

# **BLUEBIRD STORAGE**

SITE PLAN # 17-21

STAFF REPORT #4

March 9, 2022

**SITE:** 196-202 Central Street; Tax Map 176 Lot 021-000, 022-000, 023-000

**ZONING:** Business (B)

**PURPOSE OF PLAN:** Proposes a 39,338-SF self-storage building with associated parking, drives, utilities, and stormwater ponds.

**PLAN UNDER REVIEW:** Non-Residential Site Plan, Bluebird Self Storage, Map 176 Lots 21, 22, & 23, 196-202 Central Street, Hudson, New Hampshire; prepared by Keach-Nordstrom Associates, Inc., 10 Commerce Park North, Suite 3B, Bedford, NH 03110; prepared for Bluebird Self Storage LLC, 125 Ocean Road, Greenland, NH 03840; consisting of 23 sheets with an additional cover page and notes 1-43 on Sheet 1; dated December 20, 2021, last revised February 28, 2022.

## **ATTACHMENTS**

- A. Additional waiver request – signature block location.
- B. CAP Fee Worksheet

## **APPLICATION TRACKING:**

- September 9, 2021 – The Zoning Board of Adjustment granted a variance to allow the construction of a self-storage facility in the Business Zone.
- December 21, 2021 – Site plan application received.
- January 19, 2022 – Public hearing held; waiver granted; continued to February 9, 2022.
- January 29, 2022 – Site walk conducted.
- February 9, 2022 – Public hearing scheduled; deferred.
- February 14, 2022 – Revised plan set received.
- February 23, 2022 – Public hearing held; waivers granted; continued to March 9, 2022.
- March 9, 2022 – Public hearing scheduled.

## **WAIVER REQUESTS:**

1. § 275-8.C(2)(g), parking requirement for industrial uses. [GRANTED 1/19/22]
2. § 276-11.1.(12)(c), buffer between residential use or zoning district and any improved part of the nonresidential development. [GRANTED 2/23/22]
3. § 275-8.C(6)(a), loading space requirement. [GRANTED 2/23/22]

4. § 276-11.1.B(4)(b), approval block location. [pending]

**COMMENTS:**

UPDATE

The meeting was continued for reasons of the approval block location, signage location and to receive any final comments from the Fire Department or Engineering Department.

1. **Waivers** - The waivers for the required number of parking spaces, number of loading spaces, and buffer between residential use or zoning district and any improved part of the nonresidential development were granted by the Board at the two previous meetings. The applicant is requesting an additional waiver for the approval block location.
2. **Signage** - The revised plan added a placeholder pedestal sign near the driveway entrance. As Staff noted during the previous meeting, the Applicant's desired building signage – as shown on renderings provided and described by the Applicant, may require a variance. Hudson's sign ordinance currently only allows one wall sign per tenant [note: this is an area worthy of consideration for amendment].
3. **Engineering** – the drainage items raised by the Engineering Department have been addressed to the department's satisfaction.
4. **Fire** – the Fire Department reviewed the revised plans and have confirmed that there is adequate maneuverability even without a hammerhead turnaround.

**RECOMMENDATIONS:**

The Board should consider the Applicant's remaining waiver request for approval block location. If the requested waiver is granted, and if the Board finds the remaining items acceptable to be administratively reviewed and approved, Staff finds the application ready for the Board's final decision.

**DRAFT MOTIONS:**

**CONTINUE** the public hearing to a date certain:

I move to defer the public hearing for site plan application for 196-202 Central Street; Tax Map 176 Lots 21, 22, 23 to date certain, \_\_\_\_\_.

Motion by: \_\_\_\_\_ Second: \_\_\_\_\_ Carried/Failed: \_\_\_\_\_

**GRANT** a waiver:

I move to grant a waiver from § 276-11.B(4)(b), approval block location, based on the Board's discussion, the testimony of the Applicant's representative, and in accordance with the language included in the submitted Waiver Request Form for said waiver.

Motion by: \_\_\_\_\_ Second: \_\_\_\_\_ Carried/Failed: \_\_\_\_\_

**APPROVE** the site plan application:

I move to approve Non-Residential Site Plan, Bluebird Self Storage, Map 176 Lots 21, 22, & 23, 196-202 Central Street, Hudson, New Hampshire; prepared by Keach-Nordstrom Associates, Inc., 10 Commerce Park North, Suite 3B, Bedford, NH 03110; prepared for Bluebird Self Storage LLC, 125 Ocean Road, Greenland, NH 03840; consisting of 23 sheets with an additional cover page and notes 1-43 on Sheet 1; dated December 20, 2021, last revised February 28, 2022; subject to, and revised per, the following stipulations:

1. All stipulations of approval shall be incorporated into the Development Agreement, which shall be recorded at the HCRD, together with the Plan.
2. All improvements shown on the Plan, including notes 1-43 on Sheet 1, shall be completed in their entirety and at the expense of the applicant or the applicant's assigns.
3. Prior to the issuance of a final certificate of occupancy, an LLS Certified "as-built" site plan shall be provided to the Town of Hudson Land Use Division, confirming that the site conforms to the Plan approved by the Planning Board.
4. A cost allocation procedure (CAP) amount of \$29,503.50 shall be paid prior to the issuance of a Certificate of Occupancy.
5. The onsite drainage system shall be constructed and maintained in compliance with NHDES requirements for such systems.
6. Prior to the Planning Board endorsement of the Plan, it shall be subject to final administrative review by Town Planner and Town Engineer.
7. Construction activities involving the subject lot shall be limited to the hours between 7:00 A.M. and 7:00 P.M. No exterior construction activities shall be allowed on Sundays.
8. Hours of refuse removal shall be exclusive to the hours between 7:00 A.M. and 7:00 P.M., Monday through Friday only.

Motion by: \_\_\_\_\_ Second: \_\_\_\_\_ Carried/Failed: \_\_\_\_\_

**WAIVER REQUEST FORM**Name of Subdivision/Site Plan: Bluebird Self StorageStreet Address: 196-202 Central Street

I Bridget Souza hereby request that the Planning Board  
waive the requirements of item 276-11.1.B(4)(b) of the Hudson Land Use Regulations  
in reference to a plan presented by Keach-Nordstrom Associates, Inc.

(name of surveyor and engineer) dated February 24, 2022 for  
property tax map(s) 176 and lot(s) 21, 22, & 23 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 Land Use Regulations.

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

The requirement of the location of the approval block in the lower left hand corner of  
the plan inhibits the ability to show the site at a scale that provides more detail.

Relocating the approval block on the plan set allows for a clearer view of detail on the  
Site plan and Grading & Drainage plan.

Reason(s) for granting this waiver, relative to not being contrary to the spirit and intent of the Land Use  
Regulations: (if additional space is needed please attach the appropriate documentation hereto):

The spirit and intent of the Land Use Regulations are maintained as a waiver for the  
regulation would not put the Town or Community in harm or pose as a hazard to  
anyone.

Signed:



Applicant or Authorized Agent





# TOWN OF HUDSON

## Planning Board

Timothy Malley, Chairman



12 School Street • Hudson, New Hampshire 03051 • Tel: 603-886-6008 • Fax: 603-594-1142

### CAP FEE WORKSHEET - 2022

Date: 02-16-22 Zone # 1 Map/Lot: 176/Lots 021, 022, & 023  
196-202 Central Street

Project Name: Bluebird Self-Storage

Proposed ITE Use #1: Warehousing

Proposed Building Area (net square footage): 39,338 S.F.

### CAP FEES: (ONE CHECK NEEDED)

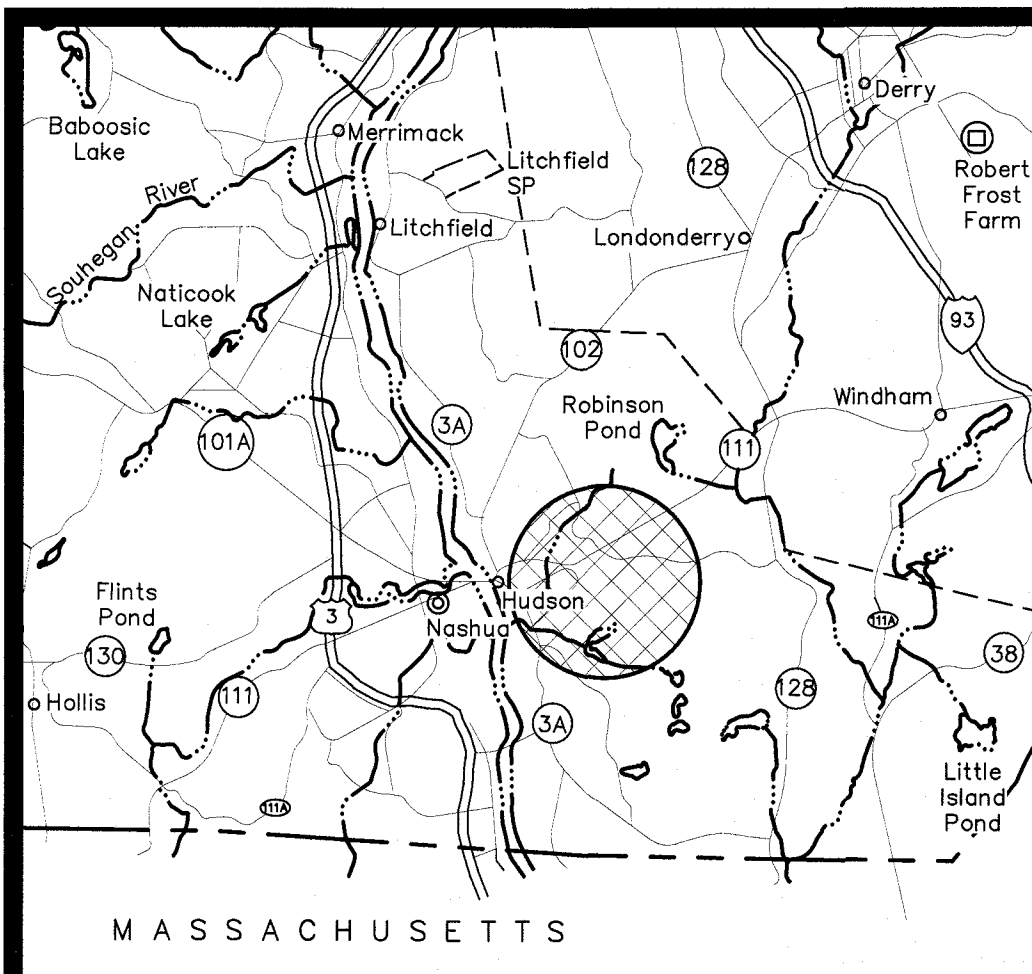
1.	(Bank 09)		
	2070-701	Zone 1	\$ <u>\$29,503.50</u>
		(\$0.75 per sf X 39,338 sf)	

Check should be made payable to the Town of Hudson.

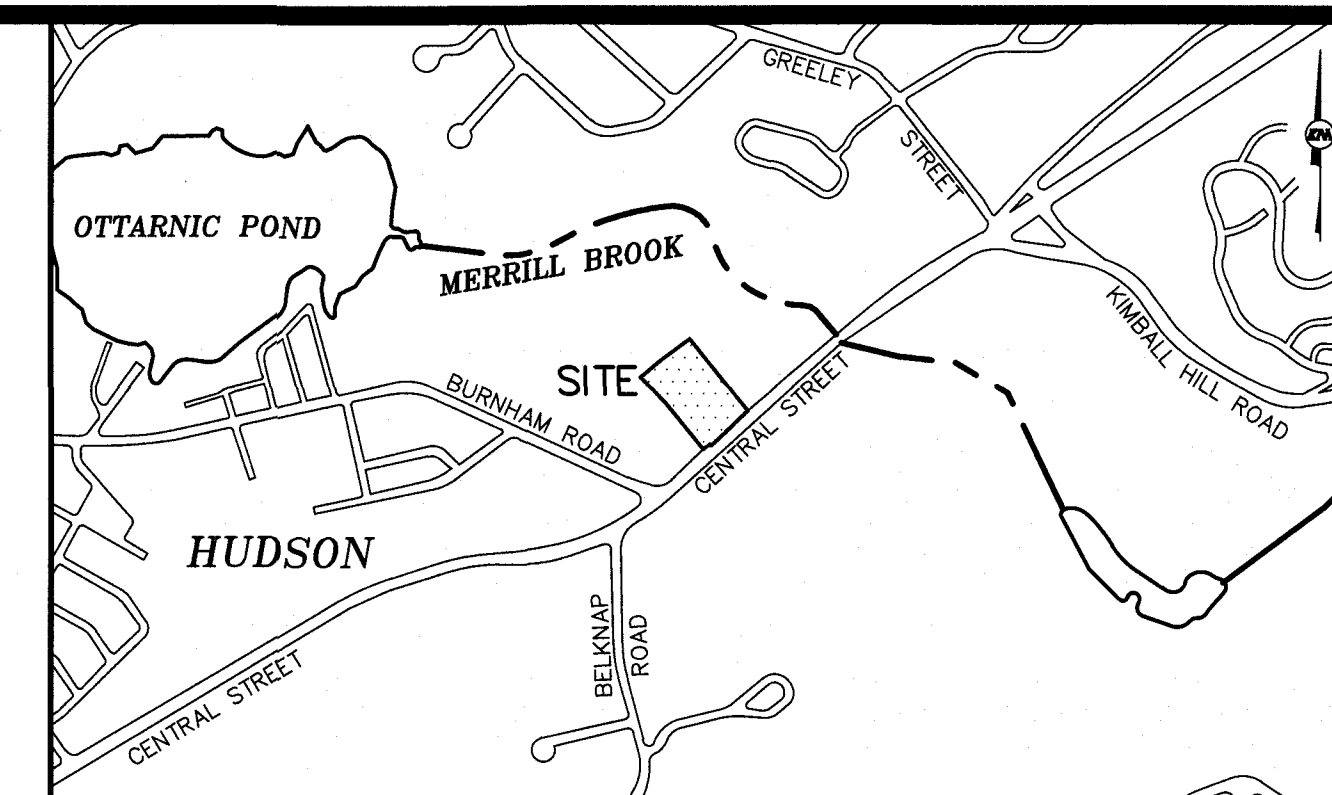
Thank you,

*Brooke Dubowik*

Planning Administrative Aide



VICINITY PLAN  
NOT TO SCALE



LOCUS MAP  
SCALE: 1" = 1,000'

