestation. Use a liquid systemic application on birch, etc.

18. Plant beds and saucers vary in dia. (refer to dwg). Trees and shrubs shall receive a 4" covering of pine/hemlock bark mulch; saucer diameters per drawing & details. Deciduous trees shall have a 6' dia. saucer (typ.), evergreen trees shall have a saucer 2' min. beyond it's outter branches. All edges shall have a 'V' groove.

20. All B&B material which are encased in wire baskets shall have the wires cut loose and the top third removed prior to backfill operation.

21. If road base is encountered in any plant bed areas, ie. parking islands, it shall be removed and suitable amended soil installed per drawings and specifications.

22. Soil planting mixture shall be a 6%-10% organic topsoil, amended with 10% wood ash, 10% manure, & 30% peatmoss(or incorporate ALL-GRO or a similar dehydrated compost material. If planting in sand, gravel or other well drained soils, a 50% peatmoss to excavated soil. Other soil amendments shall include; Agriform tablets, Hydro-Gel or equal, and Roots growth enhancer to all trees and shrubs listed, per manufacturers specifications. All plant material pits will receive a min. 20% in volume mix of All-Gro soil amendment. Submittal required. 'Roots' STEP 1 can be substituted for the individual supplements. Install per manufacturer's specs.

23 . Landscape contractor shall not be responsible for topsoil spreading but shall coordinate with the site contractor adherence to the mound grades, plant bed soil depths and soil type per dwgs & spec. Landscape contractor shall power rake-out for seed.

24. Landscape contractor shall provide a soil analysis of the topsoil planting mixture. Analysis to show soil classification (min. sandy loam) and nutrients.

25. Contractor shall protect all B&B materials left above grade prior to installation from drying out. All plants shall be stored, covered in mulch, and irrigated until planted. Any plant left on the ground and whose outter ball surface drys out, shall be rejected by the landscape architect. Plants stored in shade and off pavement.

26. Plan dictates, contractor shall alert Landscape Architect if any descrepencies exist between the plan, the material list, and as-built site conditions.

27 . Installer shall notify landscape architect prior to planting, to review plant locations and bedline configurations. If contractor installs without the placement approval of the L.A., said architect shall have the right to relocate any installed plants at the contractor's expense.

28. Installer shall notify landscape architect prior to plant installation to review all materials. Any plants of poor condition, improper size, or species will be rejected.

29. Upon one year review, contractor shall remove all guys & stakes and/or straighten any trees that have shifted. Any weak or bare spots in lawn shall be reseeded.

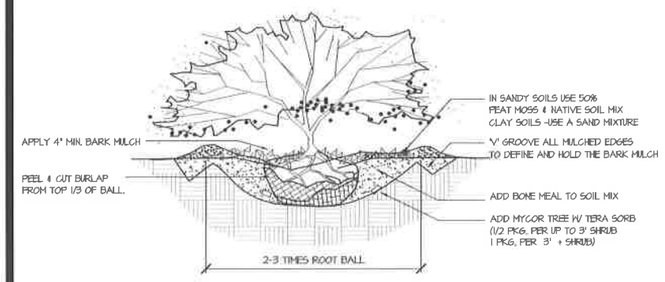
31. All bedlines shall have a deep 'V' groove to define lawn to mulch edge. No "Beehive" mounding of mulch is allowed, also keep mulch away from base of perennials.

32. Do not plant materials too close to the edge of bedlines. Refer to drawings for center of plant to bedline. At a minimum no outter branching of a shrub or perennial shall be closer than two feet from the bedlines. If the as-built does not comply contractor shall adjust the plant location or bedline at his expense.

33. Seed mixes include: Match existing site's lawn seed mixture or Blue Seal 11-A. Detention basin use N.E. Wetland's erosion control/restoration mix for moist sites; all remaining areas (non-manicured) use N.E. Wetland's erosion control/restoration mix for dry sites.

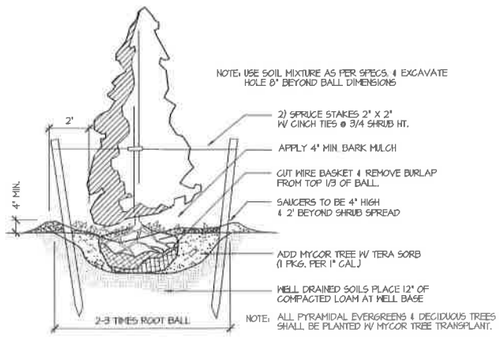
34. Any items not completed to the specifications will be required at contractors expense prior to final approvals. Contractor is to bid the work according to the specifications and not to what they may do under their standard practices. Special attention will be payed to soils, amendments, guy stakes, bedline & saucer configurations, seed mixtures, etc.

35. Any questions concerning this drawing shall be directed to Joseph Hochrein c/o Blackwater Design, 85 Frost Lane, Webster, NH 03303, 603-648-6500.



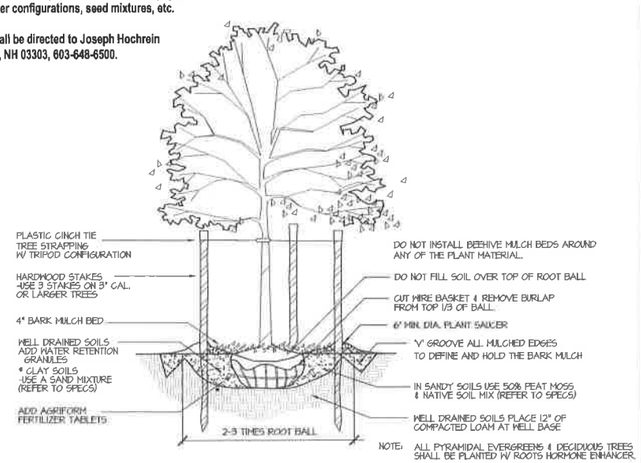
B&B SHRUB PLANTING

NOT TO SCALE



PYRAMIDAL EVERGREEN TREE PLANTING

NOT TO SCALE



TREE PLANTING 2" + CAL.

NOT TO SCALE

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MATERIAL LIST

ACE	ACER RUBRUM (RED SUNSET RED MAPLE)	16/ 2.5'-3" CAL.
CAR	CARPINUS BETULUS (EUROPEAN HORNBEAM)	16/ 2.5"-3"CAL.
EUP	EUPATORIUM (GATEWAY JOE PYE WEED)	40/ #1GAL.
ILF	ILEX VERTICILLATA (COMMON WINTERBERRY)	7/ #3GAL.
ILM	ILEX VERTICILLATA (SOUTHERN GENTLEMAN WINTERBERRY)	1/ #7GAL.
JSA	JUNIPERUS SABINA (BROADMOOR JUNIPER)	238/ #5GAL.
JUN	JUNIPERUS CHINENSIS (ROBUSTA GREEN JUNIPER)	24/ 6'-7'B&B
PIC	PICEA GLAUCA (WHITE SPRUCE)	28/ 7'-8'B&B
PIN	PINUS STROBUS (WHITE PINE)	66/ 7'-8'B&B
PRU	PRUNUS SARGENTII (PINK FLAIR SARGENT CHERRY)	7/ 2.5"-3"CAL.
GLE	GLEDITSIA T.I. (SHADEMASTER HONEYLOCUST)	16/ 2.5"-3"CAL.
QUE	QUERCUS PALUSTRIS (PIN OAK)	16/ 2.5"-3"CAL.
SAL	SALIX PURPUREA NANA (DWARF BLUE ARTIC WILLOW)	10/ #3GAL.
SAS	SASSAFRAS ALBIDUM (COMMON SASSAFRAS)	1/ 2"-2.5"CAL.
SCH	SCHIZACHYRIUM SCOPARIUM (PRAIRIE BLUES BLUESTEM)	392/ #1GAL.
SOL	SOLIDAGO RUGOSA (FIREWORKS GOLDENROD)	50/ #1GAL.
SYR	SYRINGA RETICULATA (JAPANESE LILAC TREE)	23/ 3 "-3.5"CAL.
TIL	TILIA CORDATA (LITTLELEAF LINDEN)	23/ 2.5"-3"CAL.
ZEL	ZELKOVA SERRATA (GREEN VASE ZELKOVA)	5/ 3"-3.5"CAL.

SEED MIXTURES:

GENERAL LAWN SEED TO MATCH EXISTING SITE CONDITIONS	PER PLAN
NEW ENGLAND WETLANDS'S EROSION CONTROL RESTORATION MIX (DRY SITES)	PER PLAN
NEW ENGLAND WETLAND'S EROSION CONTROL RESTORATION MIX (MOIST SITES)	PER PLAN
4" SETTLED DEPTH OF BARK MULCH TO MATCH SITE CONDITIONS	PER PLAN

TOTAL NUMBER OF TREES: 231
TOTAL NUMBER OF SHRUBS: 738

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DETAIL SHEET - LANDSCAPE
(MAP 209, LOTS 2 & 3)

PARKING LOT ADDITIONS

55 EXECUTIVE DRIVE & FRIARS DRIVE
HUDSON, NEW HAMPSHIRE

PREPARED FOR:

FARLEY WHITE INTERESTS

155 FEDERAL STREET, SUITE 1800 BOSTON, MA 02110 (617) 654-9400

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Statistics							
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min	Avg/Max
East Parking & Drive	+	2.2 fc	6.4 fc	0.4 fc	16.0:1	5.5:1	0.3:1
South Parking & Drive	+	2.4 fc	6.1 fc	0.4 fc	15.3:1	6.0:1	0.4:1
West Parking	+	2.1 fc	6.5 fc	0.4 fc	16.3:1	5.3:1	0.3:1

Luminaire Schedule										
Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	S1	10	Lithonia Lighting	CSX2 LED 4 30B700/40K SR3 MVOLT RTS 25 5-9B DM19 FBC DHW	Single Head LED Full Cut Off luminaire with 25 ft. Round Tapered Steel Pole	LED	1	CSX2_LED_4_30B 700_40K_SR3_MV OLT.ies	22339.73	0.9	292
	S2	19	Lithonia Lighting	2/ CSX2 LED 4 30B700/40K SR3 MVOLT RTS 25 5-9B DM28 FBC DHW	Twin Head LED Full Cut Off luminaire with 25 ft. Round Tapered Steel Pole	LED	1	CSX2_LED_4_30B 700_40K_SR3_MV OLT.ies	22339.73	0.9	584

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SITE LIGHTING SHEET KEY

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PHOTOMETRIC SITE LIGHTING PLAN
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GATE CITY ELECTRIC

NASHUA, NH 603-886-0200

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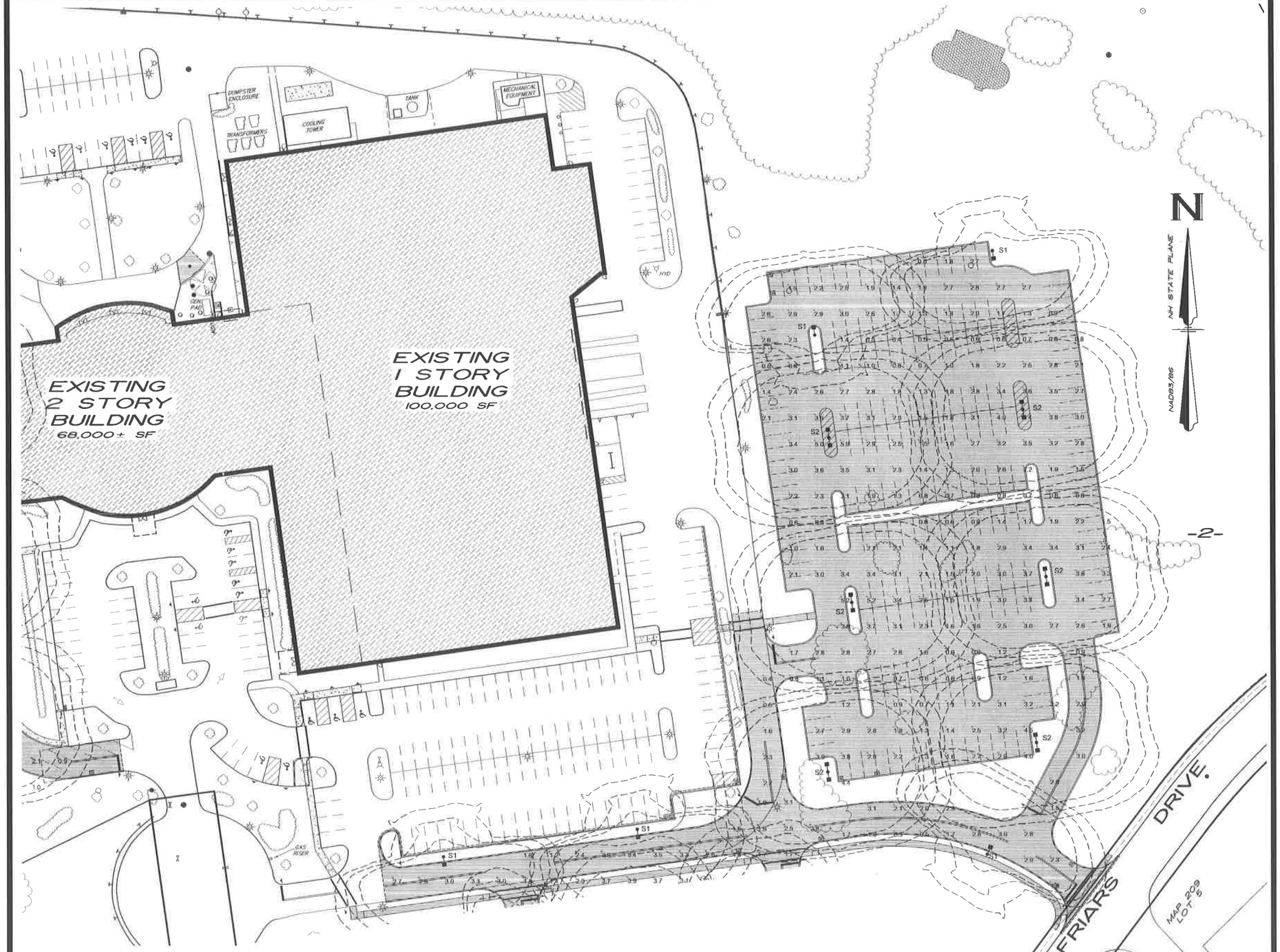

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SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

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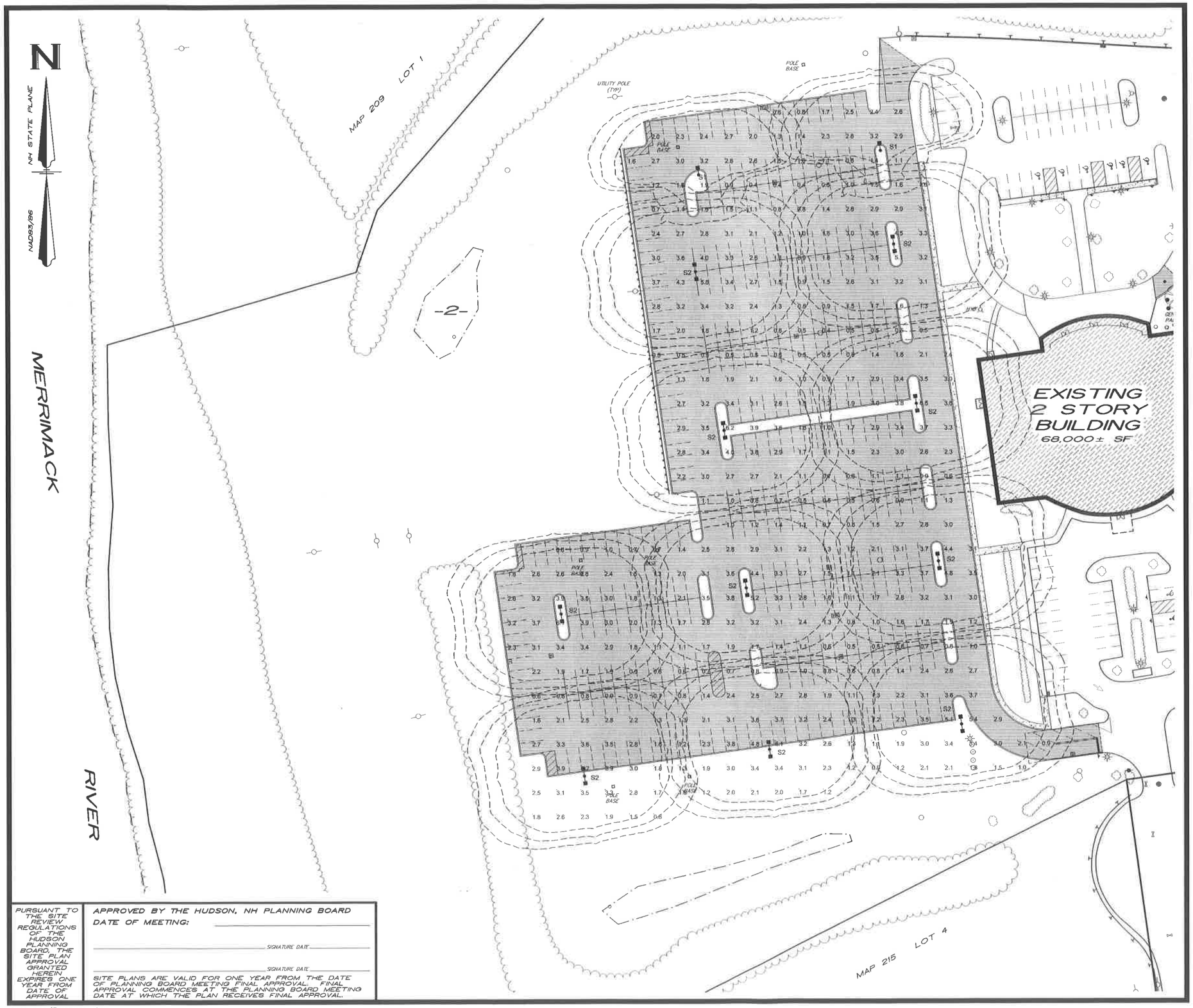

PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL

APPROVED BY THE HUDSON, NH PLANNING BOARD

DATE OF MEETING: _____

_____ SIGNATURE DATE _____

_____ SIGNATURE DATE _____

SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

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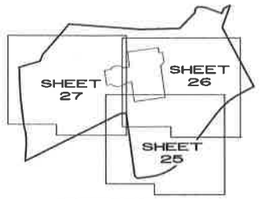


SITE LIGHTING SHEET KEY

NOT TO SCALE

No.	DATE	REVISION	BY
1	04/01/14	ADDRESS STAFF AND PEER REVIEW COMMENTS	JNP

PHOTOMETRIC SITE LIGHTING PLAN
(MAP 209, LOTS 2 & 3)

PARKING LOT ADDITIONS

55 EXECUTIVE DRIVE & FRIARS DRIVE

HUDSON, NEW HAMPSHIRE

PREPARED FOR:

FARLEY WHITE INTERESTS

155 FEDERAL STREET, SUITE 1800 BOSTON, MA 02110 (617) 654-9400

RECORD OWNER:

PRESSTEK, LLC

10 GLENVILLE STREET, 3RD FLOOR GREENWICH, CT 06831 (603) 402-7502

40 0 40 80 120 160 FEET

20 0 20 40 METERS

SCALE: 1"=40 Feet
1"=12.192 Meters

17 MARCH 2014

GATE CITY ELECTRIC

NASHUA, NH 603-886-0200

FIELD BOOK: 1193	DRAWING NAME: 5248-S-FWI SL41	5248-FWI	27 OF 27
DRAWING LOCATION: Q:\5248\DWG\5248-FWI		File Number	Sheet

Packet: 04/09/14

SNHMC Site Plan
STAFF REPORT
April 9, 2014

SITE: 300 Derry Road -- Map 109/Lot 10 -- SP# 04-14

ZONING: G-1

PURPOSE OF PLAN: To show proposed 1-story, 3,663 sq. ft. medical office building addition with accompanying parking and site improvements. Application Acceptance & Hearing.