# NON-RESIDENTIAL SITE PLAN BLUEBIRD SELF STORAGE

MAP 176 LOTS 21,22, & 23  
196-202 CENTRAL STREET  
HUDSON, NEW HAMPSHIRE

## SHEET TITLE

## SHEET No.

MASTER SITE PLAN

1

EXISTING CONDITIONS PLAN

2

REMOVALS/DEMOLITION PLAN

3

NON-RESIDENTIAL SITE PLAN

4

GRADING AND DRAINAGE PLAN

5

SPOT GRADE PLAN

6

UTILITY PLAN

7

EROSION CONTROL PLAN

8

LANDSCAPE PLAN

9

LIGHTING PLAN

10-11

FIRE TRUCK TURNING PLAN

12

SIGHT DISTANCE PLAN & PROFILE

13

SEWER PROFILE

14

DRAINAGE PROFILES

15

CONSTRUCTION DETAILS

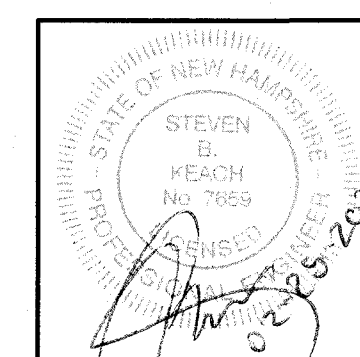
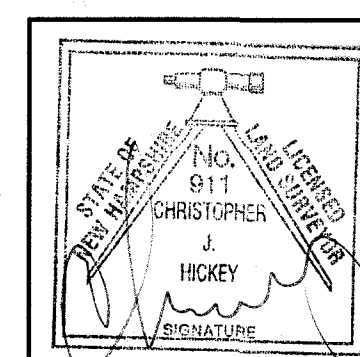
16-23

### APPLICANT:

BLUEBIRD SELF STORAGE  
125 OCEAN ROAD  
GREENLAND, NH 03840

### PREPARED BY:

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



**KMA** KEACH-NORDSTROM ASSOCIATES, INC.

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

DECEMBER 20, 2021

REVISED: FEBRUARY 28, 2022

PROJECT NO. 21-0709-3

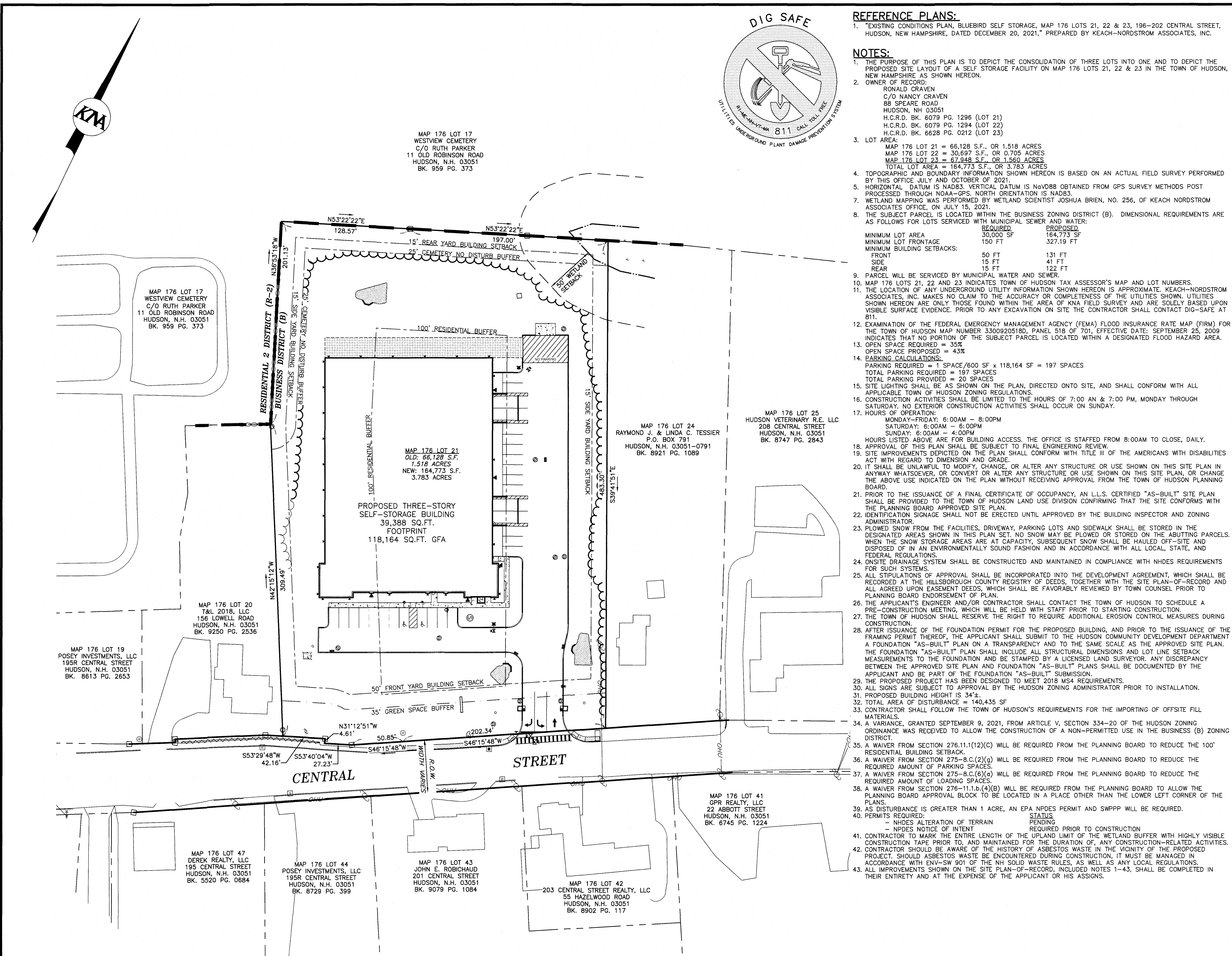
PURSUANT TO THE  
SITE REVIEW  
REGULATIONS OF  
THE HUDSON  
PLANNING BOARD,  
THE SITE PLAN  
APPROVAL  
GRANTED HEREIN  
EXPIRES ONE YEAR  
FROM DATE OF  
APPROVAL

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

SIGNATURE DATE: \_\_\_\_\_

SIGNATURE DATE: \_\_\_\_\_

SITE PLANS ARE VALID FOR TWO YEARS 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.



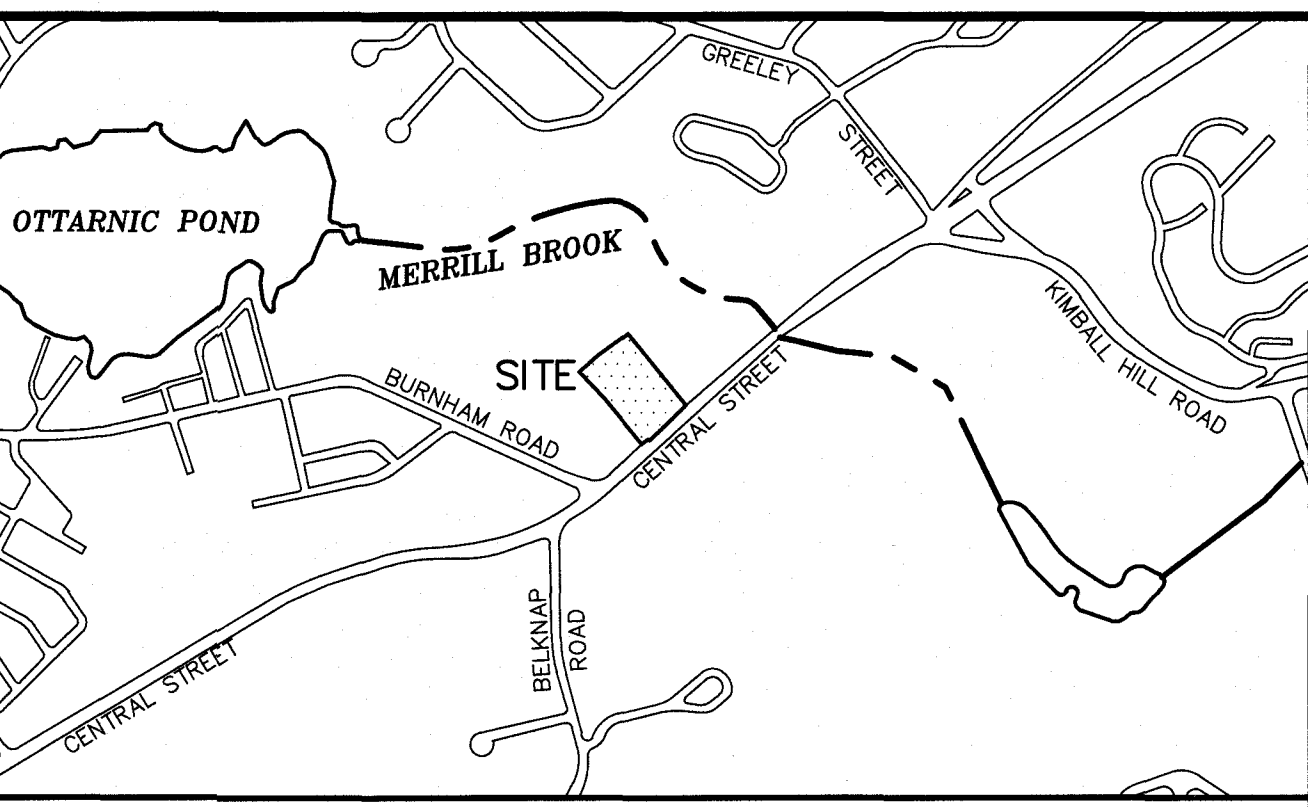
### REFERENCE PLANS:

1. "EXISTING CONDITIONS PLAN, BLUEBIRD SELF STORAGE, MAP 176 LOTS 21, 22 & 23, 196-202 CENTRAL STREET, HUDSON, NEW HAMPSHIRE, DATED DECEMBER 20, 2021," PREPARED BY KEACH-NORDSTROM ASSOCIATES, INC.