PLAN UNDER REVIEW ENTITLED: Medical Office Building Addition, 300 Derry Road, Hudson, NH, Map 109/Lot 10, prepared by Hayner/Swanson, Inc., dated: 20 Feb. 2014 and revised thru 31 March 2014, consisting of a Cover Sheet, Sheets 1 –10 and Notes 1 – 20 (plans attached hereto).

ATTACHMENTS:

1. Project Narrative & Site Plan Application, including: Checklist, Waiver Form and Site Locus Photo date stamped 7 Mar 2014 – Attachment "**A**".
2. CLD's Initial Comments Report, dated 26 March 14 – "**B**".
3. HSI, Inc. Response Letter, dated 31 March 14 – "**C**".
4. Comments/Memos from Zoning Administrator, Bill Oleksak, HFD Deputy Fire Chief, John O'Brien, and Asst. Assessor, Jim Michaud - **"D".**
5. CAP Fee Worksheet – "**E**".

REQUESTED WAIVERS:

1. 275-9C -- Noise Study
2. 275-9D -- Fiscal Impact Study
3. 275-8(30) -- Loading Spaces (2 required)
4. 275-9B -- Traffic Study

WAIVERS GRANTED WITH ORIGINAL APPROVAL:

1. 275-9C -- Noise Study
2. 275-9D -- Fiscal Impact Study
3. 275-8(30) -- Loading Spaces (2 required)

OUTSTANDING ISSUES:

1. Please see CLD's Initial Comments Report "**B**" and see that all outstanding issues have been addressed in HSI's Response Letter "**C**".
2. Note 8 on the Master Site Plan needs to be amended, i.e., by striking-out the language pertaining to "inflation indexing".

No other outstanding issues remain with this proposed addition to the existing medical facility.

NOTE: a C.A.P. fee has been calculated @ $14,615.37 ($3.99 X 3,663 sf of medical offices in Sector 2, per the 2014 CAP Fee Matrix). Please refer to the CAP Fee Worksheet "**E**".

RECOMMENDATION: For this initial hearing, staff recommends application acceptance, conduct public hearing and for final action to be considered in accordance with the below DRAFT MOTIONS.

APPLICATION TRACKING:

03/07/2014 - Application submitted.
04/09/2014 - Initial public hearing scheduled.

DRAFT MOTIONS:

I move to accept the Southern New Hampshire Medical Center Addition Site Plan application at 300 Derry Rd., Map 109/Lot 10.

Motion by: _____Second: _____Carried/Failed: _____

I move to defer further review of the Southern New Hampshire Medical Center Site Plan application date specific to the April 23, 2014 meeting.

Motion by: _____Second: _____Carried/Failed: _____

WAIVER MOTIONS:

1) HTC 275-9C – Noise Study

I move to grant the requested waiver: HTC 275-9C - Noise Study - because such a study is unnecessary, given the nature of the intended use and the fact that the nearest building is over 300 feet away, and as such, the granting of this waiver is not contrary to the spirit and intent of the Site Plan regulations.

Motion by: _____Second: _____Carried/Failed: _____.

2) HTC 275-9D – Fiscal Impact Study

I move to grant the requested waiver: HTC 275-9D - Fiscal Impact Study - because said study is not necessary to evaluate the fiscal impact of this development, and as such, the granting of this waiver is not contrary to the spirit and intent of the Site Plan regulations.

Motion by: _____Second: _____Carried/Failed: _____.

3) HTC 275-8(30) -- Loading Spaces (2 required)

I move to grant the requested waiver: HTC 275-8(30) - Loading Spaces (2 required) - because there is no need for a loading space (12' X 60'), for all deliveries associated with the proposed building addition will be by van, and as such, the granting of this waiver is not contrary to the spirit and intent of the Site Plan regulations.

Motion by: _____Second: _____Carried/Failed: _____.

4) **HTC 275-9B - Traffic Study**

I move to grant the requested waiver HTC 275-9B - Traffic Study - because the proposed addition square footage was included in the original traffic study performed for this project in 2006, and over the 7 years that the facility has been in operation, no traffic problems have occurred nor are anticipated with the addition, and as such, the granting of this waiver is not contrary to the spirit and intent of the Site Plan Review regulations.

Motion by: _____Second:_____Carried/Failed:_____.

MOTION TO APPROVE:

I move to approve the Site Plan entitled: Medical Office Building Addition, 300 Derry Road, Hudson, NH, Map 109/Lot 10, prepared by Hayner/Swanson, Inc., dated: 20 Feb. 2014 and revised thru 31 March 2014, consisting of a Cover Sheet, Sheets 1 –10 and Notes 1 – 20, 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.

2. All improvements shown on the Site Plan-of-Record, including Notes 1- 20, shall be completed in their entirety and at the expense of the Applicant or his assigns.

3. A cost allocation procedure (CAP) amount of $14,615.37shall be paid prior to the issuance of a Certificate of Occupancy, and Note 8 on the Plan shall be amended by striking-out reference to "inflation indexing".

4. After the issuance of the foundation permit and prior to the issuance of the framing permit, 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. 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 site plan.

6. Maintenance of the onsite drainage system shall be constructed and maintained in compliance with NHDES requirements for such systems.

7. Construction activities involving the subject lot shall be limited to the hours between 7:00 A.M. and 7:00 P.M., Monday through Saturday. No construction activities shall be allowed on Sundays.

8. Refuse removal shall not occur earlier than 7:00 A.M. nor later than 7:00 P.M., Monday thru Saturday only.

9. This plan shall be subject to final engineering review and approval.

Motion by: _____Second: _____Carried/Failed: _____

HSI Hayner/Swanson, Inc.
Civil Engineers/Land Surveyors

A

HUDSON
MAR 07 2014
COMMUNITY DEVELOPMENT

PROJECT NARRATIVE

The project area under consideration for this application is Tax Map 109, Lot 10, which is located at 300 Derry Road in Hudson, NH. The parcel is located in Hudson's G-1 General 1 zoning district. Abutting the 5.094 +/- acre property on the north and side of the site is undeveloped land owned by the Southern New Hampshire Medical Center. Derry Road abuts the property to the south. A commercial building abuts the land to the west. In general, the properties surrounding the vicinity of this site are a mix of commercial and retail properties along Derry Road.

In 2007, Southern New Hampshire Medical Center constructed 1-story, 11,800 square foot medical office building with accompanying parking, access and site improvements. The building currently contains four practicing doctors along with associated assistants. The proposed addition will add three practitioners and staff. It is anticipated that there will be 30 employees in this facility. The approved site plan represented areas on the property that the building and parking could be expanded in the future.

It is being proposed to construct a 1-story, 3,663 square foot building addition on the north side of the existing structure and to extend the existing site driveway and parking area to add approximately 25 parking spaces. The addition is needed to meet the growing demands of this facility. Disturbance to the site should be kept to a minimum as the site entrance, front parking and building entry should not be impacted by the new construction. The proposed addition shall be serviced by water, telephone, power and gas utilities from the existing building. A new sewer service will be connected into the existing septic system to accommodate the addition. Based on actual water meter

information for this site, there is ample capacity in the existing septic system to handle the flow generated by the new addition.

It should be noted that the original 2006 site plan application and traffic study accounted for this building addition, and development upon abutting Lot 10-1. Furthermore, the design of the stormwater management area similarly included the building, parking and site driveway additions.

Since this is a relatively minor addition that was shown on the original approved site plan, there are no significant impacts to local schools, utilities or traffic.

DATE STAMPED MARCH 7, 14 JC

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

Date of Application: MARCH 7, 2014 Tax Map # 109 Lot # 10

Name of Project: Proposed Medical Office Building Addition

Zoning District: G-1: General 1 (For Town Use) General SP# 04-14 (For Town Use)

ZBA Action: None

PROPERTY OWNER:	DEVELOPER:
Name: Southern New Hampshire Medical Center	Foundation Medical Partners, Inc.
Address: 8 Prospect Street	8 Prospect Street
Address: Nashua, NH 03060	Nashua, NH 03060
Telephone # 603-577-2090	603-577-2090
Fax # 603-577-5674	603-577-5674
Email: Scott.Cote@snhhs.org	Scott.Cote@snhhs.org
PROJECT ENGINEER	**SURVEYOR**
Name: Hayner/Swanson, Inc.	Hayner/Swanson, Inc.
Address: 3 Congress Street	3 Congress Street
Address: Nashua, NH 03062	Nashua, NH 03062
Telephone # 603-883-2057	603-883-2057
Fax # 603-883-5057	603-883-5057
Email: jpetropulos@hayner-swanson.com	jpetropulos@hayner-swanson.com

PURPOSE OF PLAN:

To show proposed 1-story, 3,663 s.f. medical office building addition with accompanying parking and site improvements.

For Town Use

Plan Routing Date: _____ Sub/Site Date: _____

_____ I have no comments _____ I have comments (attach to form)

_____ Title: _____ Date: _____
(Initials)

DEPT:
_____ Zoning _____ Engineering _____ Assessor _____ Police _____ Fire _____ Planning
_____ Consultant _____ Highway Department

Fees Paid: _____

SITE DATA SHEET

PLAN NAME: Proposed Medical Office Building Addition

PLAN TYPE: SITE PLAN

LEGAL DESCRIPTION: MAP 109 LOT 10

DATE: February 20, 2014

Location by Street	300 Derry Road
Zoning:	G-1: General 1
Proposed Land Use:	Medical Offices
Existing Use:	Medical Offices
Surrounding Land Use(s):	Mixed (Office/Retail)
Number of Lots Occupied:	One
Existing Area Covered by Building:	11,800 s.f.
Existing Buildings to be removed:	None
Proposed Area Covered by Building:	11,800 + 3,663 = 15,463 s.f.
Open Space Proposed:	60%
Open Space Required:	35%
Total Area:	S.F.: 221,896 Acres: 5.094
Area in Wetland:	- Area Steep Slopes: -
Required Lot Size:	2.0 acres
Existing Frontage:	318.58'
Required Frontage:	200'

Building Setbacks:	Required*	Proposed
Front:	50'	138.8'
Side:	15'	41.3'
Rear:	15'	125+/-'

SITE PLAN DATA SHEET
(Continued)

Flood Zone Reference: Map number 33011C0508D

Width of Driveways: 24'

Number of Curb Cuts: One (existing)

Proposed Parking Spaces: 82

Required Parking Spaces: 52

Basis of Required Parking (Use): Office

Dates/Case #/Description/Stipulations of ZBA, Conservation Commission, NH Wetlands Board Actions: N/A
(Attach stipulations on separate sheet)

Waivers Requested: (Left column for Town Use)	Hudson Town Code Reference	Regulation Description
	1. 275-9C	Noise Study
	2. 275-9D	Fiscal Impact Study
	3. 275-8(30)	Loading Spaces
	4. 275-9B	Traffic Study
	5.	
	6.	
	7.	
	8.	

Impact Fees:
C.A.P Fee: (Sector 2) $3.99 x 3.663 s.f. = $14,615.37

Development Agreement Proposed: N/A

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 site plan 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
JMP	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.	_____
JMP	b)	A Site Plan narrative, describing the purpose, locations, long-range plans, impacts on traffic, schools, and utilities	_____
JMP	c)	Plan scale at not less the one inch equals fifty feet (1" = 50')	_____
JMP	d)	Locus plan with 1,000' minimum radius of site to surrounding area	_____
JMP	e)	Plan date by day/month/year	_____
JMP	f)	Revision block inscribed on the plan	_____
JMP	g)	Planning Board approval block inscribed on the plan	_____
JMP	h)	Title of project inscribed on the plan	_____
JMP	i)	Names and addresses of property owners and their signatures inscribed on the plan	_____
JMP	j)	North point inscribed on the plan	_____
JMP	k)	Property lines: exact locations and dimensions	_____
JMP	l)	Square feet and acreage of site	_____
JMP	m)	Square feet of each building (existing and proposed)	_____
JMP	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
JNP 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	____
JNP p)	Locations of existing and proposed permanent monuments and bench marks within 200 feet of the development tract	____
JNP q)	Pertinent highway projects	____
JNP r)	Assessor's Map and Lot number(s)	____
JNP 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	____
JNP t)	Delineate zoning district on the plan	____
JNP u)	Storm water drainage plan	____
JNP v)	Topographical elevations at 2-foot intervals contours: existing and proposed	____
JNP w)	Utilities: existing and proposed	____
JNP x)	Parking: existing and proposed	____
JNP y)	Parking space: length and width	____
JNP z)	Aisle width/maneuvering space	____
JNP aa)	Landscaping: existing and proposed	____
JNP ab)	Building and wetland setback lines	____
JNP ac)	Curb cuts	____
JNP ad)	Rights of way: existing and proposed	____
JNP ae)	Sidewalks: existing and proposed	____
JNP af)	Exterior lighting plan	____
JNP ag)	Sign locations: size and design	____
JNP ah)	Water mains and sewerage lines	____
JNP ai)	Location of dumpsters on concrete pads	____
JNP aj)	All notes from plats	____

Applicant Initials		Staff Initials
JNP ak)	Buffer as required by site plan regulations	
JNP al)	Green and open space requirements met with both types of spaces inscribed on the plan	
JNP 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 performed by a State of New Hampshire Certified Soil Scientist, who shall affix his/her stamp and signature shall be inscribed on the plan.	
JNP an)	Wetlands (and poorly-drained and very poorly-drained soils, 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.	
JNP ao)	"Valid for one year after approval" statement inscribed on the plan.	
JNP ap)	Loading bays/docks	
JNP aq)	State of New Hampshire engineer's stamp, signature, surveyor's stamp, and signature	
JNP ar)	Error of closure (1 in 10,000 or better)	
JNP as)	Drafting errors/omissions	
JNP at)	Developer names, addresses, telephone numbers and signatures	
JNP au)	Photographs, electronic/digital display or video of site and area	
JNP av)	Attach one (1) copy of the building elevations	
JNP aw)	Fiscal impact study WAIVER	
JNP ax)	Traffic study WAIVER	
JNP ay)	Noise study WAIVER	

Applicant Initials		Staff Initials
JVP az)	Copies of any proposed or existing easements, covenants, deed restrictions, right of way agreements or other similar documents	____
JVP 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.

JVP bb)	Presentation plan (colored, with color-coded bar chart)	PENDING
JVP bc)	Fees paid to clerk	____
JVP 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 purview of the Planning Board, any and all items may be waived.

APPLICATION FOR SITE PLAN REVIEW
TOWN OF HUDSON, NEW HAMPSHIRE

I hereby apply for Site 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 Site 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 given 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 to 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/or inspections conducted on his/her (their) property in connection with this applications.

Signature of Owner: _____

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

Signature of Developer: _____

- 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 Code Enforcement Officer/Building Inspector must be notified within two (2) working days of any change by the individual in charge of the project.

APPLICATION IS DUE AT NOON 21 days prior to the Planning Board Meeting. (The date the Agenda is CLOSED.) Any applications received after that time will be deferred until the next available meeting.

SUBDIVISION/SITE PLAN WAIVER REQUEST FORM

Name of Subdivision/Site Plan: Proposed Medical Office Building Addition

Street Address: 300 Derry Road, Hudson, NH 03051

I Scott Cote hereby request that the Planning Board waive the requirements of item (see attached letter) of the Subdivision/Site Plan Checklist in reference to a plan presented by Hayner/Swanson, Inc. (name of surveyor and engineer) dated February 20, 2014 for property tax map(s) 109 and lot(s) 10 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):

See attached waiver letter.

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):

See attached waiver letter.

Signed: _____

Applicant or Authorized Agent

Planning Board Action:

Waiver Granted: _____

Waiver Not Granted: _____

HSI Hayner/Swanson, Inc.
Civil Engineers/Land Surveyors

March 7, 2014
Job No. 4820

Mr. Ed Van Der Veen, Chairman
Hudson Planning Board
12 School Street
Hudson, NH 03051

RE: Proposed Medical Office Building Addition
300 Derry Road
Hudson, NH, NH
Tax Map 109, Lot 10

Dear Mr. Chairman:

On behalf of our client, Foundation Medical Partners, Inc., we are respectfully requesting the following waivers from sections of the Hudson Site Plan Regulations (HSPR):

Waiver Request #1

HSPR 275-9C: Noise Study.

Request: To waive the requirement of submitting a noise study as part of the Proposed Medical Office Building Addition site plan application.

Basis of Request: Given the nature of the intended use and the fact that the nearest building is over 300 feet away, there is no need to perform a noise study.

Waiver Request #2

HSPR 275-9D: Fiscal Impact Study

Request: To waive the requirement of submitting a fiscal study as part of the Proposed Medical Office Building Addition site plan application.

Basis of Request: The proposed building addition will not require an expenditure of public money nor will it burden the local school system.

Waiver Request #3

HSPR 275-8(30): Loading spaces (2 would be required for this site).

Request: To allow the proposed medical office building addition without requiring a loading space.

Basis of Waiver: There is no need for a loading space (12' x 60') for the proposed building addition. All deliveries to this site are made by a van and not a large delivery vehicle.

Waiver Request #4

HSPR 275-9B: Traffic Study

Request: To waive the requirement of submitting a traffic study as part of the Proposed Medical Office Building Addition site plan application.

Basis of Waiver: The proposed building addition square footage was included in the original traffic study performed for this project in 2006. In the seven years that the facility has been in operation, there has not been a traffic problem at the site driveway.

Please note that waivers 1-3 were previously granted for the original site plan by the Hudson Planning Board in 2006.

In summary, it is our opinion the above waiver requests are reasonable and meet the criteria outlined in Section 275-15, Waivers of the Hudson Site Plan Regulations. Furthermore, it is our opinion the above requests meet the spirit and intent of the Town of Hudson Site Plan regulations. In particular, the requested waivers are understandable given that this property has no immediate abutters (commercial or residential) and that the building addition and site will be set back a considerable distance from Derry Road. A strict enforcement of the above regulations would pose a hardship to our Client by adding significant costs to permit this relatively minor site plan.