### NOTES:

- THE PURPOSE OF THIS PLAN IS TO DEPICT THE CONSOLIDATION OF THREE LOTS INTO ONE AND TO DEPICT THE PROPOSED SITE LAYOUT OF A SELF STORAGE FACILITY ON MAP 176 LOTS 21, 22 & 23 IN THE TOWN OF HUDSON, NEW HAMPSHIRE, AS SHOWN HEREON.
- OWNER OF RECORD:  
RONALD CRAVEN  
C/O NANCY CRAVEN  
88 SPEARE ROAD  
HUDSON, NH 03051  
H.C.R.D. BK. 6079 PG. 1296 (LOT 21)  
H.C.R.D. BK. 6079 PG. 1294 (LOT 22)  
H.C.R.D. BK. 6628 PG. 0212 (LOT 23)
- LOT AREA:  
MAP 176 LOT 21 = 66,128 S.F. OR 1.518 ACRES  
MAP 176 LOT 22 = 30,697 S.F. OR 0.705 ACRES  
MAP 176 LOT 23 = 67,948 S.F. OR 1.560 ACRES  
TOTAL LOT AREA = 164,773 S.F. OR 3.783 ACRES
- TOPOGRAPHIC AND BOUNDARY INFORMATION SHOWN HEREON IS BASED ON AN ACTUAL FIELD SURVEY PERFORMED BY THIS OFFICE JULY AND OCTOBER OF 2021.
- HORIZONTAL DATUM IS NAD83. VERTICAL DATUM IS NAVD88 OBTAINED FROM GPS SURVEY METHODS POST PROCESSED THROUGH NOAA-GPS. NORTH ORIENTATION IS NAD83.
- WETLAND MAPPING WAS PERFORMED BY WETLAND SCIENTIST JOSHUA BRIEN, NO. 256, OF KEACH NORDSTROM ASSOCIATES OFFICE, ON JULY 15, 2021.
- THE SUBJECT PARCEL IS LOCATED WITHIN THE BUSINESS ZONING DISTRICT (B). DIMENSIONAL REQUIREMENTS ARE AS FOLLOWS FOR LOTS SERVICED WITH MUNICIPAL SEWER AND WATER:  

	REQUIRED	PROPOSED
MINIMUM LOT AREA	30,000 SF	164,773 SF
MINIMUM LOT FRONTAGE	150 FT	327.19 FT
MINIMUM BUILDING SETBACKS:		
FRONT	50 FT	131 FT
SIDE	15 FT	41 FT
REAR	15 FT	122 FT
- PARCEL WILL BE SERVICED BY MUNICIPAL WATER AND SEWER.
- MAP 176 LOTS 21, 22 AND 23 INDICATES TOWN OF HUDSON TAX ASSESSOR'S MAP AND LOT NUMBERS.
- THE LOCATION OF ANY UNDERGROUND UTILITY INFORMATION SHOWN HEREON IS APPROXIMATE. KEACH-NORDSTROM ASSOCIATES, INC. MAKES NO CLAIM TO THE ACCURACY OR COMPLETENESS OF THE UTILITIES SHOWN. UTILITIES SHOWN HEREON ARE ONLY THOSE FOUND WITHIN THE AREA OF KNA FIELD SURVEY AND ARE SOLELY BASED UPON VISIBLE SURFACE EVIDENCE. PRIOR TO ANY EXCAVATION ON SITE THE CONTRACTOR SHALL CONTACT DIG-SAFE AT 811.
- EXAMINATION OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) FOR THE TOWN OF HUDSON, MAP 3309205180, DATED 1983, INDICATES THAT NO PORTION OF THE SUBJECT PARCEL IS LOCATED WITHIN A DESIGNATED FLOOD HAZARD AREA.
- OPEN SPACE REQUIRED = 35%  
OPEN SPACE PROPOSED = 43%
- PARKING CALCULATIONS:  
PARKING REQUIRED = 1 SPACE/600 SF x 118,164 SF = 197 SPACES  
TOTAL PARKING REQUIRED = 197 SPACES  
TOTAL PARKING PROVIDED = 20 SPACES
- SITE LIGHTING SHALL BE AS SHOWN ON THE PLAN, DIRECTED ONTO SITE, AND SHALL CONFORM WITH ALL APPLICABLE TOWN OF HUDSON ZONING REGULATIONS.
- CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO THE HOURS OF 7:00 AM & 7:00 PM, MONDAY THROUGH SATURDAY. NO EXTERIOR CONSTRUCTION ACTIVITIES SHALL OCCUR ON SUNDAY.
- HOURS OF OPERATION:  
MONDAY-FRIDAY: 6:00AM - 8:00PM  
SATURDAY: 6:00AM - 6:00PM  
SUNDAY: 6:00AM - 4:00PM  
HOURS LISTED ABOVE ARE FOR BUILDING ACCESS. THE OFFICE IS STAFFED FROM 8:00AM TO CLOSE, DAILY.
- APPROVAL OF THIS PLAN SHALL BE SUBJECT TO FINAL ENGINEERING REVIEW.
- SITE IMPROVEMENTS DEPICTED ON THE PLAN SHALL CONFORM WITH TITLE III OF THE AMERICANS WITH DISABILITIES ACT WITH REGARD TO DIMENSION AND GRADE.
- 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.
- 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 LAND USE DIVISION CONFIRMING THAT THE SITE CONFORMS WITH THE PLANNING BOARD APPROVED SITE PLAN.
- IDENTIFICATION SIGNAGE SHALL NOT BE ERRECTED UNTIL APPROVED BY THE BUILDING INSPECTOR AND ZONING ADMINISTRATOR.
- ON-SITE DRAINAGE SYSTEM SHALL BE CONSTRUCTED AND MAINTAINED IN COMPLIANCE WITH NHDES REQUIREMENTS FOR SUCH SYSTEMS.
- ALL STIPULATIONS OF APPROVAL SHALL BE INCORPORATED INTO THE DEVELOPMENT AGREEMENT, WHICH SHALL BE RECORDED AT THE HILLSBOROUGH COUNTY REGISTRY OF DEEDS, TOGETHER WITH THE SITE PLAN-OF-RECORD AND ALL AGREED UPON EASEMENT DEEDS, WHICH SHALL BE FAVORABLY REVIEWED BY TOWN COUNSEL PRIOR TO PLANNING BOARD ENDORSEMENT OF PLAN.
- THE APPLICANT'S ENGINEER AND/OR CONTRACTOR SHALL CONTACT THE TOWN OF HUDSON TO SCHEDULE A PRE-CONSTRUCTION MEETING, WHICH WILL BE HELD WITH STAFF PRIOR TO STARTING CONSTRUCTION.
- THE TOWN OF HUDSON SHALL RESERVE THE RIGHT TO REQUIRE ADDITIONAL EROSION CONTROL MEASURES DURING CONSTRUCTION.
- AFTER ISSUANCE OF THE FOUNDATION PERMIT FOR THE PROPOSED BUILDING, AND PRIOR TO THE ISSUANCE OF THE FRAMING PERMIT THEREOF, THE APPLICANT SHALL SUBMIT TO THE HUDSON COMMUNITY DEVELOPMENT DEPARTMENT A FOUNDATION "AS-BUILT" PLAN ON A TRANSPARENCY AND TO THE SAME SCALE AS THE APPROVED SITE PLAN. THE FOUNDATION "AS-BUILT" PLAN SHALL INCLUDE ALL STRUCTURAL DIMENSIONS AND LOT LINE SETBACK MEASUREMENTS TO THE FOUNDATION AND BE STAMPED BY A LICENSED LAND SURVEYOR. ANY DISCREPANCY BETWEEN THE APPROVED SITE PLAN AND FOUNDATION "AS-BUILT" PLANS SHALL BE DOCUMENTED BY THE APPLICANT AND BE PART OF THE FOUNDATION "AS-BUILT" SUBMISSION.
- THE PROPOSED PROJECT HAS BEEN DESIGNED TO MEET 2018 MS4 REQUIREMENTS.
- ALL SIGNS ARE SUBJECT TO APPROVAL BY THE HUDSON ZONING ADMINISTRATOR PRIOR TO INSTALLATION.
- PROPOSED BUILDING HEIGHT IS 34'-0".
- TOTAL AREA OF DISTURBANCE = 140,435 SF.
- CONTRACTOR SHALL FOLLOW THE TOWN OF HUDSON'S REQUIREMENTS FOR THE IMPORTING OF OFFSITE FILL MATERIALS.
- A VARIANCE, GRANTED SEPTEMBER 9, 2021, FROM ARTICLE V, SECTION 334-20 OF THE HUDSON ZONING ORDINANCE WAS RECEIVED TO ALLOW THE CONSTRUCTION OF A NON-PERMITTED USE IN THE BUSINESS (B) ZONING DISTRICT.
- A WAIVER FROM SECTION 276.11(12)(C) WILL BE REQUIRED FROM THE PLANNING BOARD TO REDUCE THE 100' RESIDENTIAL BUILDING SETBACK.
- A WAIVER FROM SECTION 275-8.C(2)(g) WILL BE REQUIRED FROM THE PLANNING BOARD TO REDUCE THE REQUIRED AMOUNT OF PARKING SPACES.
- A WAIVER FROM SECTION 275-8.C(6)(g) WILL BE REQUIRED FROM THE PLANNING BOARD TO REDUCE THE REQUIRED AMOUNT OF LOADING SPACES.
- A WAIVER FROM SECTION 276-11.1.b(4)(B) WILL BE REQUIRED FROM THE PLANNING BOARD TO ALLOW THE PLANNING BOARD APPROVAL BLOCK TO BE LOCATED IN A PLACE OTHER THAN THE LOWER LEFT CORNER OF THE PLANS.
- AS DISTURBANCE IS GREATER THAN 1 ACRE, AN EPA NPDES PERMIT AND SWPPP WILL BE REQUIRED.
- PERMITS REQUIRED:  
- NHDES ALTERATION OF TERRAIN  
- NPDES NOTICE OF INTENT  
- NPDES REQUIRED PRIOR TO CONSTRUCTION
- CONTRACTOR TO MARK THE ENTIRE LENGTH OF THE UPLAND LIMIT OF THE WETLAND BUFFER WITH HIGHLY VISIBLE CONSTRUCTION TAPE PRIOR TO, AND MAINTAINED FOR THE DURATION OF, ANY CONSTRUCTION-RELATED ACTIVITIES.
- CONTRACTOR SHOULD BE AWARE OF THE HISTORY OF ASBESTOS WASTE IN THE VICINITY OF THE PROPOSED PROJECT. SHOULD ASBESTOS WASTE BE ENCOUNTERED DURING CONSTRUCTION, IT MUST BE MANAGED IN ACCORDANCE WITH ENV-SW 901 OF THE NH SOLID WASTE RULES, AS WELL AS ANY LOCAL REGULATIONS.
- ALL IMPROVEMENTS SHOWN ON THE SITE PLAN-OF-RECORD, INCLUDED NOTES 1-43, SHALL BE COMPLETED IN THEIR ENTIRETY AND AT THE EXPENSE OF THE APPLICANT OR HIS ASSIGNS.

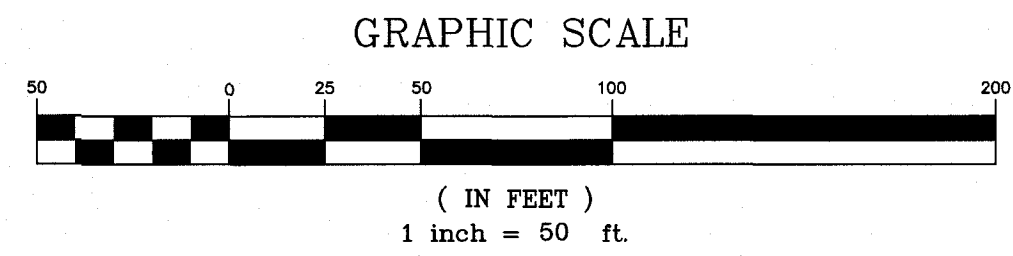


VICINITY MAP  
SCALE: 1" = 1,000'

### LEGEND

- GB-F GRANITE BOUND FOUND
- IP-F IRON PIN FOUND
- W/CAP IRON PIN SET WITH CAP
- UTILITY POLE
- STREET LIGHT
- GAS VALVE
- WATER VALVE
- SEWER MANHOLE
- DRAINAGE MANHOLE
- CATCH BASIN
- ABUTTER LINE
- PROPERTY LINE
- OVERHEAD UTILITIES
- DRAINAGE LINE
- TREELINE
- RETAINING WALL
- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- SETBACK
- 100' RESIDENTIAL BUFFER
- GREEN SPACE BUFFER
- PROPOSED SIGN
- PROPOSED LIGHT
- PROPOSED GAS VALVE
- PROPOSED WATER VALVE
- PROPOSED WOOD GUARDRAIL
- PROPOSED TREELINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED RETAINING WALL
- PROPOSED VERTICAL GRANITE CURB
- PROPOSED OUTLET STRUCTURE

### LOAM & SEED ALL DISTURBED AREAS (TYP.)



## MASTER SITE PLAN BLUEBIRD SELF STORAGE

MAP 176 LOTS 21, 22 & 23  
196-202 CENTRAL STREET  
HUDSON, NEW HAMPSHIRE  
HILLSBOROUGH COUNTY

OWNER OF RECORD:	APPLICANT:
RONALD CRAVEN TRUST C/O NANCY CRAVEN TRUST 88 SPEARE ROAD HUDSON, NH 03051 H.C.R.D. BK. 6079 PG. 1294	BLUEBIRD SELF STORAGE LLC. 125 OCEAN ROAD GREENLAND, NH 03840



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

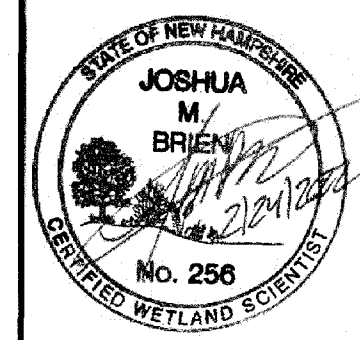
PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES TWO YEARS FROM DATE OF APPROVAL

APPROVED BY THE HUDSON, NH PLANNING BOARD  
DATE OF MEETING: \_\_\_\_\_  
SIGNATURE DATE: \_\_\_\_\_  
SIGNATURE DATE: \_\_\_\_\_

SITE PLANS ARE VALID FOR TWO YEARS 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.