Thank you for your consideration of these waiver requests.

Respectfully,

James N. Petropulos, P.E.
President/Principal Engineer
Hayner/Swanson, Inc.

cc: John Cashell – Hudson Planning Department

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:
____ 1.	Application incomplete	_____
✓ 2.	Application complete. Include any applicable requested waivers, fees paid, routing sheet returned	3-7-14
____ 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:	

_____

_____

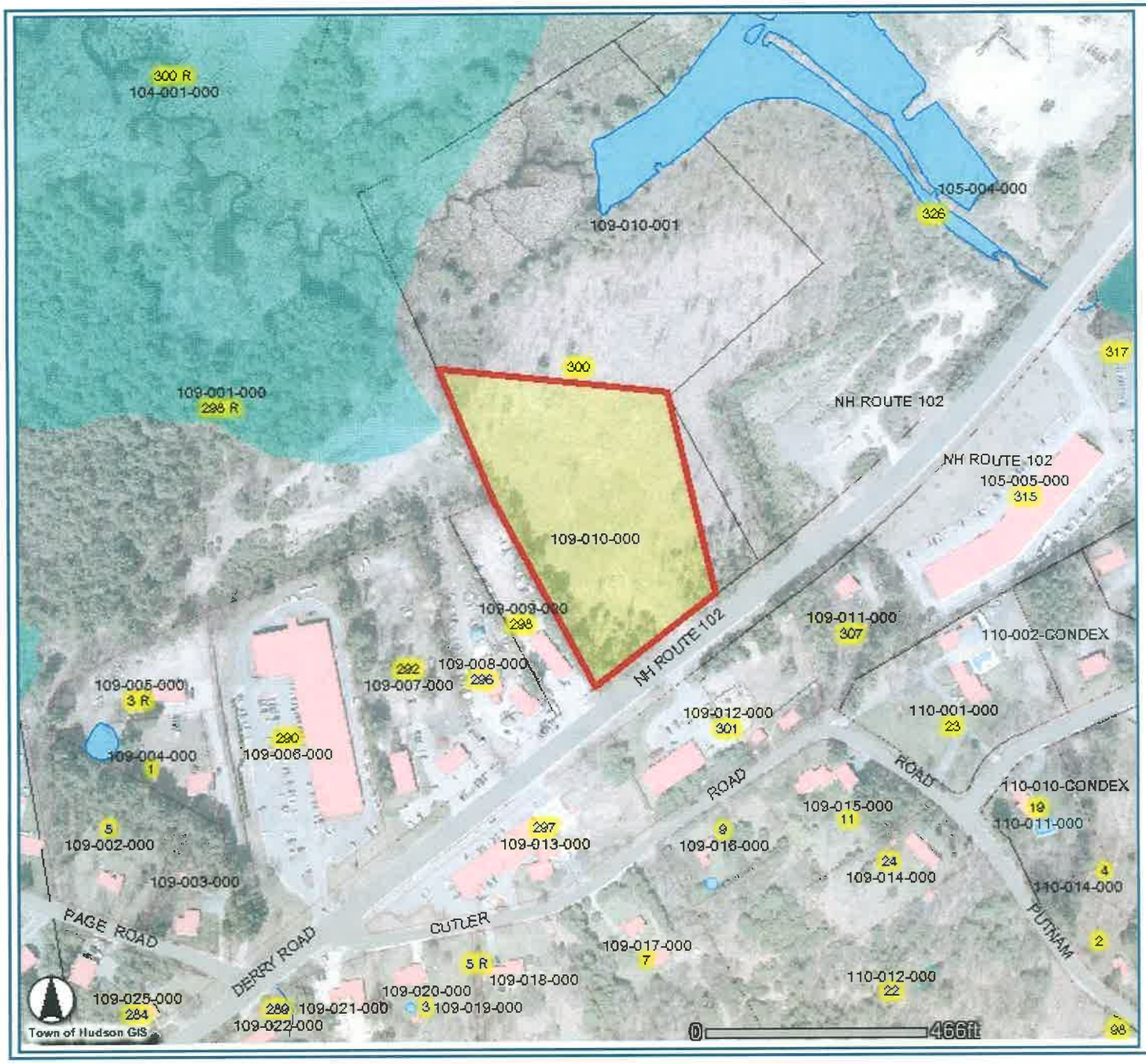
_____

_____

_____

_____

_____



Town of Hudson New Hampshire

Geographic Information System

GIS Map Print

My Map

Subject Property Data

Parcel ID	109-010-000
Owner	SOUTHERN NH MEDICAL CENTER
Location	300 DERRY RD
AccountNumber	5290
Co-Owner	ATTN: SCOTT COTE
Owner Addr	8 PROSPECT STREET
Owner CSZ	NASHUA, NH 03060
Land Value	315300
Yard Value	41500
Building Value	1470500
Total Value	1827300
Acreage	5.094
zone1	G1
Use Code	905
Year Built	2007
Building Style	OFFICE-PROF
Bedrooms	0
Fuel Type	OIL
Sale Date	2/14/2006
Sale Price	1100000
Book/Page	7629-1080

Disclaimer

The Town of Hudson makes no warranty or representation as to the accuracy, timeliness or completeness of any of the data. The Town of Hudson shall have no liability for the data or lack thereof, or any decision made or action taken or not taken in reliance upon any of the data.

"B"

HUDSON
APR 01 2014
COMMUNITY DEVELOPMENT

March 26, 2014

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

Re: Town of Hudson Planning Board Review
Southern New Hampshire Medical Office Building Addition, 300 Derry Road
Tax Map 109, Lot 10, PO #1350-Not Available
CLD Reference No. 03-0249.1330

Dear Mr. Cashell:

CLD Consulting Engineers, Inc. (CLD) has reviewed the first submission of the materials received on March 12, 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 note that several items could not be verified by CLD and require action by the Town.

The project consists of constructing a 3,663-square foot building addition with associated site improvements, and additional parking on the previously developed site. The site is currently serviced by existing Municipal Water and an existing septic system.

The following items are noted:

1. **Site Plan Review Codes**
   a. Hudson Regulations (HR) 275-8.B. (17) The applicant has shown one temporary benchmark on the plan set. Reference to a USGS benchmark was not provided.
   b. HR 275-9.A. See comments below.
   c. HR 275-9.B. See comment below.
   d. HR 275-9.C. The applicant has noted on the plan set that a waiver from the Noise Study requirement was previously granted by the Planning Board in 2006.
   e. HR 275-9.D. The applicant has noted on the plan set that a waiver from the Fiscal and Environmental Impact Study requirement was previously granted by the Planning Board in 2006.
   f. HR 275-9.E. See comments below.
   g. HR 275-9.F. Copies of deeds or easements were not received for review. The applicant has shown two existing easements on the plans: an existing drainage easement and an existing utility and private access easement.
   h. HR 275-9.G. See comments below.

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

a. HR 275-9.B. The applicant has noted on the plan set that a waiver from the Traffic Study requirement has been requested.

b. HR 193-10.E. The applicant has not shown any sight distance information on the plan set for the existing driveway that has no proposed modifications.

c. HR 275-8.B. (30) The applicant has not shown any loading spaces on the plans. The applicant has noted on the plan set that a waiver was previously granted by the Planning Board in 2006.

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

a. No existing fire hydrant(s) have been shown within 200 feet of the site.

b. A septic review was not performed as part of this review. The applicant has noted in the project narrative that there is ample capacity in the existing septic system to handle the flow generated by the building addition but no flow data or capacity calculations were provided.

c. The applicant has not shown how electric or telephone services are connected to the building, but has stated that they are existing on-site.

d. The applicant has shown two proposed "A.C. Pads"; but has not provided details.

e. The applicant has provided a detail for the SMH that shows the pipe flush with the SMH wall. We note Town Standards indicate the pipe should extend 3-inches into structure.

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

a. HR 275-9.A (1) We note the applicant provided comparative numbers for peak runoff and impervious area, the applicant should also compare runoff volume, for proposed conditions to the 2006 original design and drainage analysis.

b. HR 290-4.A (10) The applicant should provide both the two-year storm events (as typical in the NHDES "Green Book") in comparison to the previously approved 2006 original design and drainage analysis.

c. HR 290-5.B (2) (d) The applicant should provide both the ten-year storm events in comparison to the previously approved 2006 original design and drainage analysis.

d. HR 290-4.C (2) (e) The applicant should provide swale calculations demonstrating that required velocities are met.

e. HR 290-4.C (2)(i) and (j) The applicant should provide closed drainage system calculation/data demonstrating that required velocities are met.

f. The applicant should provide existing and proposed riprap dimensions (including depth) to ensure proper erosion protection is achieved.

g. The applicant should coordinate subcatchment and pond labels illustrated in the HydroCAD calculations with the supplied Drainage Area Map.

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5. Erosion Control/Wetland Impacts

a. HR 290-4.A. (3) and (5) The applicant should consider providing additional erosion control measures near the end of the proposed drive where the natural swale leaves the property.

b. HR 290-4.A. (4) and (13) The applicant has stated that all disturbed soil should be stabilized within two-months of disturbance; however, we note the regulation requires soil be stabilized within 30 days of disturbance.

c. HR 290-5.B. (1) (m) The applicant should propose a temporary stockpile area and detail.

d. The Town should reserve the right to require additional erosion control measures during construction if needed.

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

- HR 275-8.B.(31)(d) If only interior drive aisle pavement areas (not parking space or access drive paved areas) are used to calculate the new paved area related to shrubs, the applicant has met the minimum shrub requirement. The applicant has met the minimum tree requirement either way the paved area is calculated (excluding access drive pavement area).

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

a. HR 290-5.B. (2) (i) The applicant has noted on the plan that the Stormwater Pollution Prevention Plan shall be retained on-site for the duration of the contract and the filing of a Notice of Intent as part of the NPDES General Construction Permit is required.

b. Env – Wq 1003.13. The applicant should review the need to revise their NHDES Individual Subsurface Septic Disposal System Permit for the proposed building footprint expansion and additional flows.

c. Additional local permitting may be required.

8. Other

a. HR 275-8.B. (35) The applicant should consider whether additional American with Disabilities Act (ADA) parking should be provided near the building addition. The applicant should also expand the note regarding ADA compliance to include the date of the Regulations used and remove the limitation that the compliance evaluation is solely limited to dimension and grade.

b. HR 290-5.B. (1) (u) and (v) The applicant has not shown any snow storage areas on the plan set nor have they noted how excess snow will be removed from the site.

c. The applicant should provide a detail of how the proposed sloped granite curb is to tie into the existing Cape Cod berm.

d. Lighting plan review was not performed as part of CLD's requested scope. We recommend that the Town confirm that the lighting approach is acceptable.

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e. The applicant should coordinate the crushed gravel layers in the typical pavement section detail and sloped granite curb detail, as we note a discrepancy in the depths.

f. If the building addition entrance is to be used at night, we recommend that the lighting layout be revisited. As designed, the most likely walking path to the door from the far parking spaces includes an area lit at levels less than 0.3 fc, a level typically assumed as a minimum for pedestrians.

g. The lighting plan does not appear to account for the influence of trees.

Please feel free to call if you have any questions.

Very truly yours,

Heidi J. Marshall, P.E.

Paul Konieczka, AICP

HJM/PK:sad

Enclosure

cc: Town of Hudson Engineering Division – File
Hayner/Swanson, Inc.
Three Congress Street,
Nashua, NH 03062
Fax (603) 883-5057

NEW HAMPSHIRE VERMONT MAINE
540 Commercial Street • Manchester, NH 03101 • ph: (603) 668-8223 • fx: (603) 668-8802 • www.cldengineers.com

CONSULTING ENGINEERS
540 Commercial Street Manchester, NH 03101
(603) 668-8223 • Fax: (603) 668-8802
cld@cldengineers.com • www.cldengineers.com
New Hampshire • Vermont • Maine

TO: File

FROM: Kelsey M. Gagnon KMG

DATE: March 26, 2014

RE: Town of Hudson Planning Board Review
Southern New Hampshire Medical Office Building Addition, 300 Derry Road
Tax Map 109, Lot 10, PO #1350-Not Available
CLD Reference No. 03-0249.1330

The following list itemizes the documents reviewed related to the current Southern New Hampshire Medical Office Building Addition Site Plan review comments.

- Various emails between Town of Hudson and CLD, between March 12 and March 26, 2014.
- Letter of Transmittal from CLD to Town of Hudson, dated March 13, 2014.
- Letter of Transmittal from Hayner Swanson, Inc. to Town of Hudson, dated March 7, 2014, received, March 12, 2014, including the following:
  1. Sealed envelope from Southern New Hampshire Medical Center, Accounts Payable Department to Town of Hudson, not dated. (returned to the Town of Hudson)
  2. Copy of *Preliminary and Final Site Plan Application for Plan Review*, dated March 7, 2014.
  3. Copy of *Project Narrative,* not dated, prepared by Hayner Swanson, Inc.
  4. *Drainage Area Map Medical Office Building, 300 Derry Road,* dated March 6, 2014.
  5. Copy of *Planning Board Notice to Site Plan Application*, not dated.
  6. Copy of *Abutter List, Job No. 4820, Site Plan Abutters,* dated March 7, 2014.
  7. Copy of *Proposed Medical Office Building Addition* Letter, dated March 7, 2014.
  8. Copy of *Zoning Determination, Assessors Map 109, Lot 10, Derry Road* Letter, dated January 3, 2006.
  9. Two site photos, not dated.
  10. Copy of *Proposed Medical Office Building Addition – Drainage Impact Letter Report* Letter, dated March 6, 2014.
  11. Two Copies of *Site Plan, Proposed Medical Office Building Addition, 300 Derry Road, Hudson, New Hampshire* Plan Set, prepared by Hayner Swanson, Inc., dated February 20, 2014, unless otherwise noted, with no revisions noted, including the following:
      a. Cover Sheet.
      b. *Master Site Plan*, Sheet 1 of 10.

c. *Existing Conditions Plan*, Sheet 2 of 10.

d. *Site Plan*, Sheet 3 of 10.

e. *Detail Sheet – General Site*, Sheets 4 and 5 of 10.

f. *Erosion Control Plan,* Sheet 6 of 10.

g. *Detail Sheet – Erosion Control,* Sheet 7 of 10.

h. *Landscape Plan*, Sheet 8 of 10.

i. *Detail Sheet – Landscape,* Sheet 9 of 10.

j. *Photometric Site Lighting Plan*, Sheet 10 of 10, prepared by Gate City Electric.

KMG:sad

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

APPLICATION FOR SITE PLAN REVIEW
TOWN OF HUDSON, NEW HAMPSHIRE

Southern New Hampshire Medical Office Building Addition, 300 Derry Road
Town of Hudson
CLD Reference No. 03-0249.1330
Reviewed March 26, 2014

Thirty (30) days prior to Planning Board Meeting, a complete site plan 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	
_____	a) 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 A.M. Tuesday the week prior to the scheduled public hearing/conceptual review date.		
_____	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 surrounding area	CLD/KMG	
_____	e) Plan date by day/month/year	CLD/KMG	
_____	f) Revision block inscribed on the plan	CLD/KMG	
_____	g) Planning Board approval block inscribed on the plan	CLD/KMG	g) Language does not exactly match Regulation.
_____	h) Title of project inscribed on the plan	CLD/KMG	
_____	i) Names and addresses of property owners and their signatures inscribed on the plan	CLD/KMG	
_____	j) North point inscribed on the plan	CLD/KMG	
_____	k) Property lines: exact locations and dimensions	CLD/KMG	
_____	l) Square feet and acreage of site	CLD/KMG	
_____	m) Square feet of each building (existing and proposed)	CLD/KMG	
_____	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.	CLD/KMG	n) Unable to verify date of update.

Applicant Initials		Staff Initials	
_____	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		o) No existing fire hydrant(s) have been shown within 200 feet of the site
_____	p) Locations of existing and proposed permanent monuments and bench marks within 200 feet of the development tract		p) 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.
_____	q) Pertinent highway projects		q) No highway projects noted.
_____	r) Assessor's Map and Lot number(s)	CLD/KMG	
_____	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		s) A waiver request letter was provided; however, waiver application form(s) was not received for review. The applicant has stated that three waivers have already been granted as part of the original site plan review.
_____	t) Delineate zoning district on the plan	CLD/KMG	
_____	u) Stormwater drainage plan	CLD/KMG	
_____	v) Topographical elevations at 2-foot intervals contours: existing and proposed	CLD/KMG	
_____	w) Utilities: existing and proposed		w) The applicant has not shown how existing electric or phone lines connect to the building.
_____	x) Parking: existing and proposed	CLD/KMG	
_____	y) Parking space: length and width	CLD/KMG	
_____	z) Aisle width/maneuvering space	CLD/KMG	
_____	aa) Landscaping: existing and proposed	CLD/KMG	aa) Based on drive aisle area only, shrub calculation met. Tree calculation met including whole parking lot area.
_____	ab) Building and wetland setback lines	CLD/KMG	
_____	ac) Curb cuts	CLD/KMG	
_____	ad) Rights of way: existing and proposed	CLD/KMG	
_____	ae) Sidewalks: existing and proposed	NONE REQUIRED	ae) No existing or proposed sidewalks are shown.
_____	af) Exterior lighting plan	CLD/KMG	
_____	ag) Sign locations: size and design	EXISTING	ag) No proposed signs shown.
_____	ah) Water mains and sewerage lines		ah) No new water lines or extensions are shown
_____	ai) Location of dumpsters on concrete pads	CLD/KMG	
_____	aj) All notes from plats	CLD/KMG	

Applicant Initials		Staff 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)	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 performed by a State of New Hampshire certified Soil Scientist, who shall affix his/her stamp and signature shall be inscribed on the plan.	JC	am) Regulation was repealed in 2010. Soil types indicated.
_____ an)	Wetlands (and poorly-drained and very poorly-drained soils, 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.	JC	an) Adjacent wetlands are shown on the plan; however, a New Hampshire certified wetland or soil scientist has not affixed his stamp and signature to the plan.
_____ ao)	"Valid for one year after approval" statement inscribed on the plan	CLD/KMG	
_____ ap)	Loading bays/docks	JC	ap) Not shown, applicant noted waiver previously granted.
_____ aq)	State of New Hampshire engineer's stamp, signature, surveyor's stamp, and signature	JC	aq) Lighting, landscaping, and detail sheets are not signed or stamped by a State of New Hampshire Professional Engineer.
_____ 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	CLD/KMG	
_____ au)	Photographs, electronic/digital display or video of site and area	CLD/KMG	
_____ av)	Attach one (1) copy of the building elevations	CLD/KMG	
_____ aw)	Fiscal impact study	W	aw) Not received, applicant noted waiver previously granted.
_____ ax)	Traffic study	W	ax) Not received, applicant noted waiver requested.
_____ ay)	Noise study	W	ay) Not received, applicant noted waiver previously granted.