OWNER OF MAP 176 LOTS 21, 22 & 23

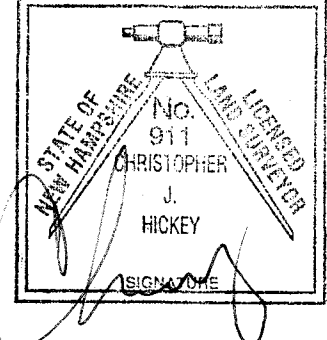
SIGNATURE: *Trustee: Ronald Craven*  
DATE: *2/14/22*



WETLAND SCIENTIST'S CERTIFICATION:

JOSHUA BRIEN, CERTIFIED WETLAND SCIENTIST #256 OF KEACH-NORDSTROM ASSOCIATES, INC. OF BEDFORD, NH PERFORMED THE DELINEATION OF JURISDICTIONAL WETLANDS IN JULY OF 2021 USING THE TECHNICAL CRITERIA IN THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL (TECHNICAL REPORT Y-87-1, JANUARY 1987).

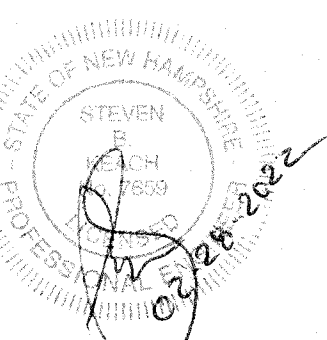
*Joshua Brien*  
CERTIFIED WETLAND SCIENTIST  
DATE: *2/14/22*



CERTIFICATION:

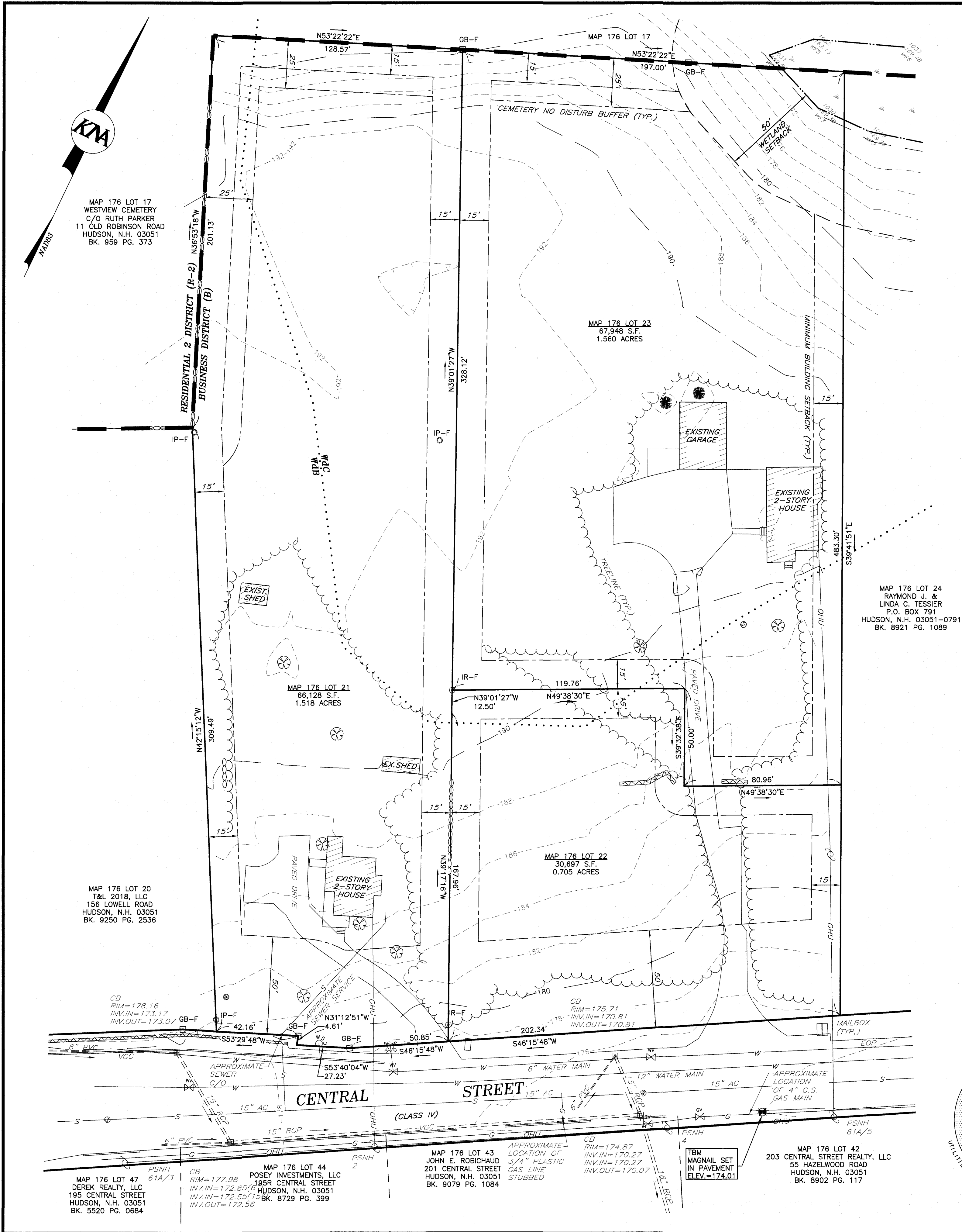
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION, FURTHER, THIS PLAN IS BASED ON AN ACTUAL FIELD SURVEY MADE ON THE GROUND BY THIS OFFICE DURING JULY AND OCTOBER OF 2021. SAID SURVEY HAS AN ERROR OF CLOSURE/BETTER THAN ONE PART IN TEN THOUSAND (1:10,000).

*Keach-Nordstrom*  
LICENSED LAND SURVEYOR  
DATE: *2/28/22*



REVISIONS			
No.	DATE	DESCRIPTION	BY
1	01-21-2022	REVISED GRADING/DRAINAGE PER CLIENT	BES
2	02-14-2022	REVISED PER REVIEW COMMENTS	BES
3	02-21-2022	REVISED PER TOWN COMMENTS	BES
4	02-28-2022	REVISED PER TOWN COMMENTS	BES
DATE: DECEMBER 20, 2021		SCALE: 1" = 50'	
PROJECT NO: 21-0709-3		SHEET 1 OF 23	





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 TWO YEARS 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.

LEGEND

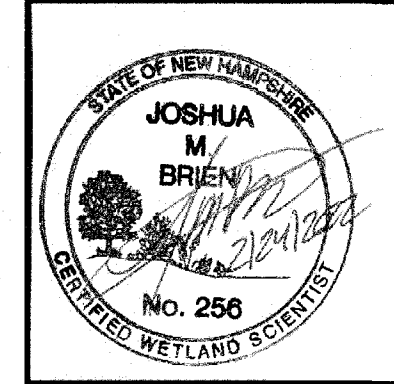
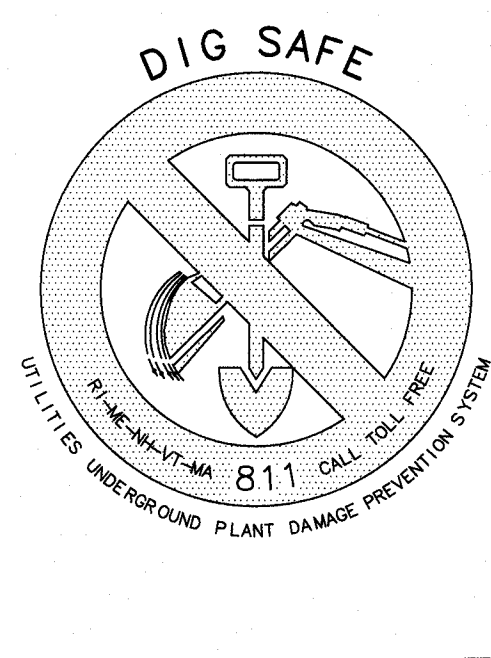
- GB-F GRANITE BOUND FOUND
- IP-F IRON PIPE FOUND
- IR-F IRON ROD FOUND
- DH-F DRILL HOLE FOUND
- BENCHMARK
- UTILITY POLE
- STREET LIGHT
- GAS VALVE
- WATER VALVE
- HYDRANT
- WATER SHUT OFF
- WELL
- SEWER MANHOLE
- CATCH BASIN
- ABUTTER LINE
- PROPERTY LINE
- WETLAND
- WETLAND SETBACK
- OVERHEAD UTILITIES
- GAS LINE
- WATER LINE
- SEWER LINE
- DRAINAGE LINE
- TREELINE
- RETAINING WALL
- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- 10' CONTOUR
- 2' CONTOUR
- STONEWALL
- SOIL LINE
- SETBACK
- DISTRICT BOUNDARY
- DECIDUOUS TREE
- CONIFEROUS TREE
- BUSH

SCS SOILS LEGEND

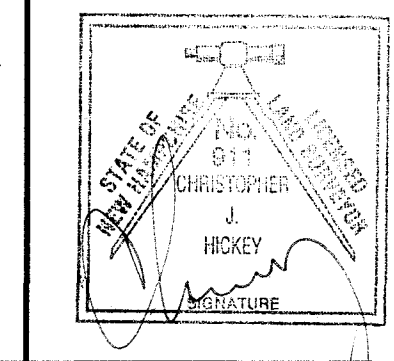
- WdB WINDSOR LOAMY SAND  
3 TO 8 PERCENT SLOPES
  - WdC WINDSOR LOAMY SAND  
8 TO 15 PERCENT SLOPES
- SOURCE: USDA-SCS WEB SOIL SURVEY  
HILLSBOROUGH COUNTY

REFERENCE PLANS:

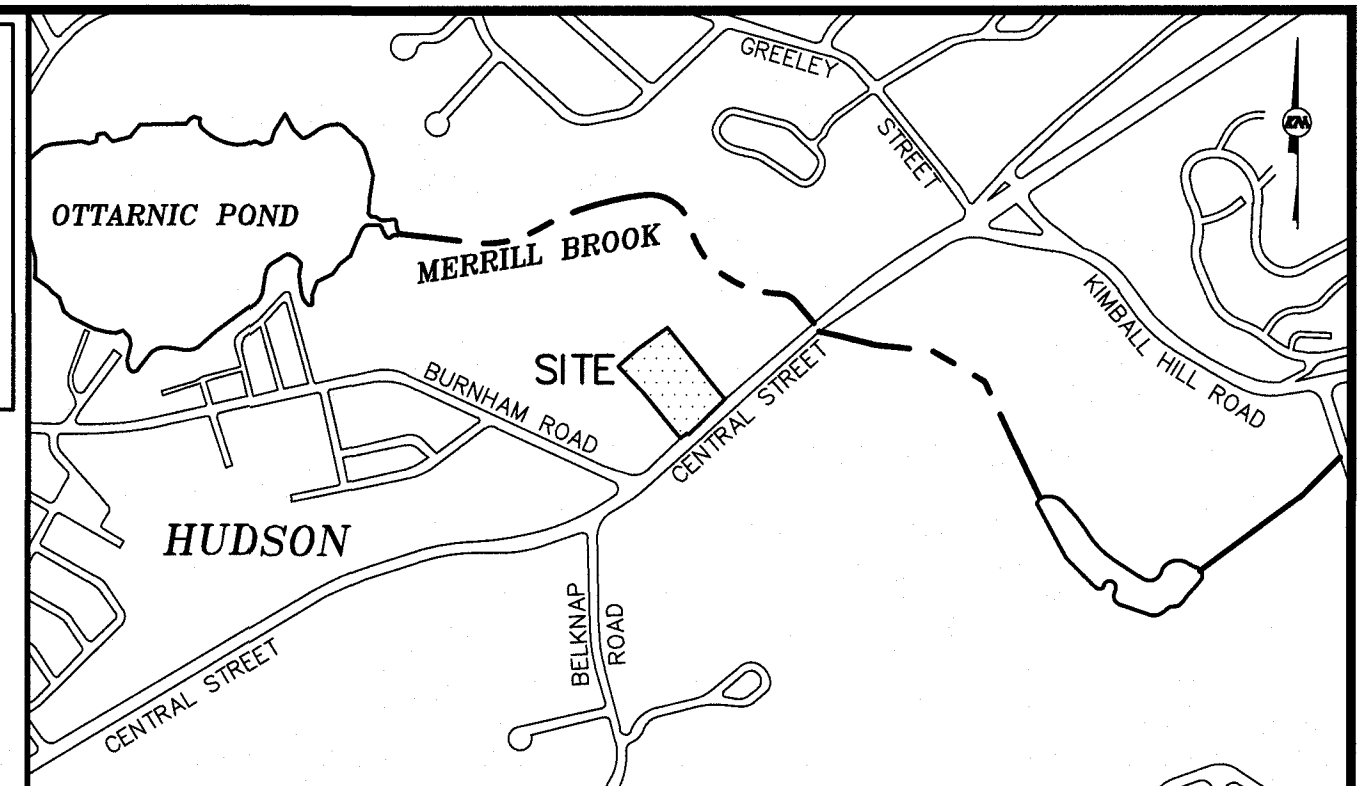
- "LAND OF NAPOLEON & JOSEPHINE PELLETIER, HUDSON, N.H. SCALE: 1"=40'. DATED: OCTOBER, 1952. H.C.R.D. PLAN #830
- "PLAN OF LAND OF PERLEY B. SMITH ESTATE, CENTRAL STREET HUDSON, N.H." SCALE: 1"=50'. DATED: JULY 1962. PREPARED BY: NED SPAULDING, CIVIL ENGINEER. H.C.R.D. PLAN #2237
- "STATE OF N.H. D.O.T. R.O.W. PLANS OF PROPOSED FEDERAL AID URBAN SYSTEM PROJECT" M-5229(003), M-5229(005), N.H. PROJECT NO. C-2432-B&D PREPARED BY: HOWARD, NEEDLES, TAMMEN & BERGENOFF. H.C.R.D. PLAN #19222
- "BOUNDARY PLAN-LOT 16 MAP 20, CENTRAL STREET-HUDSON, N.H." SCALE: 1"=50'. DATED: MAY 24, 1969. PREPARED BY: MAYNARD & PAQUETTE, INC. H.C.R.D. PLAN #23416
- "STATE OF N.H. D.O.T. PLANS OF PROPOSED FEDERAL AID URBAN SYSTEM PROJECT" MG-M-5229(008), N.H. PROJECT NO. C-2432-G, MARK-UPS, PREPARED BY: HOWARD, NEEDLES, TAMMEN & BERGENOFF. PLAN #C2432D
- "STATE OF N.H. D.O.T. PLANS OF PROPOSED FEDERAL AID URBAN SYSTEM PROJECT" MG-M-5229(008) AS BUILT PLANS. PREPARED BY: HOWARD, NEEDLES, TAMMEN & BERGENOFF. PLAN #C2432G