Applicant Initials		Staff Initials	
_____ az)	Copies of any proposed or existing easements, covenants, deed restrictions, right of way agreements or other similar documents	JK Provided	az) No deeds or easements received for review.
_____ 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 ▪ shoreland 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.	JK	ba) No permits received in package for review.
_____ bb)	Presentation plan (colored, with color coded bar chart)	JK	bb) No presentation plan received, requires a Town action.
_____ bc)	Fees paid to clerk	JK	bc) Requires Town action.
_____ 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.	JK	bd) Requires Town action.

*Under the purview of the Planning Board any and all items may be waived. _____

HSI Hayner/Swanson, Inc.
Civil Engineers/Land Surveyors

March 31, 2014
Job #4820

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

RE: SNHMC SITE PLAN
300 DERRY ROAD
HUDSON, NH

Dear John:

Please find enclosed our re-submission effort for the above referenced project. The plans (revised March 27, 2014) attempt to address the review comments provided to us by CLD Consulting Engineers in their March 26, 2014 letter and checklist review. Our responses below appear in the same order as the above referenced CLD correspondence:

1a. Note 7 of sheet 2 of 10 describes the source of the HIS referenced benchmark, which is tied to NGVD29 datum. NGVD29 is the current USGS datum.
1b. No response required
1c. No response required.
1d. No response required.
1e. No response required.
1f. No response required.
1g. Easement deeds are enclosed herewith our resubmittal effort.
1h. No response required.

2a. No response required.
2b. See sheet 1 of 10 and note 18 on said sheet.
2c. No response required.

3a. Sheet 2 of 10 shows an existing hydrant currently located on the site near the front parking field.
3b. We provided metered data from this facility to the NHDES Subsurface Systems Bureau and requested that the existing leach field and septic tank be accepted to handle the addition flow created by this small building addition. Their response is attached herewith.
3c. A note exists on sheet 3 of 10 that states that water, telephone, electric and gas utilities will be serviced through the existing building.
3d. An AC pad detail has been added to sheet 4 of 10.

3e. The sewer manhole detail on sheet 5 of 10 has been revised accordingly.

4a. See supplemental drainage information attached herewith.
4b. See supplemental drainage information attached herewith.
4c. See supplemental drainage information attached herewith.
4d. See supplemental drainage information attached herewith.
4e. See supplemental drainage information attached herewith.
4f. There is no proposed riprap associated with this project. The existing sediment forebay contains an ample amount of protection for this area (see attached photo).
4g. See supplemental drainage information attached herewith.

5a. A straw bale barrier has been added in this location on sheet 6 of 10.
5b. See revised note 8 on sheet 6 of 10.
5c. A temporary stockpile area has been added to sheet 6 of 10.
5d. No response required. This note already exists on sheet 6 of 10.

6. No response required.

7a. No response required.
7b. As indicated in our response #3b, a NHDES Subsurface Septic Disposal System Permit will not be required by the NHDES.
7c. No response required.

8a. Our client prefers to have all ADA accessible parking in the front of the existing building. Note 11 on sheet 1 of 10 has been revised accordingly.
8b. Snow storage areas have been shown on sheet 3 of 10. Note 19 on sheet 1 of 10 has been added to address this item.
8c. The only locations where slope granite curb meets cape cod berm is at 90-degree angles at the corners of a parking area. Each curb will end as close as possible to the next.
8d. No response required.
8e. The details on sheet 4 of 10 have been revised accordingly.
8f. The final photometric lighting plan will be revised to increase the wattage of the two wall mounted fixtures from 70 to 100 watts. This should increase the light levels in the location cited by CLD.
8g. The landscape plan, sheet 8 of 10, has been revised to relocate a proposed honeylocust tree from being next to a proposed light pole. All other proposed light poles have good separation from proposed trees.

Checklist item g) The Planning Board approval block has been revised accordingly.
Checklist item n) The submitted abutters list was dated March 7, 2014.
Checklist item o) The existing fire hydrant was and is shown on sheet 2 of 10.
Checklist item p) No response required.
Checklist item q) No response required.
Checklist item s) A formal waiver letter was provided to the Town.
Checklist item w) See note on sheet 3 of 10.
Checklist item aa) No response required.

Checklist item ae) Both existing and proposed sidewalks are shown on the plan set.
Checklist item ag) There are no proposed project signs associated with this application.
Checklist item ah) There are no new water lines proposed as part of this project.
Checklist item am) No response required.
Checklist item an) Based on a field inspection of this lot, there are no wetlands present. Certified Wetland Scientist Robert Prokop's stamp and signature have been added to the plans.
Checklist item ap) No response required.
Checklist item aq) Landscape plans, landscape details and photometric lighting plans would not require the stamp of a professional engineer. All other sheets are stamped by a Hayner/Swanson, Inc. licensed professional.
Checklist item aw) No response required.
Checklist item ax) No response required.
Checklist item ay) No response required.

As always, please feel free to contact me if you have any further questions regarding this project.

Respectfully,

James N. Petropulos, PE
President/Principal Engineer
HAYNER/SWANSON, INC.

HSI Hayner/Swanson, Inc.
Civil Engineers/Land Surveyors

March 31, 2014
Job #4820

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

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As always, please feel free to contact me if you have any further questions regarding this project.

Respectfully,

James N. Petropulos, PE
President/Principal Engineer
HAYNER/SWANSON, INC.

Jim Petropulos

From: Thomas, Eric
Sent: Tuesday, January 14, 2014 1:37 PM
To: Jim Petropulos
Subject: RE: SNHMC, 300 Derry Road, Hudson, NH

Hello Jim,

I have reviewed the lot loading calculations based on our book values and it appears that the lot can support the additional sewage load. It also appears that the septic system has adequate capacity based on the metered flow data that you have supplied. As mentioned earlier in our phone conversation,if there will be a seperate sewerline hook-up to the existing system a collection system submittal showing the sewerline and the addition will be required for approval.If you have any other questions please feel free to give me a call at 603-271-3501.

Eric Thomas
Land Resources Management
603-271-3501

-----Original Message-----
From: Jim Petropulos [mailto:jpetropulos@hayner-swanson.com]
Sent: Tuesday, January 14, 2014 12:55 PM
To: Thomas, Eric
Cc: Cote, Scott
Subject: SNHMC, 300 Derry Road, Hudson, NH

Eric:

Please see the attachment for our sewage loading calculation for this site. Thanks for your call earlier and we look forward to hearing back from you...Best regards, JIM

PS: The original is in the mail.

James N. Petropulos, P.E., LEED AP
President / Principal Engineer
Hayner/Swanson, Inc.
Civil Engineers & Land Surveyors
3 Congress Street
Nashua, NH 03062
phone: 603.883.2057 x129
cell: 603.897.9009
fax: 603.883.5057
jpetropulos@hayner-swanson.com
www.hayner-swanson.com

Scott Murphy

From: Smith, Doug
Sent: Friday, March 28, 2014 2:16 PM
To: SMURPHY@HAYNER-SWANSON.COM
Subject: AMENDED 300 DERRY RD HUDSON

Hi Scott

I reviewed the plan you provided me yesterday and I will amend it to show the new sewer line entering the existing septic tank from the proposed addition.

I have requested the original file to be pulled from archives so this amendment can be placed in the file. Please provide me with 2 more copies of the plan.

Thank You Doug Smith

Jim Petropulos

From: Thomas, Eric
Sent: Tuesday, January 14, 2014 1:37 PM
To: Jim Petropulos
Subject: RE: SNHMC, 300 Derry Road, Hudson, NH

Hello Jim,

I have reviewed the lot loading calculations based on our book values and it appears that the lot can support the additional sewage load. It also appears that the septic system has adequate capacity based on the metered flow data that you have supplied. As mentioned earlier in our phone conversation,if there will be a seperate sewerline hook-up to the existing system a collection system submittal showing the sewerline and the addition will be required for approval.If you have any other questions please feel free to give me a call at 603-271-3501.

Eric Thomas
Land Resources Management
603-271-3501

-----Original Message-----
From: Jim Petropulos [mailto:jpetropulos@hayner-swanson.com]
Sent: Tuesday, January 14, 2014 12:55 PM
To: Thomas, Eric
Cc: Cote, Scott
Subject: SNHMC, 300 Derry Road, Hudson, NH

Eric:

Please see the attachment for our sewage loading calculation for this site. Thanks for your call earlier and we look forward to hearing back from you...Best regards, JIM

PS: The original is in the mail.

James N. Petropulos, P.E., LEED AP
President / Principal Engineer
Hayner/Swanson, Inc.
Civil Engineers & Land Surveyors
3 Congress Street
Nashua, NH 03062
phone: 603.883.2057 x129
cell: 603.897.9009
fax: 603.883.5057
jpetropulos@hayner-swanson.com
www.hayner-swanson.com

Scott Murphy

From: Smith, Doug
Sent: Friday, March 28, 2014 2:16 PM
To: SMURPHY@HAYNER-SWANSON.COM
Subject: AMENDED 300 DERRY RD HUDSON

Hi Scott

I reviewed the plan you provided me yesterday and I will amend it to show the new sewer line entering the existing septic tank from the proposed addition.

I have requested the original file to be pulled from archives so this amendment can be placed in the file. Please provide me with 2 more copies of the plan.

Thank You Doug Smith

"D"

HUDSON MAR 07 2014 COMMUNITY DEVELOPMENT

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

Date of Application: MARCH 7, 2014 Tax Map # 109 Lot # 10

Name of Project: Proposed Medical Office Building Addition

Zoning District: G-1: General 1 (For Town Use) General SP# ON-14 (For Town Use)

ZBA Action: None

PROPERTY OWNER:	DEVELOPER:
Name: Southern New Hampshire Medical Center	Foundation Medical Partners, Inc.
Address: 8 Prospect Street	8 Prospect Street
Address: Nashua, NH 03060	Nashua, NH 03060
Telephone # 603-577-2090	603-577-2090
Fax # 603-577-5674	603-577-5674
Email: Scott.Cote@snhhs.org	Scott.Cote@snhhs.org

PROJECT ENGINEER	SURVEYOR
Name: Hayner/Swanson, Inc.	Hayner/Swanson, Inc.
Address: 3 Congress Street	3 Congress Street
Address: Nashua, NH 03062	Nashua, NH 03062
Telephone # 603-883-2057	603-883-2057
Fax # 603-883-5057	603-883-5057
Email: jpetropulos@hayner-swanson.com	jpetropulos@hayner-swanson.com

PURPOSE OF PLAN:

To show proposed 1-story, 3,663 s.f. medical office building addition with accompanying parking and site improvements.

For Town Use

Plan Routing Date: 3-12-14 Sub/Site Date: _____

✓ I have no comments _____ I have comments (attach to form)

WAD Title: Z.A. H.O Date: _____
(Initials)

DEPT:
✓ Zoning _____ Engineering _____ Assessor _____ Police _____ Fire _____ Planning
_____ Consultant _____ Highway Department

Fees Paid: _____

HUDSON MAR 07 2014 COMMUNITY DEVELOPMENT

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

Date of Application: MARCH 7, 2014 Tax Map # 109 Lot # 10

Name of Project: Proposed Medical Office Building Addition

Zoning District: G-1: General 1 (For Town Use) General SP# 04-14 (For Town Use)

ZBA Action: None

PROPERTY OWNER:	DEVELOPER:
Name: Southern New Hampshire Medical Center	Foundation Medical Partners, Inc.
Address: 8 Prospect Street	8 Prospect Street
Address: Nashua, NH 03060	Nashua, NH 03060
Telephone # 603-577-2090	603-577-2090
Fax # 603-577-5674	603-577-5674
Email: Scott.Cote@snhhs.org	Scott.Cote@snhhs.org

PROJECT ENGINEER	SURVEYOR
Name: Hayner/Swanson, Inc.	Hayner/Swanson, Inc.
Address: 3 Congress Street	3 Congress Street
Address: Nashua, NH 03062	Nashua, NH 03062
Telephone # 603-883-2057	603-883-2057
Fax # 603-883-5057	603-883-5057
Email: jpetropulos@hayner-swanson.com	jpetropulos@hayner-swanson.com

PURPOSE OF PLAN:

To show proposed 1-story, 3,663 s.f. medical office building addition with accompanying parking and site improvements.

For Town Use

Plan Routing Date: 3-12-14 Sub/Site Date: _____

✓ I have no comments _____ I have comments (attach to form)

JOB (Initials) Title: Deputy Fire Chief Date: 3/17/2014

DEPT:

_____ Zoning _____ Engineering _____ Assessor _____ Police ✓ Fire _____ Planning

_____ Consultant _____ Highway Department

Fees Paid: _____

RECEIVED MAR 12 2014 BY:

HUDSON MAR 07 2014 COMMUNITY DEVELOPMENT

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

Date of Application: MARCH 7, 2014 Tax Map # 109 Lot # 10

Name of Project: Proposed Medical Office Building Addition

Zoning District: G-1: General 1 (For Town Use) General SP# 04-14 (For Town Use)

ZBA Action: None

PROPERTY OWNER:	DEVELOPER:
Name: Southern New Hampshire Medical Center	Foundation Medical Partners, Inc.
Address: 8 Prospect Street	8 Prospect Street
Address: Nashua, NH 03060	Nashua, NH 03060
Telephone # 603-577-2090	603-577-2090
Fax # 603-577-5674	603-577-5674
Email: Scott.Cote@snhhs.org	Scott.Cote@snhhs.org

PROJECT ENGINEER	SURVEYOR
Name: Hayner/Swanson, Inc.	Hayner/Swanson, Inc.
Address: 3 Congress Street	3 Congress Street
Address: Nashua, NH 03062	Nashua, NH 03062
Telephone # 603-883-2057	603-883-2057
Fax # 603-883-5057	603-883-5057
Email: jpetropulos@hayner-swanson.com	jpetropulos@hayner-swanson.com

PURPOSE OF PLAN:

To show proposed 1-story, 3,663 s.f. medical office building addition with accompanying parking and site improvements.

For Town Use

Plan Routing Date: 3-12-14 Sub/Site Date: _____

_____ I have no comments _____ I have comments (attach to form)

_____ Title: Asst. Assessor Date: 3-12-14
(Initials)

DEPT:

_____ Zoning _____ Engineering ✓ Assessor _____ Police _____ Fire _____ Planning
_____ Consultant _____ Highway Department

Fees Paid: _____

CAP FEE WORKSHEET **"E"**

Date: 4/03/14 **Sector #:** 2 **Map/Lot:** 109/010

Project Name: Southern NH Medical Center

Proposed ITE Use #1: Medical Office Bldg.

Proposed Building Area (square footage): 3,663 **S.F.**

CAP FEES: (THREE CHECKS NEEDED)

1. (Bank 08)

(2070-090)	**Route 3A:**	**$3,186.81**
(2070-091)	**Route 102:**	**$7,326.00**
(2070-086)	**Route 111:**	**$4,102.56**
	Total CAP Fee:	**$14,615.37**

PACKET 4/9/14

MAP 109 LOT 10
SITE PLAN

Medical Office Building Addition

300 DERRY ROAD
HUDSON, NEW HAMPSHIRE

HUDSON
APR 01 2014
COMMUNITY DEVELOPMENT

PREPARED FOR

FOUNDATION MEDICAL PARTNERS, INC.

8 PROSPECT STREET
NASHUA, NEW HAMPSHIRE 03060
(603) 577-2090

INDEX OF PLANS		
SHEET No.	TITLE	
1 OF 10	MASTER SITE PLAN	1"=50'
2 OF 10	EXISTING CONDITIONS PLAN	1"=40'
3 OF 10	SITE PLAN	1"=40'
4-5 OF 10	DETAIL SHEET - GENERAL SITE	
6 OF 10	EROSION CONTROL PLAN	1"=40'
7 OF 10	DETAIL SHEET - EROSION CONTROL	
8 OF 10	LANDSCAPE PLAN	1"=40'
9 OF 10	DETAIL SHEET - LANDSCAPE PLAN	
10 OF 10	PHOTOMETRIC SITE LIGHTING PLAN	1"=40'

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

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____

_____ SIGNATURE DATE _____

_____ SIGNATURE DATE _____

SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

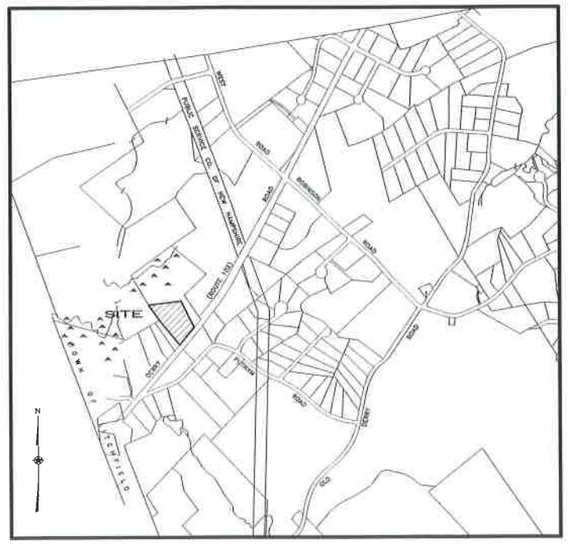
RECORD OWNER

Southern New Hampshire Medical Center

8 PROSPECT STREET
NASHUA, NEW HAMPSHIRE 03060
(603) 577-2090
www.snhhs.org

20 FEBRUARY 2014

REVISED
31 MARCH 2014



VICINITY PLAN
SCALE: 1" =1000'±

STATE OF NEW HAMPSHIRE
JAMES N. PETROPULOS
No. 10274
LICENSED
PROFESSIONAL ENGINEER

HSI Hayner/Swanson, Inc.
Civil Engineers/Land Surveyors
Three Congress Street Nashua, New Hampshire 03062-3301
Tel (603) 883-2057 Fax (603) 883-5057
www.hayner-swanson.com

STATE OF NEW HAMPSHIRE
No. 704
GARY L. COLLAR
LICENSED LAND SURVEYOR
SIGNATURE
3/31/14

©Hayner/Swanson, Inc.

FILE No. Q:\4820\dwg\4820 ADD\4820ADD-CS00

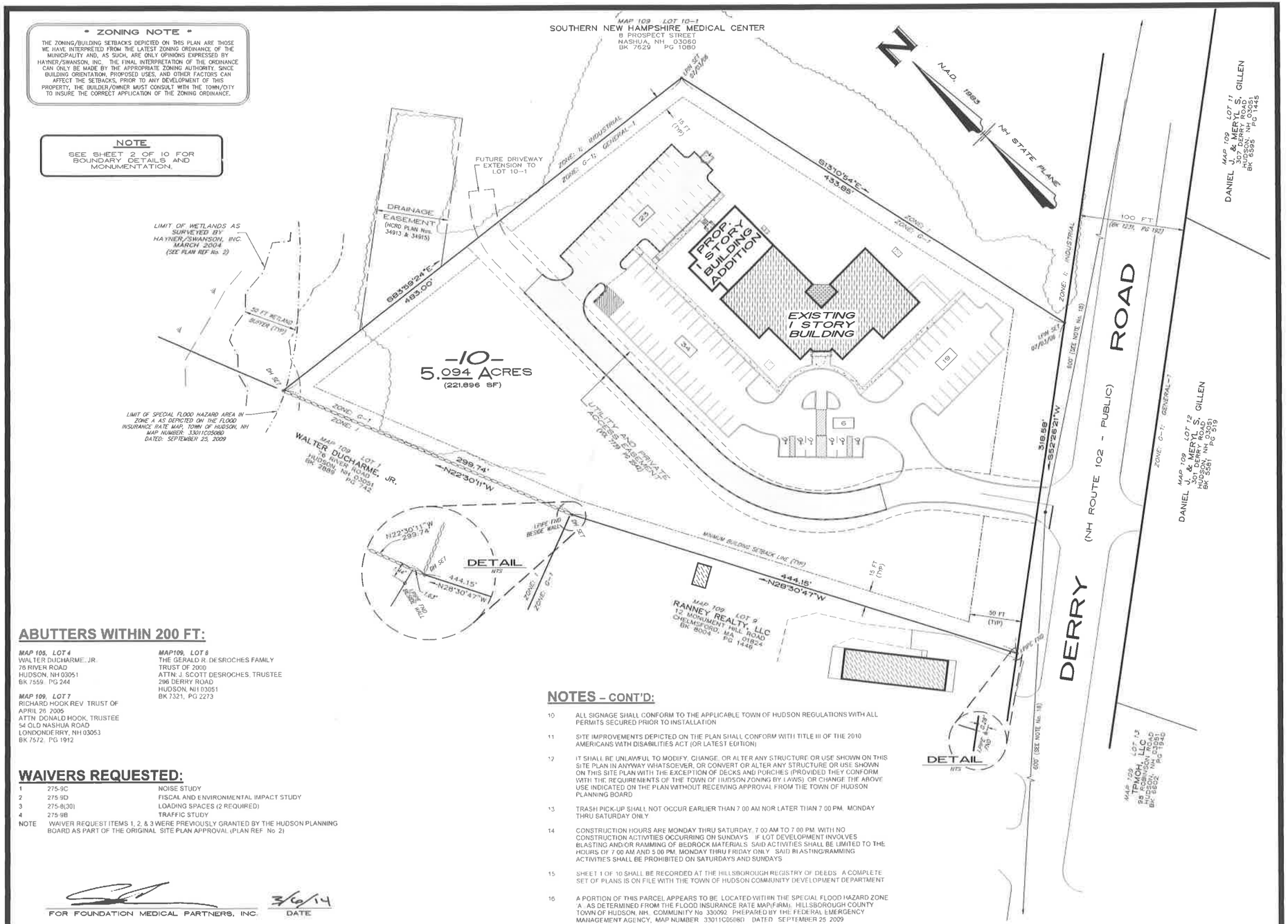
HSI Hayner/Swanson, Inc.
Three Congress Street Nashua, New Hampshire 03062-3301
Tel (603) 883-2057 Fax (603) 883-5057
www.hayner-swanson.com

* ZONING NOTE *

THE ZONING/BUILDING SETBACKS DEPICTED ON THIS PLAN ARE THOSE WE HAVE INTERPRETED FROM THE LATEST ZONING ORDINANCE OF THE MUNICIPALITY AND, AS SUCH, ARE ONLY OPINIONS EXPRESSED BY HAYNER/SWANSON, INC. THE FINAL INTERPRETATION OF THE ORDINANCE CAN ONLY BE MADE BY THE APPROPRIATE ZONING AUTHORITY, SINCE BUILDING ORIENTATION, PROPOSED USES, AND OTHER FACTORS CAN AFFECT THE SETBACKS. PRIOR TO ANY DEVELOPMENT OF THIS PROPERTY, THE BUILDER/OWNER MUST CONSULT WITH THE TOWN/CITY TO INSURE THE CORRECT APPLICATION OF THE ZONING ORDINANCE.

NOTE

SEE SHEET 2 OF 10 FOR BOUNDARY DETAILS AND MONUMENTATION.



ABUTTERS WITHIN 200 FT:

MAP 105, LOT 4
WALTER DUCHARME, JR.
76 RIVER ROAD
HUDSON, NH 03051
BK 7559, PG 244

MAP109, LOT 8
THE GERALD R. DESROCHES FAMILY TRUST OF 2000
ATTN: J. SCOTT DESROCHES, TRUSTEE
296 DERRY ROAD
HUDSON, NH 03051
BK 7321, PG 2273

MAP 109, LOT 7
RICHARD HOOK REV. TRUST OF APRIL 26, 2005
ATTN: DONALD HOOK, TRUSTEE
54 OLD NASHUA ROAD
LONDONDERRY, NH 03053
BK 7572, PG 1912

WAIVERS REQUESTED:

1	275-9C	NOISE STUDY
2	275-9D	FISCAL AND ENVIRONMENTAL IMPACT STUDY
3	275-8(301)	LOADING SPACES (2 REQUIRED)
4	275-9B	TRAFFIC STUDY

NOTE: WAIVER REQUEST ITEMS 1, 2, & 3 WERE PREVIOUSLY GRANTED BY THE HUDSON PLANNING BOARD AS PART OF THE ORIGINAL SITE PLAN APPROVAL (PLAN REF. No. 2)

FOR FOUNDATION MEDICAL PARTNERS, INC. — DATE 3/6/14

FOR SOUTHERN NH MEDICAL CENTER — DATE 3/6/14

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

APPROVED BY THE HUDSON, NH PLANNING BOARD

DATE OF MEETING: _____

_____ SIGNATURE DATE

_____ SIGNATURE DATE

SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

JAMES N. PETROPULOS No. 10274 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE

NOTES – CONT'D:

10 ALL SIGNAGE SHALL CONFORM TO THE APPLICABLE TOWN OF HUDSON REGULATIONS WITH ALL PERMITS SECURED PRIOR TO INSTALLATION

11 SITE IMPROVEMENTS DEPICTED ON THE PLAN SHALL CONFORM WITH TITLE III OF THE 2010 AMERICANS WITH DISABILITIES ACT (OR LATEST EDITION)

12 IT SHALL BE UNLAWFUL TO MODIFY, CHANGE, OR ALTER ANY STRUCTURE OR USE SHOWN ON THIS SITE PLAN IN ANYWAY WHATSOEVER, OR CONVERT OR ALTER ANY STRUCTURE OR USE SHOWN ON THIS SITE PLAN WITH THE EXCEPTION OF DECKS AND PORCHES (PROVIDED THEY CONFORM WITH THE REQUIREMENTS OF THE TOWN OF HUDSON ZONING BY LAWS) OR CHANGE THE ABOVE USE INDICATED ON THE PLAN WITHOUT RECEIVING APPROVAL FROM THE TOWN OF HUDSON PLANNING BOARD

13 TRASH PICK-UP SHALL NOT OCCUR EARLIER THAN 7:00 AM NOR LATER THAN 7:00 PM, MONDAY THRU SATURDAY ONLY

14 CONSTRUCTION HOURS ARE MONDAY THRU SATURDAY, 7:00 AM TO 7:00 PM. WITH NO CONSTRUCTION ACTIVITIES OCCURRING ON SUNDAYS. IF LOT DEVELOPMENT INVOLVES BLASTING AND/OR RAMMING OF BEDROCK MATERIALS, SAID ACTIVITIES SHALL BE LIMITED TO THE HOURS OF 7:00 AM AND 5:00 PM, MONDAY THRU FRIDAY ONLY. SAID BLASTING/RAMMING ACTIVITIES SHALL BE PROHIBITED ON SATURDAYS AND SUNDAYS

15 SHEET 1 OF 10 SHALL BE RECORDED AT THE HILLSBOROUGH REGISTRY OF DEEDS. A COMPLETE SET OF PLANS IS ON FILE WITH THE TOWN OF HUDSON COMMUNITY DEVELOPMENT DEPARTMENT

16 A PORTION OF THIS PARCEL APPEARS TO BE LOCATED WITHIN THE SPECIAL FLOOD HAZARD ZONE 'A', AS DETERMINED FROM THE FLOOD INSURANCE RATE MAP(FIRM), HILLSBOROUGH COUNTY TOWN OF HUDSON, NH, COMMUNITY No. 330092, PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, MAP NUMBER 33011C0508D, DATED SEPTEMBER 25, 2009

17 PRIOR TO ISSUANCE OF A FINAL CERTIFICATE OF OCCUPANCY A LICENSED LAND SURVEYOR CERTIFIED 'AS-BUILT' SITE PLAN SHALL BE PROVIDED TO TOWN OF HUDSON COMMUNITY DEVELOPMENT DEPARTMENT, CONFIRMING THAT THE SITE CONFORMS WITH THE PLANNING BOARD APPROVED SITE PLAN

18 SIGHT DISTANCE MEASUREMENTS AS PROVIDED BY 2006 TRAFFIC STUDY PREPARED BY VANASSE & ASSOCIATES, INC., ANDOVER, MA

19 SNOW REMOVAL TO BE PLACED IN OPEN AREAS OF THE SITE AS SHOWN ON SHEET 3 OF 10. IF NEEDED, EXCESS SNOW SHALL BE TRUCKED FROM THE SITE AND DISPOSED OF IN A LEGAL MANNER

20 PRESENT OWNER OF RECORD
MAP 109 LOT 10
SOUTHERN NEW HAMPSHIRE MEDICAL CENTER
8 PROSPECT STREET
NASHUA, NEW HAMPSHIRE 03060
BK 7629 PG 1080

PURSUANT TO RSA 676:18,III AND RSA 672:14

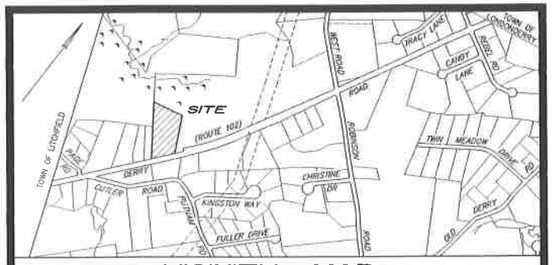
I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN

DATE: 3/31/14

STATE OF NEW HAMPSHIRE No. 704 GARY L. COLLINS LICENSED LAND SURVEYOR

SIGNATURE

LICENSED LAND SURVEYOR



VICINITY MAP SCALE: 1" = 1000'

PLAN REFERENCES:

1 SUBDIVISION/LOT LINE RELOCATION PLAN (LOTS 9 & 10, MAP 109), SNHMC SUBDIVISION, 296 & 300 DERRY ROAD, HUDSON, NEW HAMPSHIRE, PREPARED FOR: FOUNDATION MEDICAL PARTNERS, INC., RECORD OWNERS: SOUTHERN NEW HAMPSHIRE MEDICAL CENTER AND LEON J. & MICHELLE I. ZUPKOFSKA, SCALE: AS SHOWN, DATED: 26 MAY 2006, WITH REVISIONS THRU 07/03/06, AND PREPARED BY THIS OFFICE. RECORDED: HCRD – PLAN No. 34913

2 SITE PLAN (LOT 10, MAP 109), MEDICAL OFFICE BUILDING, 300 DERRY ROAD, HUDSON, NEW HAMPSHIRE, PREPARED FOR: FOUNDATION MEDICAL PARTNERS, INC., RECORD OWNER: SOUTHERN NEW HAMPSHIRE MEDICAL CENTER, SCALE: AS SHOWN, DATED: 3 MARCH 2006, WITH REVISIONS THRU 07/03/06, AND PREPARED BY THIS OFFICE. RECORDED: HCRD – PLAN No. 34915

3 AS-BUILT PLAN (LOT 10, MAP 109), MEDICAL OFFICE BUILDING, 300 DERRY ROAD, HUDSON, NEW HAMPSHIRE, PREPARED FOR: FOUNDATION MEDICAL PARTNERS, INC., RECORD OWNER: SOUTHERN NEW HAMPSHIRE MEDICAL CENTER, SCALE: 1" = 40', DATED: 5 JULY 2007, AND PREPARED BY THIS OFFICE

NOTES:

1 TOTAL SITE AREA: 5.094 ACRES (221,896 SF)

2 PRESENT ZONING: G-1; GENERAL-1

MINIMUM LOT REQUIREMENTS	
- LOT AREA	2 ACRES
- LOT FRONTAGE	200 FT
MINIMUM BUILDING SETBACKS REQUIREMENTS	
- FRONT YARD	50 FT
- SIDE YARD	15 FT
- REAR YARD	15 FT

3 LOT NUMBERS REFER TO THE TOWN OF HUDSON ASSESSORS MAP 109

4 SITE IS SERVICED BY MUNICIPAL WATER AND AN ON-SITE SEPTIC SYSTEM

5 PURPOSE OF PLAN: TO SHOW PROPOSED A 3,663 SF 1 STORY MEDICAL OFFICE BUILDING ADDITION WITH ACCOMPANYING PARKING AND SITE IMPROVEMENTS

6 PARKING (TOTAL LOT):
REQUIRED: OFFICE: 1 SPACE/300 SF x 15,483 SF = 52 SPACES
TOTAL SPACES PROVIDED: (INCLUDES 6 HANDICAP SPACES) = 82 SPACES

7 OPEN SPACE
REQUIRED: 35%
PROVIDED: 68%

8 A CAP FEE IN THE AMOUNT OF $14,615.37 ($3.99 x 3,663 SF MEDICAL OFFICE) SHALL BE PAID PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY, SUBJECT TO ANNUAL INFLATION INDEXING AS PERMITTED IN THE IMPACT FEE METHODOLOGY

9 SITE LIGHTING SHALL BE AS SHOWN ON THE PLAN, DIRECTED ONTO SITE, AND SHALL CONFORM WITH ALL APPLICABLE TOWN OF HUDSON ZONING REGULATIONS.

No.	DATE	REVISION	BY
1	03/31/14	ADDRESS STAFF AND PEER REVIEW COMMENTS	JNP

MASTER SITE PLAN
(MAP 109, LOT 10)

Medical Office Building Addition

300 DERRY ROAD
HUDSON, NEW HAMPSHIRE

PREPARED FOR:
FOUNDATION MEDICAL PARTNERS, INC.
8 PROSPECT STREET NASHUA, NEW HAMPSHIRE 03060 (603) 577-2090

RECORD OWNER:
Southern New Hampshire Medical Center
8 PROSPECT STREET NASHUA, NEW HAMPSHIRE 03060 (603) 577-2090

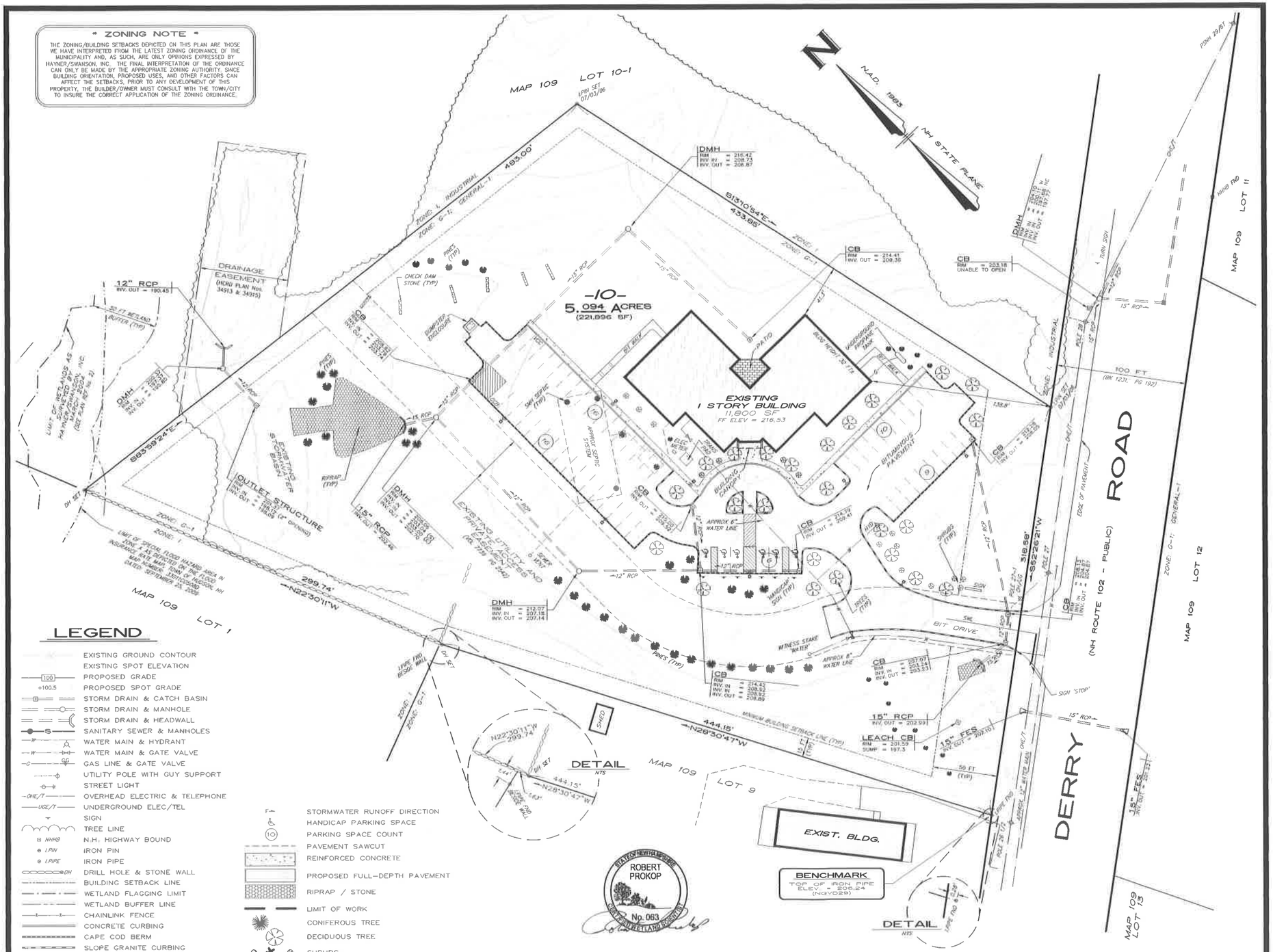
50 0 50 100 150 200 FEET
25 0 25 50 METERS
SCALE: 1"=50 Feet
1"=15.240 Meters

20 FEBRUARY 2014

HSI Hayner/Swanson, Inc.
Civil Engineers/Land Surveyors
Three Congress Street Nashua, New Hampshire 03062-3301
Tel (603) 883-2057 Fax (603) 883-5057
www.hayner-swanson.com

FIELD BOOK: 1150	DRAWING NAME: 4820ADD-F08I	4820-ADD	1 OF 10
DRAWING LOCATION: O:\4820\DWG\4820 ADD		File Number	Sheet

©Hayner/Swanson, Inc.