**WETLAND SCIENTIST'S CERTIFICATION:**  
JOSHUA BRIEN, CERTIFIED WETLAND SCIENTIST #256 OF KEACH-NORDSTROM ASSOCIATES, INC. OF BEDFORD, NH PERFORMED THE DELINEATION OF JURISDICTIONAL WETLANDS IN JULY OF 2021 USING THE TECHNICAL CRITERIA IN THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL (TECHNICAL REPORT Y-87-1, JANUARY 1987).  
DATE: 2/20/22  
CERTIFIED WETLAND SCIENTIST



**CERTIFICATION:**  
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION. FURTHER, THIS PLAN IS BASED ON AN ACTUAL FIELD SURVEY MADE ON THE GROUND BY THIS OFFICE DURING JULY AND OCTOBER OF 2021. SAID SURVEY HAS AN ERROR OF CLOSURE BETTER THAN ONE PART IN TEN THOUSAND (1:10,000).  
DATE: 2/20/22  
LICENSED LAND SURVEYOR

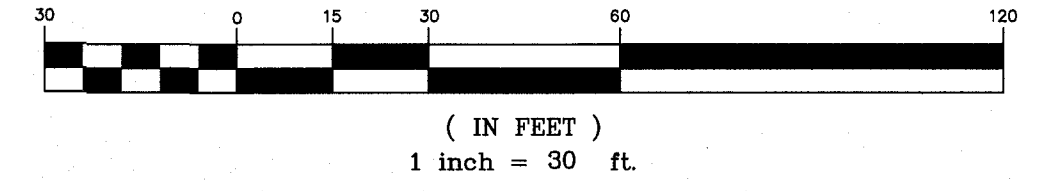


VICINITY MAP  
SCALE: 1" = 1,000'

NOTES:

- THE PURPOSE OF THIS PLAN IS TO DEPICT THE EXISTING CONDITIONS PRESENT ON MAP 176 LOTS 21, 22, & 23 IN THE TOWN OF HUDSON, NEW HAMPSHIRE AS SHOWN HEREON.
- LOT AREA:  
MAP 176 LOT 21 = 66,128 S.F., OR 1.518 ACRES  
MAP 176 LOT 22 = 30,697 S.F., OR 0.705 ACRES  
MAP 176 LOT 23 = 67,948 S.F., OR 1.560 ACRES  
TOTAL LOT AREA = 164,773 S.F., OR 3.783 ACRES
- OWNER OF RECORD:  
RONALD CRAVEN  
C/O NANCY CRAVEN  
88 SPEARE ROAD  
HUDSON, NH 03051  
H.C.R.D. BK. 6079 PG. 1296 (LOT 21)  
H.C.R.D. BK. 6079 PG. 1294 (LOT 22)  
H.C.R.D. BK. 6628 PG. 0212 (LOT 23)
- THE SUBJECT PARCELS ARE LOCATED WITHIN THE BUSINESS ZONING DISTRICT (B). DIMENSIONAL REQUIREMENTS ARE AS FOLLOWS FOR LOTS SERVICED WITH MUNICIPAL SEWER AND WATER:  
- MINIMUM LOT AREA 30,000 SF  
- MINIMUM LOT FRONTAGE 150 FT  
- MINIMUM BUILDING SETBACKS:  
  - FRONT 15  
  - SIDE 15  
  - REAR 15
- TOPOGRAPHIC AND BOUNDARY INFORMATION SHOWN HEREON IS BASED ON AN ACTUAL FIELD SURVEY PERFORMED BY THIS OFFICE JULY AND OCTOBER OF 2021.
- HORIZONTAL DATUM IS NAD83. VERTICAL DATUM IS NAVD88 OBTAINED FROM GPS SURVEY METHODS POST PROCESSED THROUGH NOAA-GPS. NORTH ORIENTATION IS NAD83.
- EXAMINATION OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) FOR THE TOWN OF HUDSON MAP NUMBER 3300920518D, PANEL 518 OF 701, EFFECTIVE DATE: SEPTEMBER 25, 2009 INDICATES THAT NO PORTION OF THE SUBJECT PARCELS ARE LOCATED WITHIN A DESIGNATED FLOOD HAZARD AREA.
- WETLAND MAPPING WAS PERFORMED BY JOSHUA BRIEN OF KEACH NORDSTROM ASSOCIATES ON JULY 15, 2021.
- SITE IS SERVICED BY MUNICIPAL WATER AND SEWER.
- THE LOCATION OF ANY UNDERGROUND UTILITY INFORMATION SHOWN HEREON IS APPROXIMATE. KEACH-NORDSTROM ASSOCIATES, INC. MAKES NO CLAIM TO THE ACCURACY OR COMPLETENESS OF THE UTILITIES SHOWN. PRIOR TO ANY EXCAVATION ON SITE THE CONTRACTOR OR OWNER SHALL CONTACT DIG-SAFE AT 81.
- EXISTING BUILDING HEIGHTS:  
LOT 21 HOUSE - 22± FT  
LOT 23 HOUSE - 20± FT  
LOT 23 GARAGE - 12± FT

GRAPHIC SCALE



EXISTING CONDITIONS PLAN  
BLUEBIRD SELF STORAGE

MAP 176 LOTS 21, 22 & 23  
196-202 CENTRAL STREET  
HUDSON, NEW HAMPSHIRE  
HILLSBOROUGH COUNTY

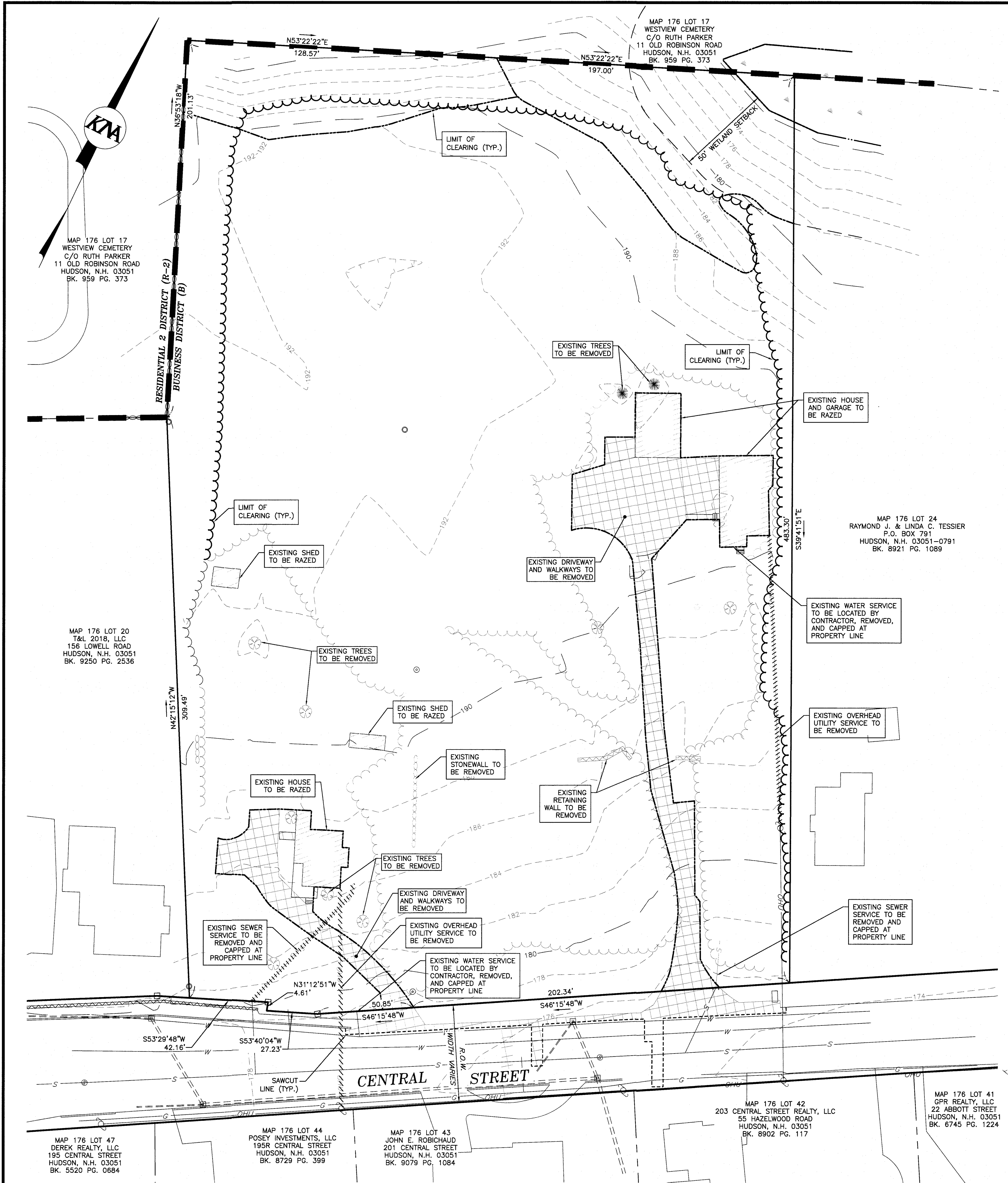
**OWNER OF RECORD:**  
RONALD CRAVEN TRUST  
C/O NANCY CRAVEN TRUST  
88 SPEARE ROAD  
HUDSON, NH 03051  
H.C.R.D. BK. 6079 PG. 1294

**APPLICANT:**  
BLUEBIRD SELF STORAGE LLC.  
125 OCEAN ROAD  
GREENLAND, NH 03840

**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	01-21-2022	REVISED GRADING/DRAINAGE PER CLIENT	BES
2	02-14-2022	REVISED PER REVIEW COMMENTS	BES
3	02-21-2022	REVISED PER TOWN COMMENTS	BES
4	02-28-2022	REVISED PER TOWN COMMENTS	BES

DATE: DECEMBER 20, 2021  
PROJECT NO: 21-0709-3  
SCALE: 1" = 30'  
SHEET 2 OF 23



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

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

\_\_\_\_\_  
SIGNATURE DATE: \_\_\_\_\_

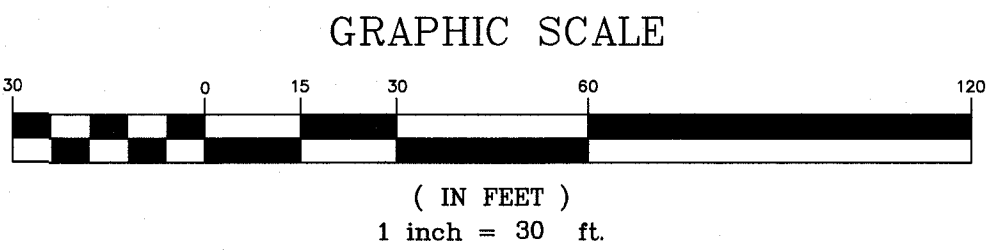
\_\_\_\_\_  
SIGNATURE DATE: \_\_\_\_\_

SITE PLANS ARE VALID FOR TWO YEARS 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.

- REMOVALS/DEMOLITION NOTES:**
1. THE PURPOSE OF THIS PLAN IS TO DEPICT EXISTING FEATURES ON SITE TO BE REMOVED, SALVAGED OR REPLACED.
  2. ALL STUMPS, ROOTS, BRANCHES, BRUSH, WOODS, AND OTHER PERISHABLE MATERIAL RESULTING FROM THE CLEARING AND GRUBBING OPERATIONS SHALL BE DISPOSED OF BY AN APPROVED METHOD.
  3. STRIP, STOCKPILE, AND REUSE ONSITE GRAVEL AND FILL AREAS WHERE APPROPRIATE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE DESIGN ENGINEER.
  4. REMOVE ALL ASPHALT, CURBING, CONCRETE, VEGETATION, TREES, SHRUBS, LIGHT POLES, SIGNAGE, AND STRUCTURES WITHIN THE HATCHED AREA, UNLESS OTHERWISE NOTED.
  5. DEBRIS REMOVED FROM THE SITE SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.
  6. ALL WORK PERFORMED ON BEHALF OF THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TOWN OF HUDSON'S ENGINEERING TECHNICAL GUIDELINES & TYPICAL DETAILS, LATEST EDITION.
  7. SITE CONTRACTOR SHALL ESTABLISH TEMPORARY PERIMETER CONTROLS PRIOR TO THE START OF SITE EXCAVATION.
  8. CONTRACTOR SHALL WORK WITH LOCAL UTILITY PROVIDERS DURING SHUT DOWN AND REMOVAL EFFORTS.
  9. ALL ITEMS TO REMAIN SHALL BE PROTECTED BY THE CONTRACTOR.
  10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING "DIG SAFE" AT 811 AT LEAST 72 HOURS BEFORE DIGGING.

**LEGEND**

GB-F	GRANITE BOUND FOUND	---	ABUTTER LINE
IPIN-F	IRON PIN FOUND	---	PROPERTY LINE
DH-F	DRILL HOLE FOUND	---	WETLAND
IPP-F	IRON PIPE FOUND	---	OVERHEAD UTILITIES
U	UTILITY POLE	---	TREELINE
S	SIGN	---	EDGE OF PAVEMENT
L	LIGHT	---	VERTICAL GRANITE CURB
G	GAS VALVE	---	SLOPED GRANITE CURB
W	WATER VALVE	---	BITUMINOUS CURB
H	HYDRANT	---	STONEWALL
W	WATER SHUT OFF	---	EASEMENT
W	WELL	---	ZONE LINE
W	SEWER MANHOLE		
W	DRAINAGE MANHOLE		
W	CATCH BASIN		
W	FLARED END SECTION		



**NPDES NOTE**

THIS PROJECT DISTURBS IN EXCESS OF 1-ACRE OF LAND, THEREFORE IT WILL BE REQUIRED TO OBTAIN NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT COVERAGE AS ISSUED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA). THE OWNER/DEVELOPER AND "OPERATOR" (GENERAL CONTRACTOR) SHALL EACH BE REQUIRED TO PREPARE AND SUBMIT A NOTICE OF INTENT (NOI) TO THE EPA PRIOR TO THE START OF CONSTRUCTION AND SHALL BE RESPONSIBLE FOR THE PREPARATION AND IMPLEMENTATION OF A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) MEETING THE REQUIREMENTS OF THE CURRENT CONSTRUCTION GENERAL PERMIT.

**UTILITY NOTE**

THE UNDERGROUND UTILITIES DEPICTED HEREON HAVE BEEN DRAWN FROM FIELD SURVEY INFORMATION AND OR PLOTTED FROM EXISTING DRAWINGS. KEACH-NORDSTROM ASSOCIATES, INC. MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES DEPICTED COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. FURTHER, KEACH-NORDSTROM ASSOCIATES, INC. 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. KEACH-NORDSTROM ASSOCIATES, INC. HAS NOT PHYSICALLY LOCATED THE UNDERGROUND PORTIONS OF THE UTILITIES.

**REMOVALS/DEMOLITION PLAN**  
**BLUEBIRD SELF STORAGE**

MAP 176 LOTS 21, 22 & 23  
196-202 CENTRAL STREET  
HUDSON, NEW HAMPSHIRE  
HILLSBOROUGH COUNTY

<b>OWNER OF RECORD:</b> RONALD CRAVEN TRUST c/o NANCY CRAVEN TRUST 88 SPEARE ROAD HUDSON, NH 03051 H.C.R.D. BK. 6079 PG. 1294	<b>APPLICANT:</b> BLUEBIRD SELF STORAGE LLC. 125 OCEAN ROAD GREENLAND, NH 03840
--	--

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

No.	DATE	DESCRIPTION	BY
1	01-21-2022	REVISED GRADING/DRAINAGE PER CLIENT	BES
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4	02-28-2022	REVISED PER TOWN COMMENTS	BES

DATE: DECEMBER 20, 2021  
PROJECT NO: 21-0709-3

SCALE: 1" = 30'  
SHEET 3 OF 23



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

APPROVED BY THE HUDSON, NH PLANNING BOARD  
DATE OF MEETING: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

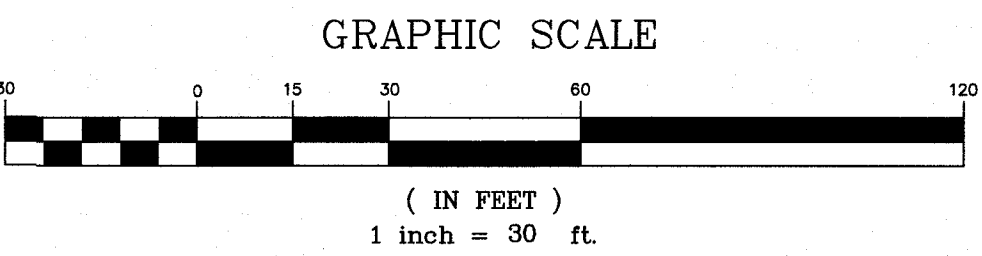
SITE PLANS ARE VALID FOR TWO YEARS FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

LEGEND

- GB-F GRANITE BOUND FOUND
- IPIN-F IRON PIN FOUND
- DH-F DRILL HOLE FOUND
- UTILITY POLE
- PROPOSED SIGN
- PROPOSED LIGHT
- PROPOSED HYDRANT
- PROPOSED WELL
- PROPOSED SEWER MANHOLE
- PROPOSED DRAINAGE MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED OUTLET STRUCTURE
- ABUTTER LINE
- PROPERTY LINE
- OVERHEAD UTILITIES
- TREELINE
- EDGE OF PAVEMENT
- STONEWALL
- BUILDING SETBACK
- ZONE LINE
- PROPOSED TREELINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED VERTICAL GRANITE CURB
- PROPOSED SWALE
- EASEMENT
- SITE LIGHTING
- BUILDING WALL PACK LIGHTING

SEE SHEET 1 FOR NOTES & REFERENCE PLANS

LOAM & SEED ALL DISTURBED AREAS (TYP.)



NPDES NOTE

THIS PROJECT DISTURBS IN EXCESS OF 1-ACRE OF LAND. THEREFORE IT WILL BE REQUIRED TO OBTAIN NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT COVERAGE AS ISSUED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA). THE OWNER/DEVELOPER AND "OPERATOR" (GENERAL CONTRACTOR) SHALL EACH BE REQUIRED TO PREPARE AND SUBMIT A NOTICE OF INTENT (NOI) TO THE EPA PRIOR TO THE START OF CONSTRUCTION AND SHALL BE RESPONSIBLE FOR THE PREPARATION AND IMPLEMENTATION OF A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) MEETING THE REQUIREMENTS OF THE CURRENT CONSTRUCTION GENERAL PERMIT.

UTILITY NOTE

THE UNDERGROUND UTILITIES DEPICTED HEREON HAVE BEEN DRAWN FROM FIELD SURVEY INFORMATION AND OR PLOTTED FROM EXISTING DRAWINGS. KEACH-NORDSTROM ASSOCIATES, INC. MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES DEPICTED COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. FURTHER, KEACH-NORDSTROM ASSOCIATES, INC. 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. KEACH-NORDSTROM ASSOCIATES, INC. HAS NOT PHYSICALLY LOCATED THE UNDERGROUND PORTIONS OF THE UTILITIES.

NON RESIDENTIAL SITE PLAN  
BLUEBIRD SELF STORAGE

MAP 176 LOTS 21, 22 & 23  
196-202 CENTRAL STREET  
HUDSON, NEW HAMPSHIRE  
HILLSBOROUGH COUNTY

OWNER OF RECORD:  
RONALD CRAVEN TRUST  
c/o NANCY CRAVEN TRUST  
88 SPEARE ROAD  
HUDSON, NH 03051  
H.C.R.D. BK. 6079 PG. 1294

APPLICANT:  
BLUEBIRD SELF STORAGE LLC.  
125 OCEAN ROAD  
GREENLAND, NH 03840

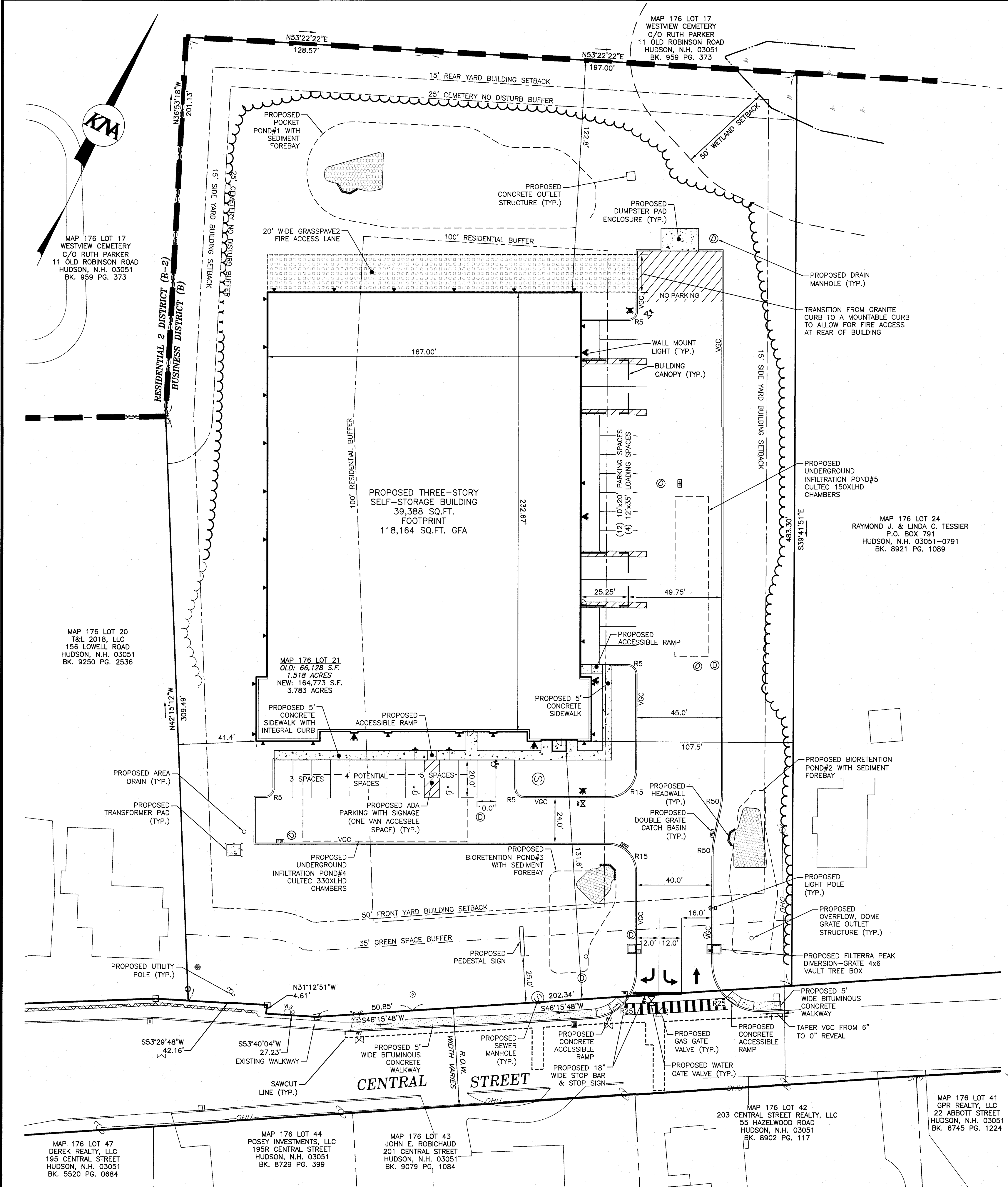
KEACH-NORDSTROM ASSOCIATES, INC.