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

APPROVED BY THE HUDSON, NH PLANNING BOARD

DATE OF MEETING: _____

_____ SIGNATURE DATE _____

_____ SIGNATURE DATE _____

SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL

UTILITY NOTE

THE UNDERGROUND UTILITIES DEPICTED HEREON HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND PLOTTED FROM EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES DEPICTED COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND PORTIONS OF THE UTILITIES.

THIS PLAN DEPICTS A SURVEY MADE ON THE GROUND UNDER MY DIRECTION AND SUPERVISION BETWEEN MARCH 2004 AND JUNE 2007 IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE STATE OF NEW HAMPSHIRE AND THE CITY/TOWN WITHIN WHICH IT IS LOCATED. THE SURVEY WAS PERFORMED AS AN URBAN STANDARD PROPERTY SURVEY, AS DEFINED IN THE NH CODE OF ADMINISTRATIVE RULES, (CATEGORY 1, CONDITION 1, NHLSA STANDARDS) WITH A TRAVERSE ERROR OF CLOSURE BETTER THAN 1 PART IN 15,000.

3/31/14
DATE

STATE OF NEW HAMPSHIRE — No. 704 — GARY COLBY — LICENSED LAND SURVEYOR
SIGNATURE

©Hayner/Swanson, Inc.

NOTES:

1. THE EXISTING TOPOGRAPHY, AS SHOWN ON THE PLANS, IS BASED ON AN ACTUAL FIELD SURVEY MADE ON THE GROUND BETWEEN MARCH 2004 AND JUNE 2007
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE ACCURACY OF THE EXISTING TOPOGRAPHY PRIOR TO EARTHWORK OPERATIONS. NO CLAIM FOR EXTRA WORK DUE TO TOPOGRAPHIC INACCURACY SHALL BE CONSIDERED AFTER EARTHWORK HAS COMMENCED.
3. THE DATUM USED FOR THIS PROJECT IS NGVD29.
4. THE CONTRACTOR SHALL ONLY USE BENCHMARKS AS PROVIDED BY THE ENGINEER
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION. THE ENGINEER 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 CONTACTING "DIG SAFE" AT 1-888-344-7233 AT LEAST 72 HOURS BEFORE DIGGING.
6. BENCHMARK: TOP OF IRON PIPE FOUND AT SOUTHWEST CORNER OF LOT 10, MAP 109 ELEVATION = 206.24, DATUM = NGVD29
7. THE ABOVE REFERENCED BENCHMARK IS TIED TO NHDOT DISK No. 263 0060, ON 1 FT X 4 FT LEDGE OUTCROP, 0.5 MILES PAST THE HUDSON TOWN LINE IN LITCHFIELD AND NHDOT DISK No. 263 0050, ON 5" X 5" GRANITE MONUMENT, 0.8 MILES PAST THE HUDSON TOWN LINE IN LITCHFIELD.
8. THERE ARE NO WETLANDS UPON THIS LOT

811 DigSafe MA.ME.NH.RI.VT
CONTACT DIG SAFE 72 HOURS PRIOR TO CONSTRUCTION
digsafe.com
DIAL 811 or
1-888-DIG SAFE
1-888-344-7233

No.	DATE	REVISION	BY
1	03/31/14	ADDRESS STAFF AND PEER REVIEW COMMENTS	JNP

EXISTING CONDITIONS PLAN
(MAP 109, LOT 10)

Medical Office Building Addition

300 DERRY ROAD
HUDSON, NEW HAMPSHIRE

PREPARED FOR:
FOUNDATION MEDICAL PARTNERS, INC.
8 PROSPECT STREET NASHUA, NEW HAMPSHIRE 03060 (603) 577-2090

RECORD OWNER:
Southern New Hampshire Medical Center
8 PROSPECT STREET NASHUA, NEW HAMPSHIRE 03060 (603) 577-2090

40 0 40 80 120 160 FEET
20 0 20 40 METERS
SCALE: 1"=40 Feet
1"=12.192 Meters

20 FEBRUARY 2014

HSI Hayner/Swanson, Inc.
Civil Engineers/Land Surveyors
Three Congress Street Nashua, New Hampshire 03062-3301
Tel (603) 883-2057 Fax (603) 883-5057
www.hayner-swanson.com

FIELD BOOK: 1150	DRAWING NAME: 4820ADD-EC41	4820-ADD	2 OF 10
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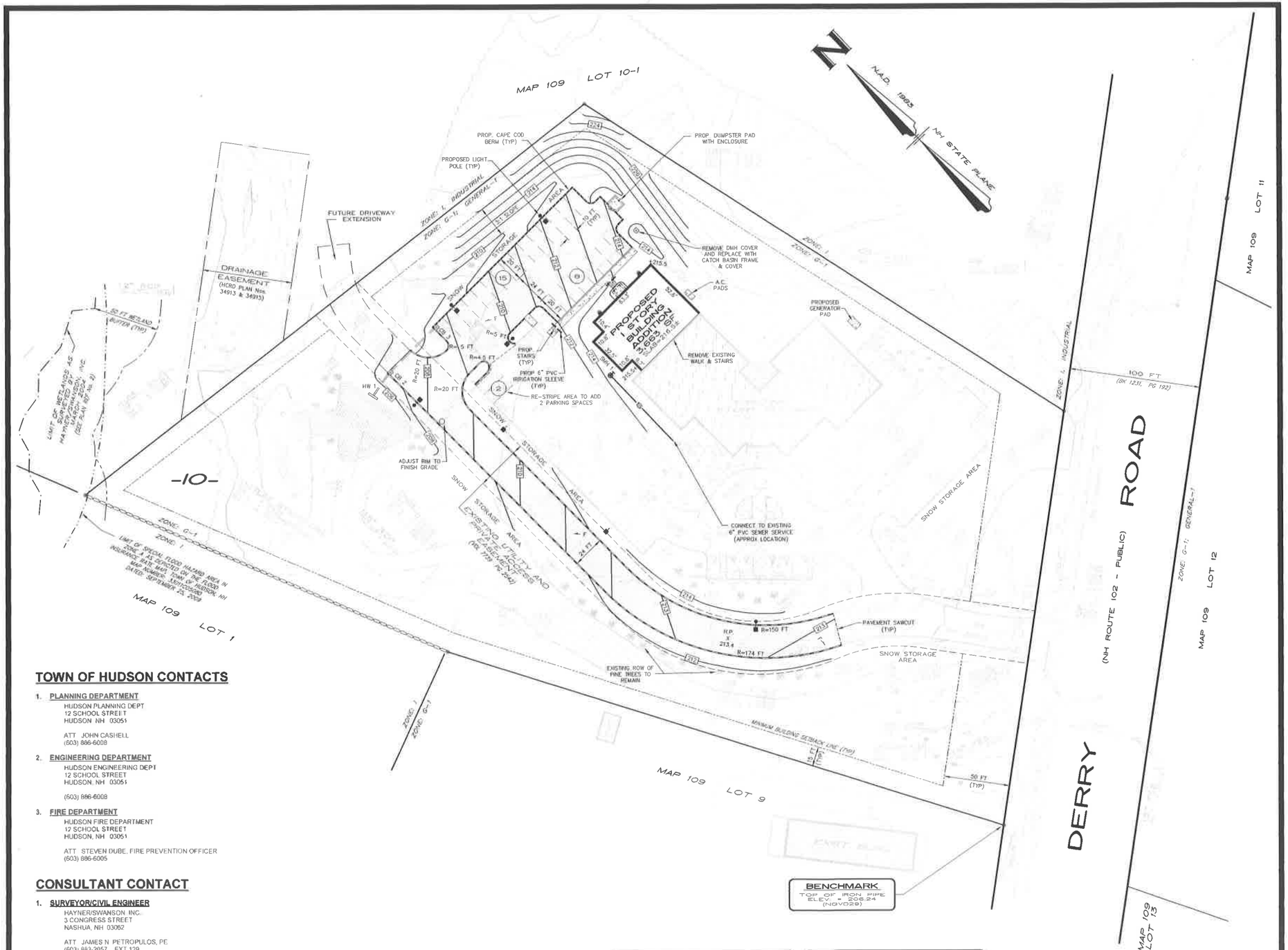

TOWN OF HUDSON CONTACTS

1. **PLANNING DEPARTMENT**
   HUDSON PLANNING DEPT
   12 SCHOOL STREET
   HUDSON NH 03051

   ATT JOHN CASHELL
   (603) 886-6008

2. **ENGINEERING DEPARTMENT**
   HUDSON ENGINEERING DEPT
   12 SCHOOL STREET
   HUDSON, NH 03051

   (603) 886-6008

3. **FIRE DEPARTMENT**
   HUDSON FIRE DEPARTMENT
   12 SCHOOL STREET
   HUDSON, NH 03051

   ATT STEVEN DUBE, FIRE PREVENTION OFFICER
   (603) 886-6005

CONSULTANT CONTACT

1. **SURVEYOR/CIVIL ENGINEER**
   HAYNER/SWANSON, INC.
   3 CONGRESS STREET
   NASHUA, NH 03062

   ATT JAMES N PETROPULOS, PE
   (603) 883-2057 EXT 129

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

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____

_____ SIGNATURE DATE _____

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STATE OF NEW HAMPSHIRE
JAMES N. PETROPULOS
No. 10274
LICENSED PROFESSIONAL ENGINEER

NOTE
SEE ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS AND DETAILS

NOTE
THE PROPOSED BUILDING ADDITION SHALL BE FULLY SPRINKLERED

NOTE
WATER, TELEPHONE AND POWER UTILITIES SHALL BE EXTENDED TO THE PROPOSED ADDITION FROM THE EXISTING BUILDING.

NOTE
ALL DISTURBED AREAS SHALL BE LOAMED AND SEEDED IMMEDIATELY UPON BEING CONSTRUCTED

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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 ROAD AND BRIDGE CONSTRUCTION, STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION, APPROVED AND ADOPTED 2010 ARE HEREBY INCORPORATED BY REFERENCE
2. 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 DEPT., HUDSON, NEW HAMPSHIRE. ALL DRAINAGE PIPES SHALL BE CLASS IV 3000 D (RCP). CATCH BASINS SHALL BE TYPE B, AND HAVE 3 FT SUMPS UNLESS OTHERWISE NOTED
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION. THE ENGINEER 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 CONTACTING "DIG SAFE" AT 1-888-344-7233 AT LEAST 72 HOURS BEFORE DIGGING
4. ALL DRAINAGE PIPE SHALL BE FURNISHED AND INSTALLED WITH FLEXIBLE GASKETS. JOINTS SHALL BE MADE WITH OIL RESISTANT COMPRESSION RINGS OF AN ELASTOMERIC MATERIAL CONFORMING TO ASTM C-443. MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL BE FOLLOWED
5. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE AND MAINTAINED THROUGH THE CONSTRUCTION PROCESS UNTIL STABILIZATION OCCURS
6. STUMPS SHALL BE DISPOSED OF OFF-SITE IN A LEGAL MANNER

NO.	DATE	REVISION	BY
1	03/31/14	ADDRESS STAFF AND PEER REVIEW COMMENTS	JP

SITE PLAN
(MAP 109, LOT 10)

Medical Office Building Addition

300 DERRY ROAD
HUDSON, NEW HAMPSHIRE

PREPARED FOR:
FOUNDATION MEDICAL PARTNERS, INC.
8 PROSPECT STREET NASHUA, NEW HAMPSHIRE 03060 (603) 577-2090

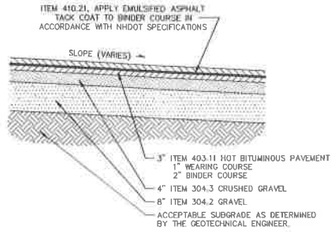
RECORD OWNER:
Southern New Hampshire Medical Center
8 PROSPECT STREET NASHUA, NEW HAMPSHIRE 03060 (603) 577-2090

40 0 40 80 120 160 FEET
20 0 20 40 METERS
SCALE: 1"=40 Feet
1"=12.192 Meters

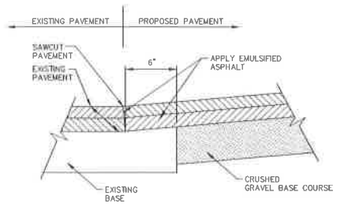
20 FEBRUARY 2014

HSI Hayner/Swanson, Inc.
Civil Engineers/Land Surveyors
Three Congress Street Nashua, New Hampshire 03062-3301
Tel (603) 883-2057 Fax (603) 883-5057
www.hayner-swanson.com

FIELD BOOK: 1150	DRAWING NAME: 4820ADD-FO41	4820-ADD	3 OF 10
DRAWING LOCATION: Q:\4820\DWG\4820 ADD		File Number	Sheet



TYPICAL PAVEMENT SECTION
NOT TO SCALE



SAWCUT PAVEMENT DETAIL
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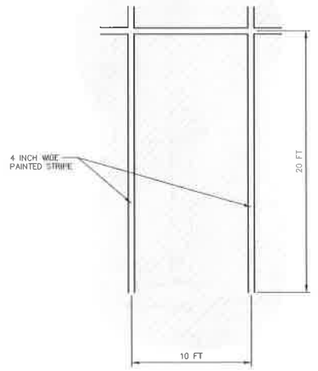

TYP. PARKING STALL DETAIL
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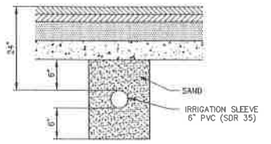

IRRIGATION SLEEVE DETAIL
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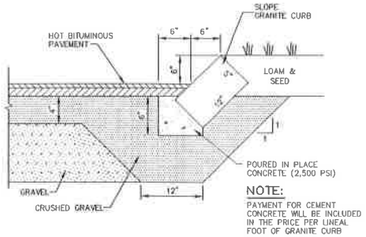

SLOPE GRANITE CURB DETAIL
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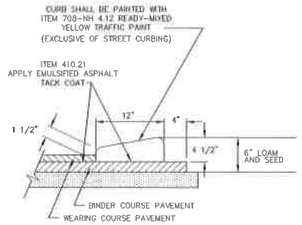
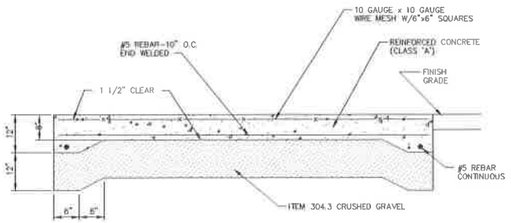


CAPE COD BERM DETAIL
NOT TO SCALE



DUMPSTER PAD DETAIL
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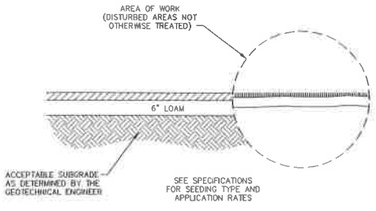
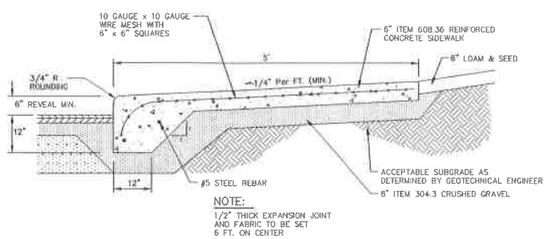


LOAM AND SEED DETAIL
NOT TO SCALE



CONCRETE SIDEWALK AND CURB DETAIL
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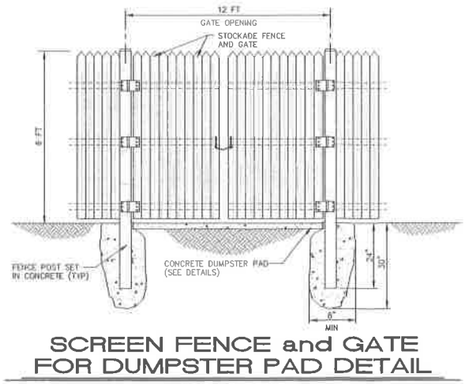
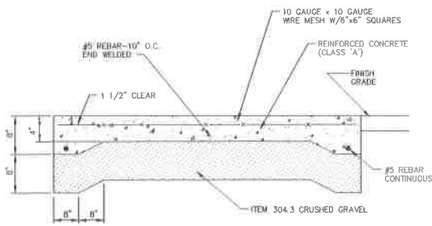


SCREEN FENCE and GATE FOR DUMPSTER PAD DETAIL
NOT TO SCALE



AC PAD DETAIL
NOT TO SCALE

No.	DATE	REVISION	BY
1	03/31/14	ADDRESS STAFF AND PEER REVIEW COMMENTS	JNP

DETAIL SHEET - GENERAL SITE
(MAP 109, LOT 10)

Medical Office Building Addition

300 DERRY ROAD
HUDSON, NEW HAMPSHIRE

PREPARED FOR:
FOUNDATION MEDICAL PARTNERS, INC.
8 PROSPECT STREET NASHUA, NEW HAMPSHIRE 03060 (603) 577-2090

RECORD OWNER:
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SCALE AS SHOWN

20 FEBRUARY 2014

HSI Hayner/Swanson, Inc.
Civil Engineers/Land Surveyors
Three Congress Street Nashua, New Hampshire 03062-3301
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STATE OF NEW HAMPSHIRE — JAMES N. PETROPULOS No. 10274 LICENSED PROFESSIONAL ENGINEER

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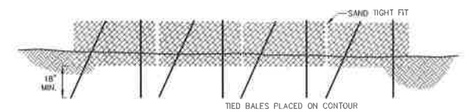
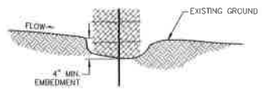


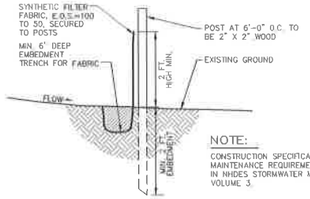
NOTES:

1. 2 STAKES PER BALE TO BE NO. 4 REBAR, STEEL PIPE, OR 2" X 2" WOOD.
2. ANGLE FIRST STAKE TOWARD PREVIOUSLY LAID BALE.
3. CONSTRUCTION SPECIFICATIONS AND MAINTENANCE REQUIREMENTS SHOWN IN NHDES STORMWATER MANUAL VOLUME 3.



STRAW BALE BARRIER DETAIL

NOT TO SCALE

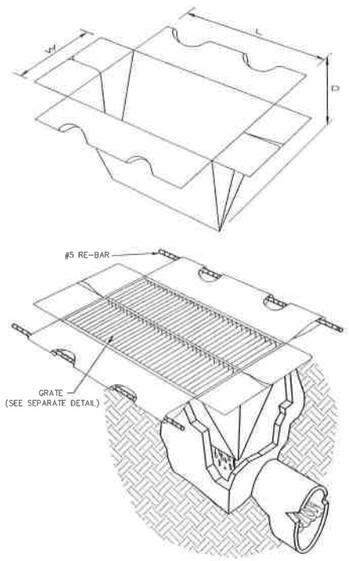


NOTE:

CONSTRUCTION SPECIFICATIONS AND MAINTENANCE REQUIREMENTS SHOWN IN NHDES STORMWATER MANUAL VOLUME 3.

SILT FENCE DETAIL

NOT TO SCALE



SILTSAK® NOTES

1.0 THE SILTSAK® SHALL BE MANUFACTURED FROM WOVEN POLYPROPYLENE AND SEWN BY A DOUBLE NEEDLE MACHINE, USING A HIGH STRENGTH NYLON THREAD.

2.0 THE SILTSAK® SEAMS SHALL HAVE A CERTIFIED AVERAGE WIDE WIDTH STRENGTH PER ASTM D-4884 STANDARDS AS FOLLOWS:

SILTSAK® STYLE	TEST METHOD	TEST METHOD
REGULAR FLOW	ASTM D-4884	166.0 LBS/IN
HI-FLOW	ASTM D-4884	114.0 LBS/IN

3.0 THE SILTSAK® WILL BE MANUFACTURED TO FIT THE OPENING OF THE CATCH BASIN OR DROP INLET. THE SILTSAK® WILL HAVE THE FOLLOWING FEATURES: TWO DUMP STRAPS ATTACHED AT THE BOTTOM TO FACILITATE THE EMPTYING OF THE SILTSAK®; THE SILTSAK® SHALL HAVE LIFTING LOOPS AS AN INTEGRAL PART OF THE SYSTEM TO BE USED TO LIFT THE SILTSAK® FROM THE BASIN; THE SILTSAK® SHALL HAVE A RESTRAINT CORD APPROXIMATELY HALFWAY UP THE SACK TO KEEP THE SIDES AWAY FROM THE CATCH BASIN WALLS, THIS YELLOW CORD IS ALSO A VISIBLE MEANS OF INDICATING WHEN THE SACK SHOULD BE EMPTIED, CLEANED, AND PLACED BACK INTO THE BASIN.

4.0 THE GEOTEXTILE FABRIC SHALL BE WOVEN POLYPROPYLENE FABRIC WITH THE FOLLOWING PROPERTIES:

SILTSAK® REGULAR FLOW

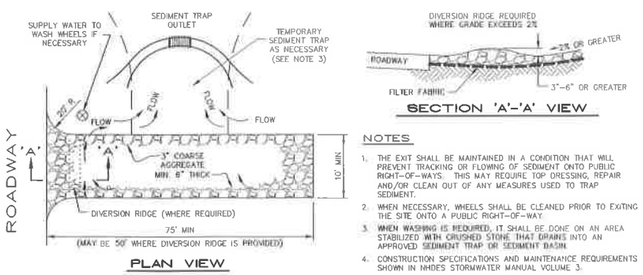
PROPERTY	TEST METHOD	TEST RESULT
GRAB TENSILE	ASTM D-4632	300 LBS
GRAB ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	600 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80%
APPARENT OPENING	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/FT2
PERMITTIVITY	ASTM D-4491	0.55 SEC

OR SILTSAK® HI-FLOW

PROPERTY	TEST METHOD	TEST RESULT
GRAB TENSILE	ASTM D-4632	265 LBS
GRAB ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90%
APPARENT OPENING	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/FT2
PERMITTIVITY	ASTM D-4491	1.5 SEC

SILTSAK® DETAIL

NOT TO SCALE



PLAN VIEW

SECTION 'A'-'A' VIEW

NOTES

1. THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO EXITING THE SITE ONTO A PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
4. CONSTRUCTION SPECIFICATIONS AND MAINTENANCE REQUIREMENTS SHOWN IN NHDES STORMWATER MANUAL VOLUME 3.

TEMPORARY GRAVEL CONSTRUCTION EXIT

NOT TO SCALE

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STATE OF NEW HAMPSHIRE JAMES N. PETROPULOS No. 10274 LICENSED PROFESSIONAL ENGINEER

GENERAL NOTES

1. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH STANDARDS AND SPECIFICATIONS THEREOF IN NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES STORMWATER MANUAL'S, VOLUME 3, (LATEST EDITION)
2. THE WORK AREA SHALL BE GRADED, SHAPED, AND OTHERWISE TRAINED IN SUCH A MANNER AS TO MINIMIZE SOIL EROSION, SILTATION OF DRAINAGE CHANNELS, DAMAGE TO EXISTING VEGETATION, AND DAMAGE TO PROPERTY OUTSIDE THE LIMITS OF THE WORK AREA. SILT FENCES, STRAW BALES AND/OR DETENTION BASINS WILL BE NECESSARY TO ACCOMPLISH THIS END.
3. STRIPPED TOPSOIL SHALL BE STOCKPILED, WITHOUT COMPACTION, AND STABILIZED AGAINST EROSION IN ACCORDANCE WITH TEMPORARY STABILIZATION OF DISTURBED AREAS" AS OUTLINED IN NOTE No. 4
4. TEMPORARY STABILIZATION OF DISTURBED AREAS.
   SEED BED PREPARATION: 10-10-10 FERTILIZATION TO BE SPREAD AT THE RATE OF 7 LBS PER 1,000 SF AND AGRICULTURAL LIMESTONE AT A RATE OF 90 LBS PER 1,000 SF AND INCORPORATED INTO THE SOIL. THE SOIL, FERTILIZER AND LIMESTONE SHALL BE TILLED TO PREPARE FOR SEEDING.
   A. SEED MIXTURE: USE ANY OF THE FOLLOWING:

SPECIES	RATE PER 1,000 SF	DEPTH	SEEDING DATES
WINTER RYE	2.5 LBS	1"	08/15 TO 09/15
OATS	2.5 LBS	1"	04/15 TO 10/15
ANNUAL RYE GRASS	1.0 LBS	0.25"	08/15 TO 09/15

   B. MULCHING: MULCH SHOULD NE USED ON HIGHLY ERODIBLE AREAS, AND WHERE CONSERVATION OF MOISTURE WILL FACILITATE PLANT ESTABLISHMENT AS FOLLOWS:

TYPE	RATE PER 1,000 SF	USE & COMMENTS
STRAW	70 TO 90 LBS	MAY BE USED WITH PLANTINGS, MUST BE ANCHORED TO BE USED ALONE
WOOD CHIPS OR BARK MULCH	~~400 TO 920 LBS~~	USED WITH TREE AND SHRUB PLANTINGS
FIBROUS MATTING	AS RECOMMENDED BY MANUFACTURER	MUST BE BIODEGRADABLE. USE IN SLOPE AREAS AND AREAS DIFFICULT TO VEGETATE
CRUSHED STONE ¾" TO 1½" DIA	SPREAD TO GREATER THAN ½" THICKNESS	USE IN SPECIFIC AREAS AS SHOWN ON PLAN OR AS NEEDED

5. PERMANENT STABILIZATION OF DISTURBED AREAS:
   A. ALL ROADWAYS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
   B. ALL CUT AND FILL SLOPES SHALL BE SEEDED AND MULCHED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
6. THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION. BUT IN NO CASE SHALL EXCEED 5 ACRES AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED.
7. AN AREA SHALL BE CONSIDERED STABILIZED IF ONE OF THE FOLLOWING HAS OCCURRED:
   A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED.
   B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED.
   C. A MINIMUM OF 3 INCHES OF NON-ERODIBLE MATERIAL, SUCH AS STONE OR RIPRAP, HAS BEEN INSTALLED.
   D. OR, EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
8. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
9. SITE LOCATION:
   42° 46' 54" N LATITUDE; 71° 25' 14" W LONGITUDE
10. TOTAL AREA OF DISTURBED SOILS: 54,800± SF
11. REFERENCE IS MADE TO THE LATEST EDITION OF THE FEDERAL REGISTER (63 FR 7857), ENVIRONMENTAL PROTECTION AGENCY NPDES GENERAL PERMITS FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES. FOR ADDITIONAL INFORMATION CONTACT (202) 564-9545 OR www.epa.gov/npdes/stormwater
12. THE ENTIRE CONTENTS OF THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE RETAINED ON-SITE FOR THE DURATION OF THE CONTRACT AND BE MADE AVAILABLE TO LOCAL, STATE AND FEDERAL CODE ENFORCEMENT PERSONNEL.
13. THIS PROJECT SHALL BE MANAGED TO MEET THE REQUIREMENTS AND INTENT OF RSA 430:53 AND AGR 3800 RELATIVE TO INVASIVE SPECIES AND FUGITIVE DUST IS CONTROLLED IN ACCORDANCE WITH ENV-A 1000.

WINTER CONDITION NOTES

1. 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 INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1 AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE PLACEMENT OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
2. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
3. AFTER NOVEMBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3.

EPA

THE CONTRACTOR SHALL FILE THE EPA NOTICE OF INTENT (NOI) FORM AT LEAST 14 DAYS PRIOR TO CONSTRUCTION

SITE MAINTENANCE/INSPECTION PROGRAM

THE FOLLOWING PROVIDES AN ITEMIZATION OF SPECIFIC SITE MAINTENANCE PRACTICES THAT WILL BE EMPLOYED ON THE SITE TO MINIMIZE POLLUTANT GENERATION AND TRANSPORT FROM THE SITE. THE SITE MAINTENANCE PROGRAM INCLUDES ROUTINE INSPECTIONS, PREVENTATIVE MAINTENANCE AND "GOOD HOUSEKEEPING" PRACTICES.

ROUTINE INSPECTIONS

1. THE CONTRACTOR SHALL INSPECT ALL CONTROL MEASURES AT LEAST ONCE A WEEK AND WITHIN TWELVE (12) HOURS OF THE END OF A STORM WITH RAINFALL AMOUNT GREATER THAN 0.5 INCHES. THE INSPECTIONS WILL VERIFY THAT THE STRUCTURAL BMPS DESCRIBED IN THE PLANS ARE IN GOOD CONDITION AND ARE MINIMIZING EROSION. A MAINTENANCE INSPECTION REPORT WILL BE MADE WITH EACH INSPECTION. COMPLETED INSPECTION FORMS SHALL BE KEPT ON-SITE FOR THE DURATION OF THE PROJECT. FOLLOWING CONSTRUCTION, THE COMPLETED FORMS SHALL BE RETAINED AT THE CONTRACTOR'S OFFICE FOR A MINIMUM OF ONE YEAR.

PREVENTATIVE MAINTENANCE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL TEMPORARY AND PERMANENT CONTROLS THROUGHOUT THE DURATION OF THIS CONTRACT. MAINTENANCE PRACTICES SHALL INCLUDE, BUT ARE NOT LIMITED TO:

1. CLEANING OF CATCH BASINS TWICE PER YEAR OR MORE FREQUENTLY AS DICTATED BY QUARTERLY INSPECTIONS.
2. CLEANING OF SEDIMENT AND DEBRIS FROM STORMWATER MANAGEMENT AREA FOREBAY TWICE PER YEAR OR MORE FREQUENTLY AS DICTATED BY MONTHLY INSPECTIONS.
3. IMPLEMENTATION OF OTHER MAINTENANCE OR REPAIR ACTIVITIES AS DEEMED NECESSARY BASED UPON WEEKLY INSPECTIONS.
4. REMOVAL OF BUILT UP SEDIMENT ALONG SILT FENCES AND/OR HAY BALE BARRIERS.
5. REMOVAL OF BUILT UP SEDIMENT IN BOTH TEMPORARY AND PERMANENT CONTROLS SUCH AS GRASS SWALES, SEDIMENT FOREBAYS AND RECHARGE/DETENTION BASINS.
6. RECONSTRUCTING THE TEMPORARY GRAVEL CONSTRUCTION EXIT IF NOT WORKING PROPERLY.
7. TREATMENT OF NON-STORM WATER DISCHARGES SUCH AS WATER FROM WATER LINE FLUSHINGS OR GROUNDWATER FROM DEWATERING EXCAVATIONS. SUCH FLOWS SHOULD BE DIRECTED TO A TEMPORARY SEDIMENTATION BASIN OR STORMWATER MANAGEMENT AREA.
8. SWEEP PARKING LOTS AND DRIVES REGULARLY TO MINIMIZE SEDIMENT ACCUMULATION. FREQUENCY WILL VARY SEASONALLY ACCORDING TO SEDIMENT ACCUMULATION ON PAVE SURFACES (E.G., MORE FREQUENT SWEEPING DURING THE WINTER AND SPRING).

GOOD HOUSEKEEPING PRACTICES

1. THE CONTRACTOR SHALL EMPLOY MEASURES AND PRACTICES TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS TO STORM AND WATER RUNOFF. THE CONTRACTOR SHALL PAY SPECIAL ATTENTION TO THE HANDLING, USE AND DISPOSAL OF MATERIALS SUCH AS PETROLEUM PRODUCTS, FERTILIZERS AND PAINTS TO ENSURE THAT THE RISK ASSOCIATED WITH THE USE OF THESE PRODUCTS IS MINIMIZED. THE FOLLOWING "GOOD HOUSEKEEPING" PRACTICES SHALL BE FOLLOWED DURING CONSTRUCTION OF THE PROJECT:
   A. AN EFFORT SHALL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB.
   B. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE.
   C. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THEIR MANUFACTURERS' LABELS.
   D. WHENEVER POSSIBLE, ALL OF A PRODUCT SHALL BE USED BEFORE DISPOSING OF THE CONTAINER.
   E. MANUFACTURERS' RECOMMENDATIONS FOR PROPER USE AND DISPOSAL SHALL BE FOLLOWED.
   F. THE CONTRACTOR SHALL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS.

SPILL PREVENTION AND CLEANUP PRACTICES

A. MANUFACTURERS' RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.

B. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ON-SITE. EQUIPMENT AND MATERIAL WILL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.

C. ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.

D. THE SHOP AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.

E. SPILLS OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE.

F. THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM RECCURRING AND HOW TO CLEAN UP THE SPILL. IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED.

No.	DATE	REVISION	BY
1	03/31/14	ADDRESS STAFF AND PEER REVIEW COMMENTS	JRP

DETAIL SHEET - EROSION CONTROL
(MAP 109, LOT 10)

Medical Office Building Addition

300 DERRY ROAD
HUDSON, NEW HAMPSHIRE

PREPARED FOR:

FOUNDATION MEDICAL PARTNERS, INC.
8 PROSPECT STREET NASHUA, NEW HAMPSHIRE 03060 (603) 577-2090

RECORD OWNER:

Southern New Hampshire Medical Center
8 PROSPECT STREET NASHUA, NEW HAMPSHIRE 03060 (603) 577-2090

SCALE AS SHOWN

20 FEBRUARY 2014

HSI Hayner/Swanson, Inc.
Civil Engineers/Land Surveyors
Three Congress Street Nashua, New Hampshire 03062-3301
Tel (603) 883-2057 Fax (603) 883-5057
www.hayner-swanson.com

FIELD BOOK: 1150	DRAWING NAME: 4820ADD-DET1	4820-ADD	7 OF 10
DRAWING LOCATION: O:\4820\DWG\4820 ADD		File Number	Sheet

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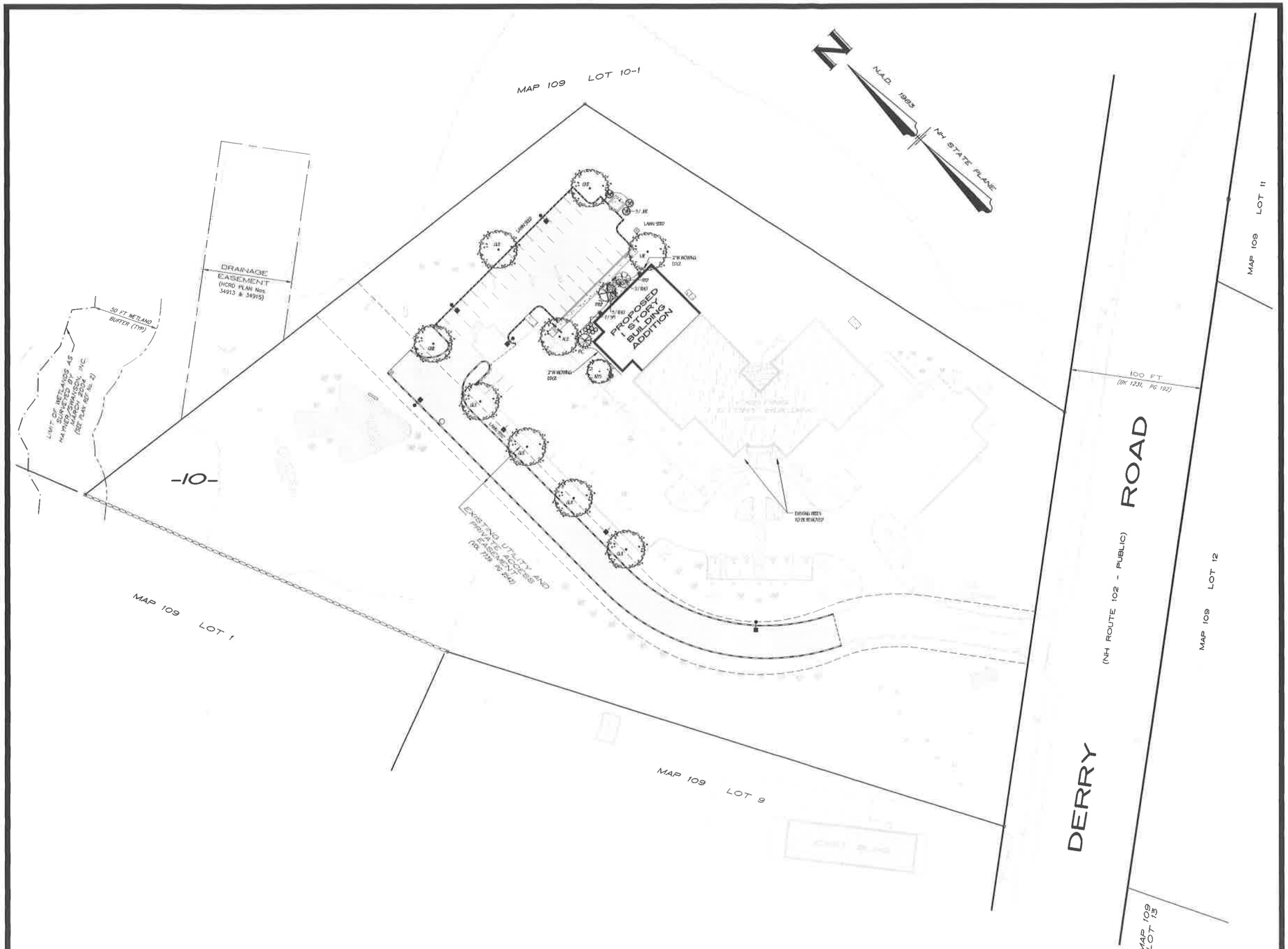

PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL

APPROVED BY THE HUDSON, NH PLANNING BOARD

DATE OF MEETING: _____

_____ SIGNATURE DATE: _____

_____ SIGNATURE DATE: _____

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PLANT MATERIAL LIST

1/ ACE	ACER RUBRUM (KARPICK MAPLE) NO SUBS.	2.5"-3" CAL.	
6/ GLE	GLEDITSIA T.I. (HALKA HONEYLOCUST)	2.5"-3" CAL.	
1/ HYD	HYDRANGEA PANICULATA (TARDIVA HYDRANGEA)	6'-7' B&B TREEFORM	
3/ JHE	JUNIPERUS CHINENSIS (HETZ COLUMNAR JUNIPER)	6'-7' B&B	
1/ LIR	LIRIODENDRON TULIPIFERA (TULIPTREE)	3"-3.5" CAL.	
1/ NYS	NYSSA SYLVATICA (RED RAGE TUPELO)	2.5"-3" CAL.	
1/ PIC	PICEA PUNGENS (FAT ALBERT BLUE SPRUCE) NO SUBS.	8'-10' B/B	
2/ QUE	QUERCUS PALUSTRIS (PIN OAK)	2.5"-3" CAL.	
1/ PRU	PRUNUS SARGENTII (PINK FLAIR CHERRY)	2.5"-3" CAL.	
5/ RHO	RHODODENDRON (CHIONOIDES RHODODENDRON)	#7 GAL.	
7/ SPI	SPIREA JAPONICA (NEON FLASH SPIREA)	#3 GAL.	