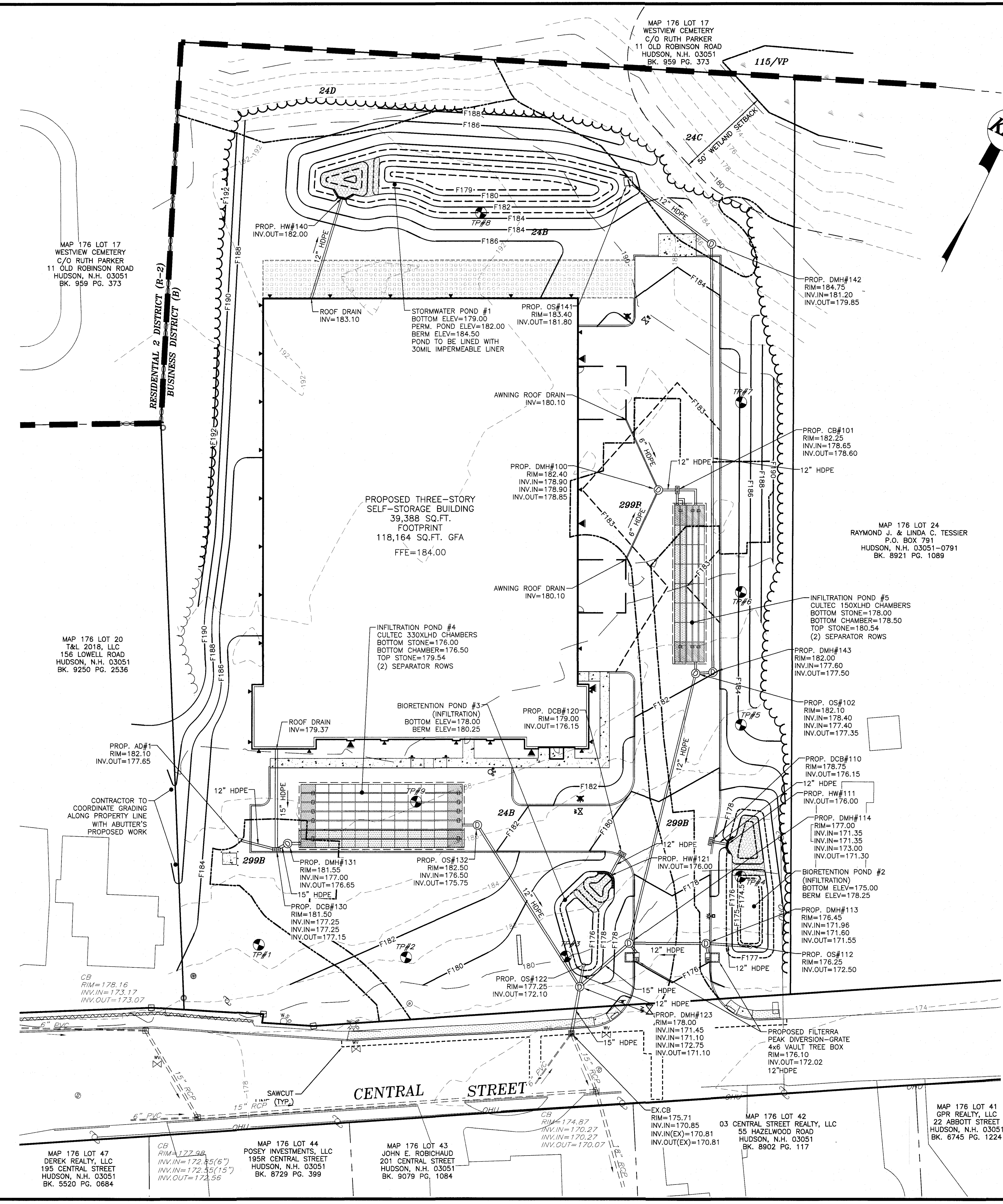
Civil Engineering Land Surveying Landscape Architecture  
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

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DATE: DECEMBER 20, 2021  
PROJECT NO: 21-0709-3

SCALE: 1" = 30'  
SHEET 4 OF 23





- CONSTRUCTION NOTES:**
1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE PROPOSED GRADING AND DRAINAGE SYSTEMS FOR THIS SITE.
  2. 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. ALL WORK PERFORMED IN THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION, APPROVED AND ADOPTED 2016 ARE HEREBY INCORPORATED BY REFERENCE.
  3. 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 HDPE. CATCH BASINS SHALL HAVE 3' SUMPS UNLESS OTHERWISE NOTED.
  4. 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.
  5. ALL DRAINAGE PIPE SHALL BE INSTALLED FOLLOWING MANUFACTURER'S INSTALLATION INSTRUCTIONS.
  6. PLANS TO COMPLY WITH THE TOWN OF HUDSON'S MS4 PERMIT.
  7. OWNER IS SOLELY RESPONSIBLE FOR MAINTAINING THE STORMWATER MANAGEMENT SYSTEM AS OUTLINED IN THE OPERATIONS & MAINTENANCE PLAN.

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

APPROVED BY THE HUDSON, NH PLANNING BOARD  
DATE OF MEETING: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

SITE PLANS ARE VALID FOR TWO YEARS 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.

**LEGEND**

GB-F	GRANITE BOUND FOUND	PROPOSED CHAIN LINK FENCE
IPIN-F	IRON PIN FOUND	PROPOSED STOCKADE FENCE
DH-F	DRILL HOLE FOUND	PROPOSED POST & RAIL FENCE
U	UTILITY POLE	PROPOSED BARBED WIRE FENCE
S	PROPOSED SIGN	PROPOSED GUARDRAIL
L	PROPOSED LIGHT	PROPOSED OVERHEAD UTILITIES
H	PROPOSED HYDRANT	PROPOSED UNDERGROUND UTILITIES
W	PROPOSED WELL	PROPOSED GAS LINE
SM	PROPOSED SEWER MANHOLE	PROPOSED WATER LINE
DM	PROPOSED DRAINAGE MANHOLE	PROPOSED SEWER LINE
C	PROPOSED CATCH BASIN	PROPOSED DRAINAGE LINE
OS	PROPOSED OUTLET STRUCTURE	PROPOSED TREELINE
AL	ABUTTER LINE	PROPOSED EDGE OF PAVEMENT
PL	PROPERTY LINE	PROPOSED VERTICAL GRANITE CURB
W	WETLAND	PROPOSED SLOPED GRANITE CURB
G	GUARDRAIL	PROPOSED 2' CONTOUR
OHU	OVERHEAD UTILITIES	PROPOSED SWALE
D	DRAINAGE LINE	PROPOSED RETAINING WALL
T	TREELINE	PROPOSED STONEWALL
E	EDGE OF PAVEMENT	EASEMENT
ST	STONEWALL	SITE LIGHTING
B	BUILDING SETBACK	BUILDING WALL PACK LIGHTING
Z	ZONE LINE	TEST PIT
C	10' CONTOUR	
D	2' CONTOUR	

**SITE SPECIFIC SOIL MAP UNIT KEY**

SYMBOL	MAP UNIT	SLOPE CLASS	DRAINAGE CLASS	HSG
24B	AGAWAM LOAMY SAND	3-8%	WELL DRAINED	B
24C	AGAWAM LOAMY SAND	8-15%	WELL DRAINED	B
24C	AGAWAM LOAMY SAND	15-25%	WELL DRAINED	B
115/VP	SCARBORO MUCKY FINE SANDY LOAM	3-8%	VERY POORLY DRAINED	D
299	UDORTHERTS, URBAN LAND	3-8%	POORLY DRAINED	D

THIS MAP PRODUCT IS WITHIN THE TECHNICAL STANDARDS OF THE NATIONAL COOPERATIVE SOILS SURVEY. IT IS A SPECIAL PURPOSE PRODUCT, PRODUCED BY A CERTIFIED SOIL SCIENTIST, AND IS NOT A PRODUCT OF THE USDA NATURAL RESOURCE CONSERVATION SERVICE. THERE IS A NARRATIVE REPORT THAT ACCOMPANIES THIS MAP AND MAP KEY.

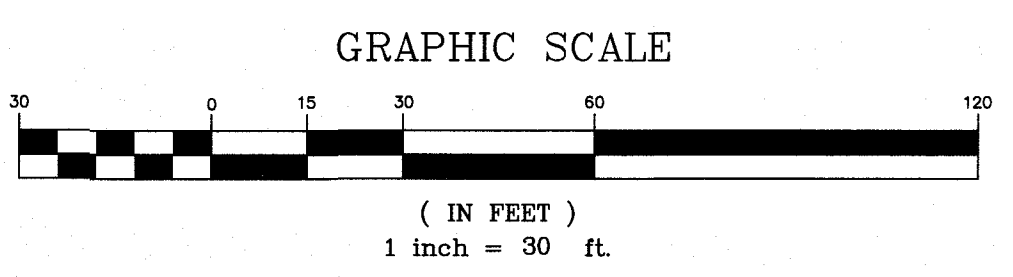
**SCS SOILS LEGEND**

WdB	WINDSOR LOAM SAND, 3-8% SLOPES
WdC	WINDSOR LOAM SAND, 8-15% SLOPES

SOURCE: USDA-SCS WEB SOIL SURVEY

SEE SHEET 1 FOR NOTES & REFERENCE PLANS

LOAM & SEED ALL DISTURBED AREAS (TYP.)



**NPDES NOTE**

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**UTILITY NOTE**

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**GRADING & DRAINAGE PLAN**  
**BLUEBIRD SELF STORAGE**

MAP 176 LOTS 21, 22 & 23  
196-202 CENTRAL STREET  
HUDSON, NEW HAMPSHIRE  
HILLSBOROUGH COUNTY

<b>OWNER OF RECORD:</b> RONALD CRAVEN TRUST c/o NANCY CRAVEN TRUST 88 SPEARE ROAD HUDSON, NH 03051 H.C.R.D. BK. 6079 PG. 1294	<b>APPLICANT:</b> BLUEBIRD SELF STORAGE LLC. 125 OCEAN ROAD GREENLAND, NH 03840
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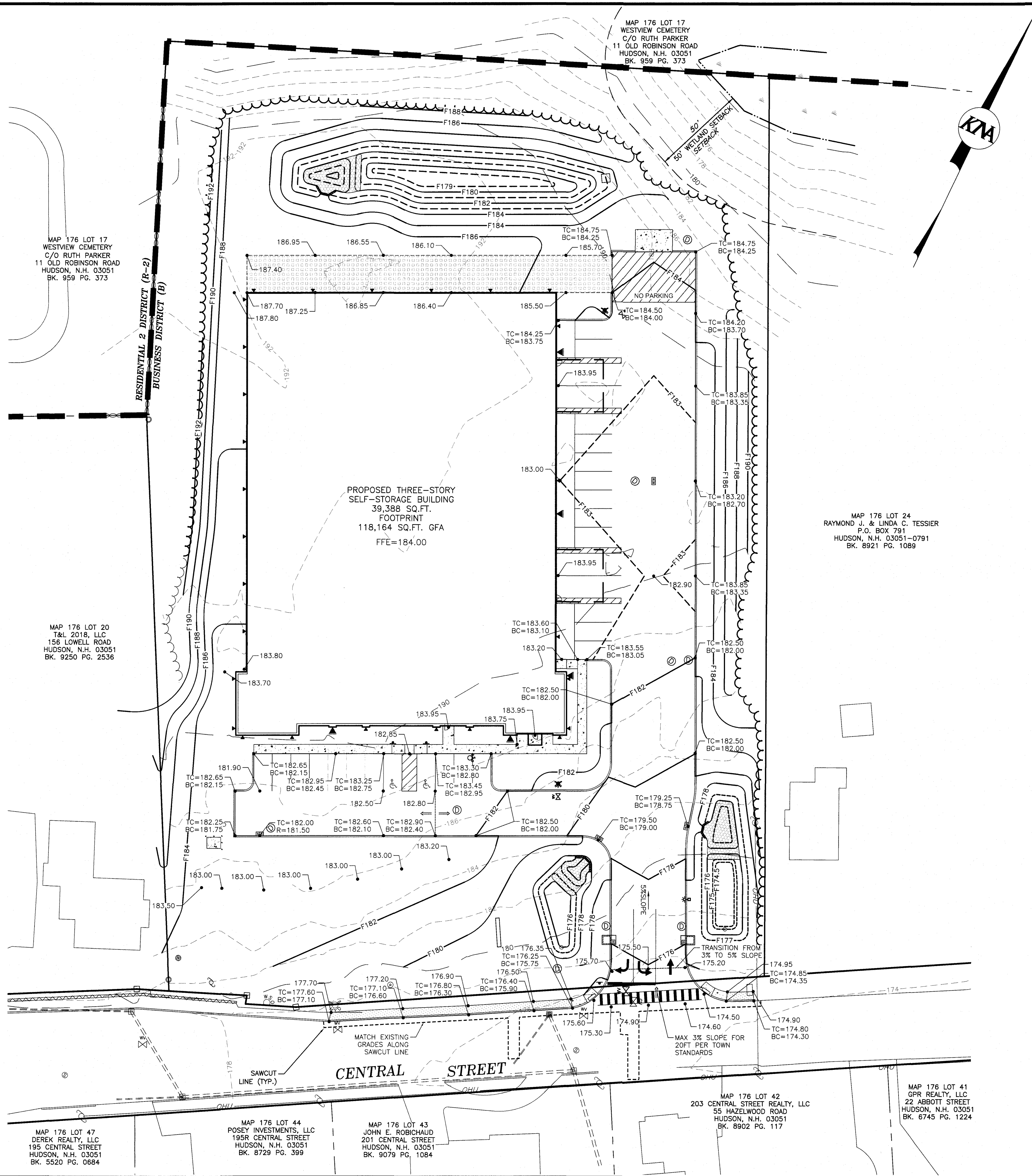
**KEACH-NORDSTROM ASSOCIATES, INC.**  
Civil Engineering Land Surveying Landscape Architecture  
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 827-2881