LAWN SEED TO MATCH SITE

BARK MULCH BEDS TO MATCH SITE

No.	DATE	REVISION	BY
1	03/31/14	ADDRESS STAFF AND PEER REVIEW COMMENTS	JNP

LANDSCAPE PLAN
(MAP 109, LOT 10)

Medical Office Building Addition

300 DERRY ROAD
HUDSON, NEW HAMPSHIRE

PREPARED FOR:

FOUNDATION MEDICAL PARTNERS, INC.
8 PROSPECT STREET NASHUA, NEW HAMPSHIRE 03060 (603) 577-2090

RECORD OWNER:

Southern New Hampshire Medical Center
8 PROSPECT STREET NASHUA, NEW HAMPSHIRE 03060 (603) 577-2090

40 0 40 80 120 160 FEET
20 0 20 40 METERS
SCALE: 1"=40 Feet
1"=12.192 Meters

20 FEBRUARY 2014

PREPARED BY :

BLACKWATER DESIGN
PHONE (603) 648 - 6500 FAX (603) 648 - 6506
Land Planning - Landscape Architecture
85 Frost Lane - Webster, NH 03303

FIELD BOOK: 1150	DRAWING NAME: 4820ADD-LS41	4820-ADD	8 OF 10
DRAWING LOCATION: Q:\4820\DWG\4820 ADD		File Number	Sheet

General Specifications

1. The contractor shall at his expense furnish all the materials, supplies, machinery, equipment, tool, superintendent, labor, insurance, & other accessories and services necessary to complete the said project within the unit costs stated within the bid price.

2. The work to be done under this contract is as shown and described on the drawings. Each bidder shall make a careful examination of the plans and specifications (the plan shall dictate quantities) and acquaint himself with all conditions before making his proposal. He will be held responsible for errors in his proposal resulting from his failure to make such an examination. All bidders shall visit the site and inform themselves of all conditions.

3. The bids shall be based on materials and equipment complying with the drawings and the specifications. The contractor shall be responsible under this contract price, for furnishing and installing materials confirming to the bid items. Under no circumstances may a species `hybrid' be substituted or size changed without consent of the landscape architect.

4. The contractor shall be responsible for the protection of such existing utilities as water mains, sewer systems, gas mains, electrical conduits, telephone lines and any other utilities and if any damage or destruction may occur to these utilities, he shall be responsible for their repair and/or replacement at his expense.

5. The contractor shall make payment for all damages to buildings, structures, trees, shrubs and/or any other property outside the construction area or located within those limits but not designated for removal or reconstructed providing such damage shall result from accident caused by negligence for which the contractor shall be legally liable.

6. If additional labor and/or materials is requested or required, the contractor shall submit a price to the owner. If the owner approves the price he shall prepare a change order for approval and signature. The contractor shall not proceed without a written authorization from the owner for the additional work. If the contractor proceeds with the additional work without this authorization he shall forfeit any claim for additional compensation.

7. The landscape architect shall reserve the right to inspect the project work at any time deemed necessary to insure that the specifications and plans and any other contract documents are being followed.

8. All seeded areas shall receive a minimum 6" topsoil blanket (by site contractor) w/site preparation, raking and general clean up prior to application. Operations shall include a preemergence type herbicide, 12-25-12 granular fertilizer @ 10 lbs./1000 sf., and pelletized limestone @ 25 lbs./1000 s/f power reaked into the top 2" of soil prior to hydro-seeding. Ratios & application rates may change based upon the required soil analysis.

10. Use Gold Star Nursery's premium bluegrass seed blend to match sod. Seed shall be spread @ 4lbs./1000. Lawn germination shall be 95% free of noxious weeds for acceptance. Define differences in seed mixes (if applicable) with irrigation flagging until 2nd mowing.

11. If an irrigation system is approved, the system shall be design/build. The awarded contractor shall provide a shop drawing of the system for owner review. the lawn areas shall be irrigated with pop-up misters: while all shrub beds shall have a drip/soaker hose system. Coordinate 6" PVC pavement sleeves with site contractor.

12. Hydroseeding operations shall be a one part process with a paper fiber mulch; a tackifier shall be applied on all slopes greater than 3:1, Excelsor Drainage mat shall be applied to all 2:1 slopes and drainage swales per plan.

13. Contractor shall maintain, from acceptance date, the lawn areas through the first mowing. Contractor is not responsible for the first mowing.

14. All plant materials shall be installed in accordance with A.L.C.C. specifications and per plan details. Per details deciduous trees shall be guyed in a tripod fashion using plastic cinch ties & 2" x 2" x 8' hardwood stakes; trees and shrubs shall have appropriate soil mixtures, fertilizer and soil retention granules.

15. If the soil conditions are extremely sandy, all trees shall have a 6" layer of compacted topsoil (verify with Landscape Architect) placed in the base of the plant pit as a moisture retention layer. The plant pit sidewalls shall be over excavated by an additional 12" beyond the normal outside radius of the hole. A topsoil planting mixture shall be used to backfill as per spec # 22.

16. Landscape architect shall have the right to reject and have ground removed any plant material not of proper size or of weak quality, ie. thin, no lower branching, etc. Contractor must submit shipping lists (billing invoices) for verification.

17. All plant material shall be guaranteed for a period of one (1) year from date of installation. Any material which dies or does not show a healthy appearance within this time shall be replaced at the contractors expense; with same warranty requirements as the original. Warranty does not cover loss due to insect infestation or mechanical damage, ie. snow storage.

18. Plant beds and saucers vary in dia. (refer to dwg). Trees and shrubs shall receive a 4" covering of pine/hemlock bark mulch; saucer diameters per drawing & details. Deciduous trees shall have a 6' dia. saucer (typ.), evergreen trees shall have a saucer 2' beyond it's outter branches.

20. All B&B material which are encased in wire baskets shall have the wires cut loose and the top third removed prior to backfill operation.

21. If road base is encountered in any plant bed areas, ie. parking islands, it shall be removed and suitable amended soil installed per drawings and specifications.

22. Soil planting mixture shall be a 4% organic topsoil, amended with 10% wood ash, 10% manure, & 30% peatmoss(or incorporate ALL-GRO or a similar dehydrated compost material. If planting in sand, gravel or other well drained soils, a 50% peatmoss to excavated soil. Other soil amendments shall include; Agriform tablets, Hydro-Gel or equal, and Roots growth enhancer to all trees and shrubs listed, per manufacturers specifications. All plant material pits will receive a min. 20% in volume mix of All-Gro soil amendment.

23 . Landscape contractor shall not be responsible for topsoil spreading but shall coordinate with the site contractor adherence to the mound grades, plant bed soil depths and soil type per dwgs & spec. Landscape contractor shall power rake-out for seed.

24. Landscape contractor shall provide a soil analysis of the topsoil planting mixture.

25. Contractor shall protect all B&B materials left above grade prior to installation from drying out. All plants shall be stored, covered in mulch, and irrigated until planted. Any plant left on the ground and whose outter ball surface drys out, shall be rejected by the landscape architect.

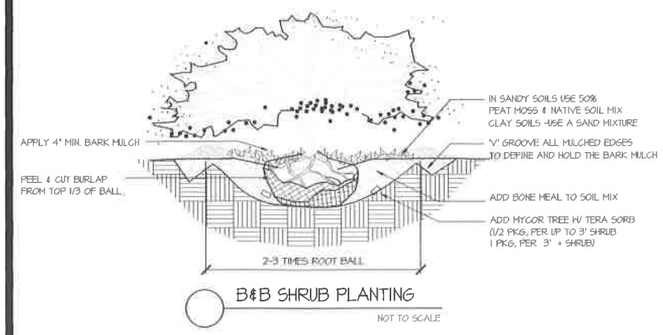
26. Plan dictates, contractor shall alert Landscape Architect if any descrepencies exist between the plan, the material list, and as-built site conditions.

27 . Installer shall notify landscape architect prior to planting, to review plant locations and bedline configurations. If contractor installs without the placement approval of the L.A., said architect shall have the right to relocate any installed plants at the contractor's expense.

28. Installer shall notify landscape architect prior to plant installation to review all materials. Any plants of poor condition, improper size, or species will be rejected.

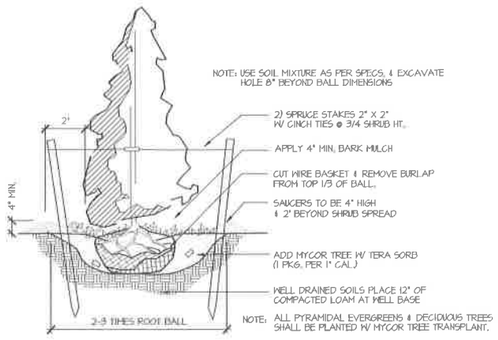
29. Upon one year review, contractor shall remove all guys & stakes and/or straighten any trees that have shifted. Any weak or bare spots in lawn shall be reseeded.

30. Any questions concerning this drawing shall be directed to Joseph Hochrein c/o Blackwater Design, 85 Frost Lane, Webster, NH 03303, 603-648-6500.



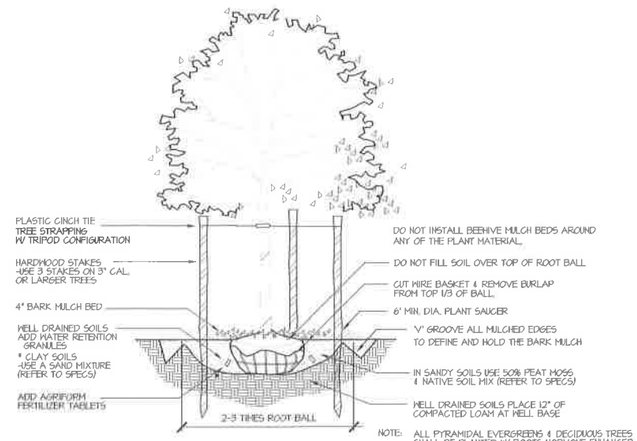
B&B SHRUB PLANTING

NOT TO SCALE



PYRAMIDAL EVERGREEN TREE PLANTING

NOT TO SCALE



TREE PLANTING 2" + CAL.

NOT TO SCALE

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1	03/31/14	ADDRESS STAFF AND PEER REVIEW COMMENTS	JNP

DETAIL SHEET - LANDSCAPE
(MAP 109, LOT 10)

Medical Office Building Addition

300 DERRY ROAD
HUDSON, NEW HAMPSHIRE

PREPARED FOR:

FOUNDATION MEDICAL PARTNERS, INC.
8 PROSPECT STREET NASHUA, NEW HAMPSHIRE 03060 (603) 577-2090

RECORD OWNER:

Southern New Hampshire Medical Center
8 PROSPECT STREET NASHUA, NEW HAMPSHIRE 03060 (603) 577-2090

SCALE AS SHOWN

20 FEBRUARY 2014

PREPARED BY :

BLACKWATER DESIGN
PHONE (603) 648 - 6500 FAX (603) 648 - 6506
Land Planning - Landscape Architecture
85 Frost Lane - Webster, NH 03303

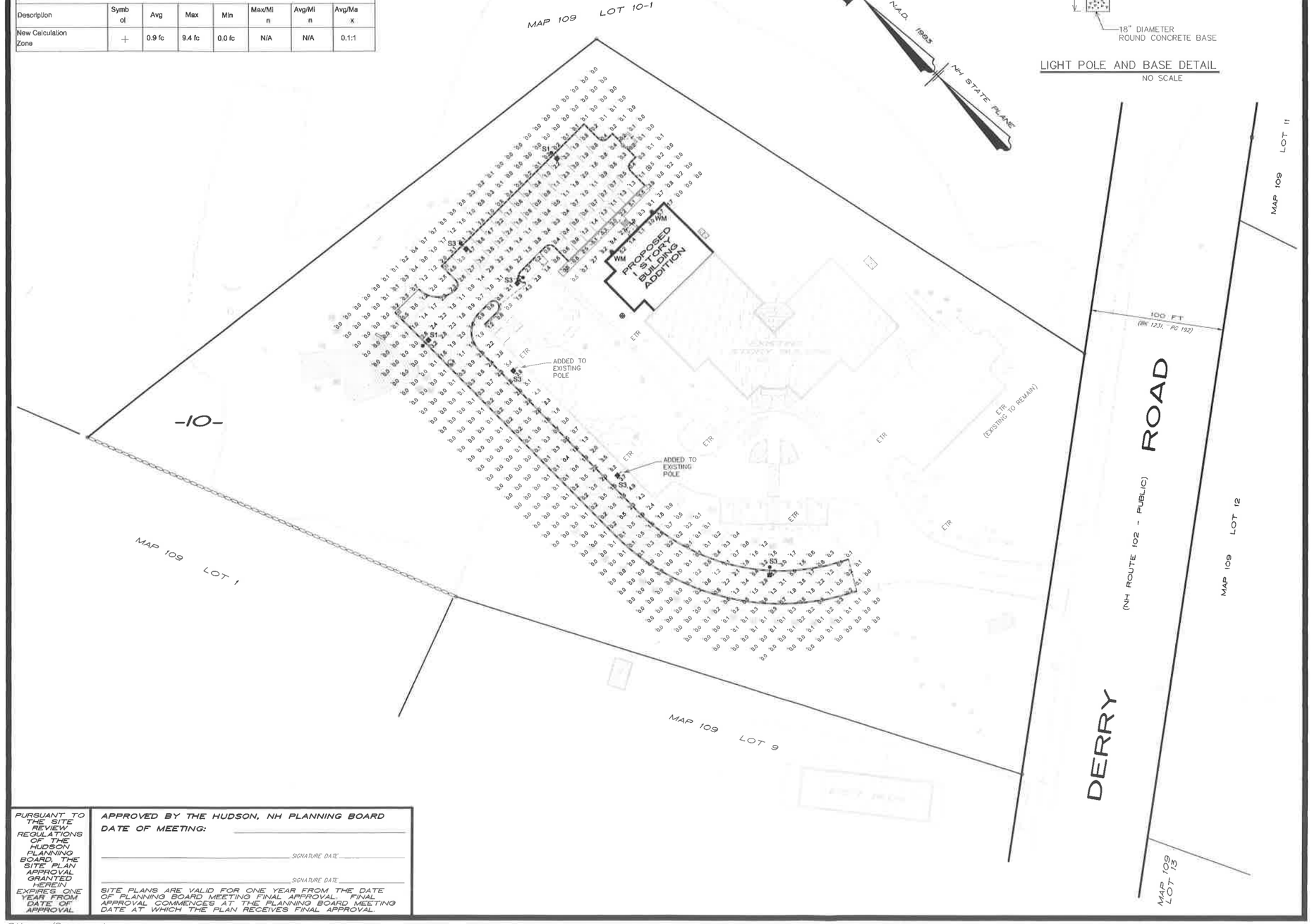
FIELD BOOK: 1150	DRAWING NAME: 4820ADD-L541	4820-ADD	9 OF 10
DRAWING LOCATION: Q:\4820\DWG\4820 ADD		File Number	Sheet

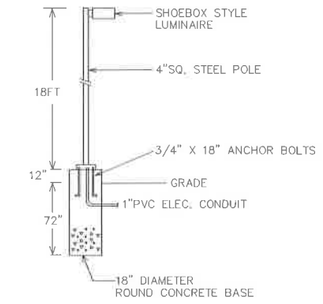
Luminaire Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	S1	2	Lithonia Lighting	KSF1 175M R4SC with SSS 18 4C DM19	Single Type IV Forward Throw Cut Off with 18 ft. Square Steel Pole	M175/U	1	KSF1_175M_R4SC_(PULSE_START).ies	14400	0.81	208
	S3	5	Lithonia Lighting	KSF1 175M R2 with SSS 18 4C DM19	Single Type II Forward Throw Cut Off with 18 ft. Square Steel Pole	M175/U	1	KSF1_175M_R2_(PULSE_START).ies	14400	0.81	208
	WM	2	Lithonia Lighting	WST 150M FT (PULSE START)	ARCHITECTURAL SCONCE WITH FORWARD THROW DISTRIBUTION WITH CLEAR, FLAT GLASS LENS. CLEAR LAMP. MEETS THE 'NIGHTTIME FRIENDLY' CRITERIA	ONE 150-WATT CLEAR ED17 PULSE START METAL HALIDE, HORIZONTAL POS.	1	WST_150M_FT_(PULSE_START).ies	14000	0.81	189

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min	Avg/Max
New Calculation Zone	+	0.9 fc	9.4 fc	0.0 fc	N/A	N/A	0.1:1





LIGHT POLE AND BASE DETAIL
NO SCALE

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LITHONIA LIGHTING

FEATURES & SPECIFICATIONS

Area Lighting

KSF1

METAL HALIDE, 100-250W
HIGH PRESSURE SODIUM, 70-200W
15' to 25' Mounting

No.	DATE	REVISION	BY
1	03/31/14	ADDRESS STAFF AND PEER REVIEW COMMENTS	JNP

PHOTOMETRIC SITE LIGHTING PLAN
(MAP 109, LOT 10)

Medical Office Building Addition

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HUDSON, NEW HAMPSHIRE

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NASHUA, NH 603-886-0200

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