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DATE: DECEMBER 20, 2021  
PROJECT NO: 21-0709-3  
SCALE: 1" = 30'  
SHEET 5 OF 23





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

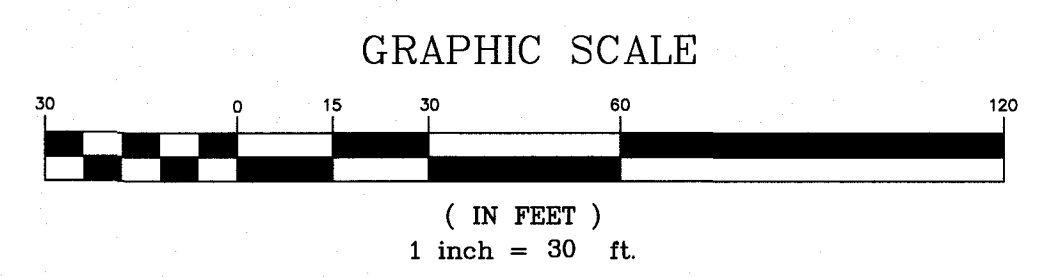
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LEGEND		
GB-F	GRANITE BOUND FOUND	PROPOSED CHAIN LINK FENCE
IPIN-F	IRON PIN FOUND	PROPOSED STOCKADE FENCE
DH-F	DRILL HOLE FOUND	PROPOSED POST & RAIL FENCE
U-P	UTILITY POLE	PROPOSED BARBED WIRE FENCE
S	PROPOSED SIGN	PROPOSED GUARDRAIL
L	PROPOSED LIGHT	PROPOSED OVERHEAD UTILITIES
H	PROPOSED HYDRANT	OHU
W	PROPOSED WELL	UGU
SM	PROPOSED SEWER MANHOLE	G
DM	PROPOSED DRAINAGE MANHOLE	G
CB	PROPOSED CATCH BASIN	W
OS	PROPOSED OUTLET STRUCTURE	W
AL	ABUTTER LINE	S
PL	PROPERTY LINE	S
W	WETLAND	PROPOSED TREELINE
G	GUARDRAIL	PROPOSED EDGE OF PAVEMENT
OHU	OVERHEAD UTILITIES	PROPOSED VERTICAL GRANITE CURB
DL	DRAINAGE LINE	PROPOSED SLOPED GRANITE CURB
T	TREELINE	PROPOSED 2' CONTOUR
EP	EDGE OF PAVEMENT	PROPOSED SWALE
SW	STONEWALL	PROPOSED RETAINING WALL
BL	BUILDING SETBACK	PROPOSED STONEWALL EASEMENT
ZL	ZONE LINE	PROPOSED STONEWALL EASEMENT
10'	10' CONTOUR	SITE LIGHTING
2'	2' CONTOUR	BUILDING WALL PACK LIGHTING
		TEST PIT

SEE SHEET 1 FOR NOTES & REFERENCE PLANS

LOAM & SEED ALL DISTURBED AREAS (TYP.)



**NPDES NOTE**

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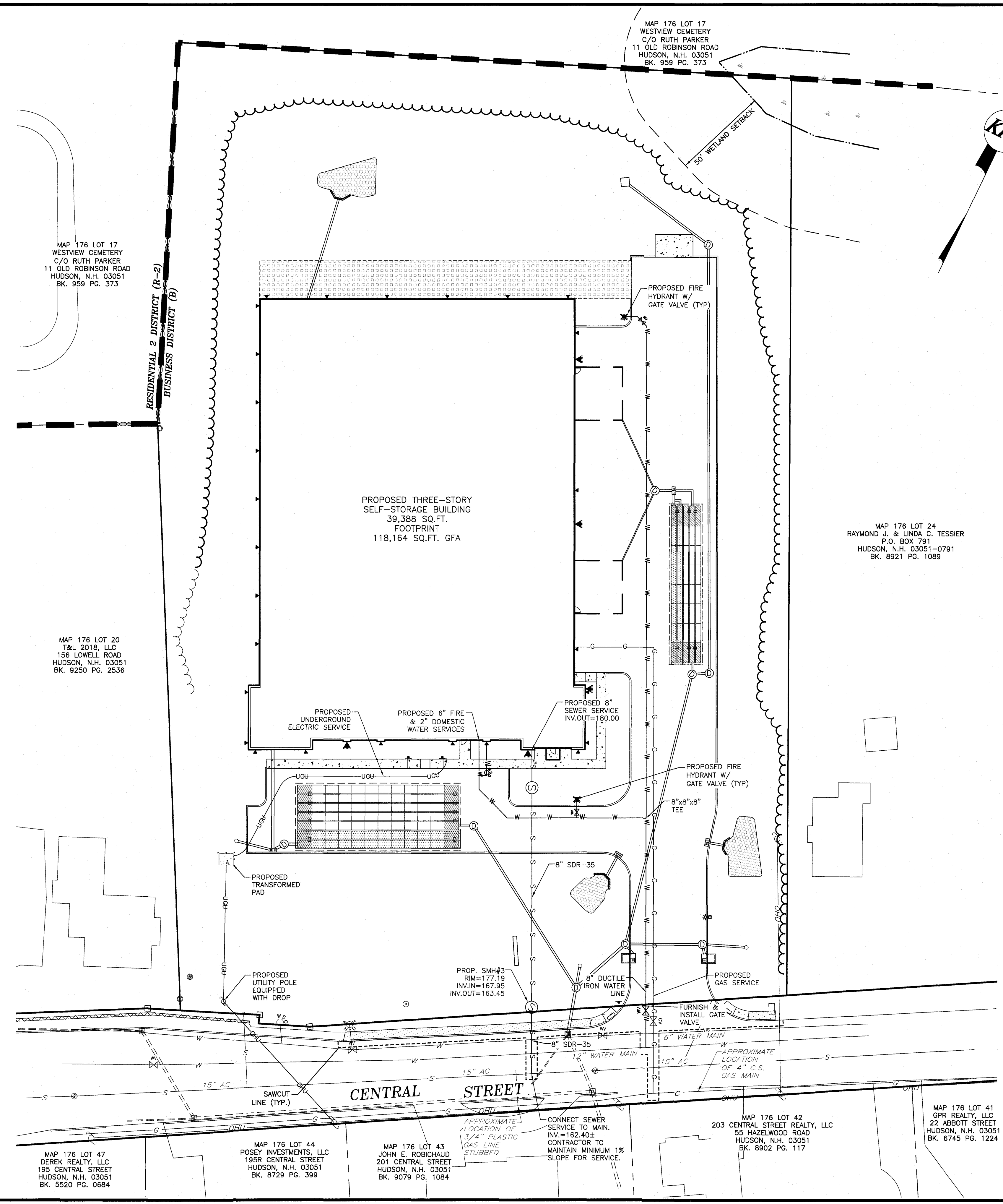
**SPOT GRADE PLAN**  
**BLUEBIRD SELF STORAGE**  
MAP 176 LOTS 21, 22 & 23  
196-202 CENTRAL STREET  
HUDSON, NEW HAMPSHIRE  
HILLSBOROUGH COUNTY

<b>OWNER OF RECORD:</b> RONALD CRAVEN TRUST c/o NANCY CRAVEN TRUST 88 SPEARE ROAD HUDSON, NH 03051 H.C.R.D. BK. 6079 PG. 1294	<b>APPLICANT:</b> BLUEBIRD SELF STORAGE LLC. 125 OCEAN ROAD GREENLAND, NH 03840
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SCALE: 1" = 30'			
SHEET 6 OF 23			





- CONSTRUCTION NOTES:**
1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE PROPOSED GRADING AND DRAINAGE SYSTEMS FOR THIS SITE.
  2. 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. ALL WORK PERFORMED IN THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION, APPROVED AND ADOPTED 2016 ARE HEREBY INCORPORATED BY REFERENCE.
  3. 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 HDPE. CATCH BASINS SHALL HAVE 3' SUMPS UNLESS OTHERWISE NOTED.
  4. 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.
  5. ALL DRAINAGE PIPE SHALL BE INSTALLED FOLLOWING MANUFACTURER'S INSTALLATION INSTRUCTIONS.
  6. PLANS TO COMPLY WITH THE TOWN OF HUDSON'S MS4 PERMIT.
  7. OWNER IS SOLELY RESPONSIBLE FOR MAINTAINING THE STORMWATER MANAGEMENT SYSTEM AS OUTLINED IN THE OPERATIONS & MAINTENANCE PLAN.
  8. THE WATER, SANITARY SEWER, GAS AND ELECTRICAL UTILITIES SHOWN HERE SHALL BE COORDINATED WITH THE FINAL BUILDING PLANS PRIOR TO CONSTRUCTION. THE DESIGN ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES.

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

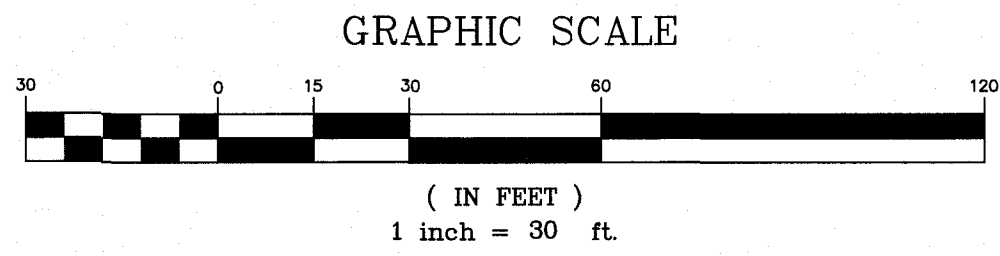
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LEGEND	
GB-F	GRANITE BOUND FOUND
IPIN-F	IRON PIN FOUND
DH-F	DRILL HOLE FOUND
U	UTILITY POLE
PS	PROPOSED SIGN
PL	PROPOSED LIGHT
HY	PROPOSED HYDRANT
W	PROPOSED WELL
SM	PROPOSED SEWER MANHOLE
DM	PROPOSED DRAINAGE MANHOLE
CB	PROPOSED CATCH BASIN
OS	PROPOSED OUTLET STRUCTURE
AL	ABUTTER LINE
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D	DRAINAGE LINE
T	TREELINE
E	EDGE OF PAVEMENT
S	STONEWALL
B	BUILDING SETBACK
Z	ZONE LINE
10	10' CONTOUR
2	2' CONTOUR
CL	PROPOSED CHAIN LINK FENCE
ST	PROPOSED STOCKADE FENCE
PR	PROPOSED POST & RAIL FENCE
BW	PROPOSED BARBED WIRE FENCE
GR	PROPOSED GUARDRAIL
OH	PROPOSED OVERHEAD UTILITIES
UG	PROPOSED UNDERGROUND UTILITIES
G	PROPOSED GAS LINE
W	PROPOSED WATER LINE
S	PROPOSED SEWER LINE
DL	PROPOSED DRAINAGE LINE
TL	PROPOSED TREELINE
EP	PROPOSED EDGE OF PAVEMENT
VG	PROPOSED VERTICAL GRANITE CURB
SG	PROPOSED SLOPED GRANITE CURB
2	PROPOSED 2' CONTOUR
SW	PROPOSED SWALE
RL	PROPOSED RETAINING WALL
STW	PROPOSED STONEWALL
E	EASEMENT
SL	SITE LIGHTING
BWL	BUILDING WALL PACK LIGHTING
TP	TEST PIT

SEE SHEET 1 FOR NOTES & REFERENCE PLANS

LOAM & SEED ALL DISTURBED AREAS (TYP.)



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**UTILITY PLAN  
BLUEBIRD SELF STORAGE**

MAP 176 LOTS 21, 22 & 23  
196-202 CENTRAL STREET  
HUDSON, NEW HAMPSHIRE  
HILLSBOROUGH COUNTY

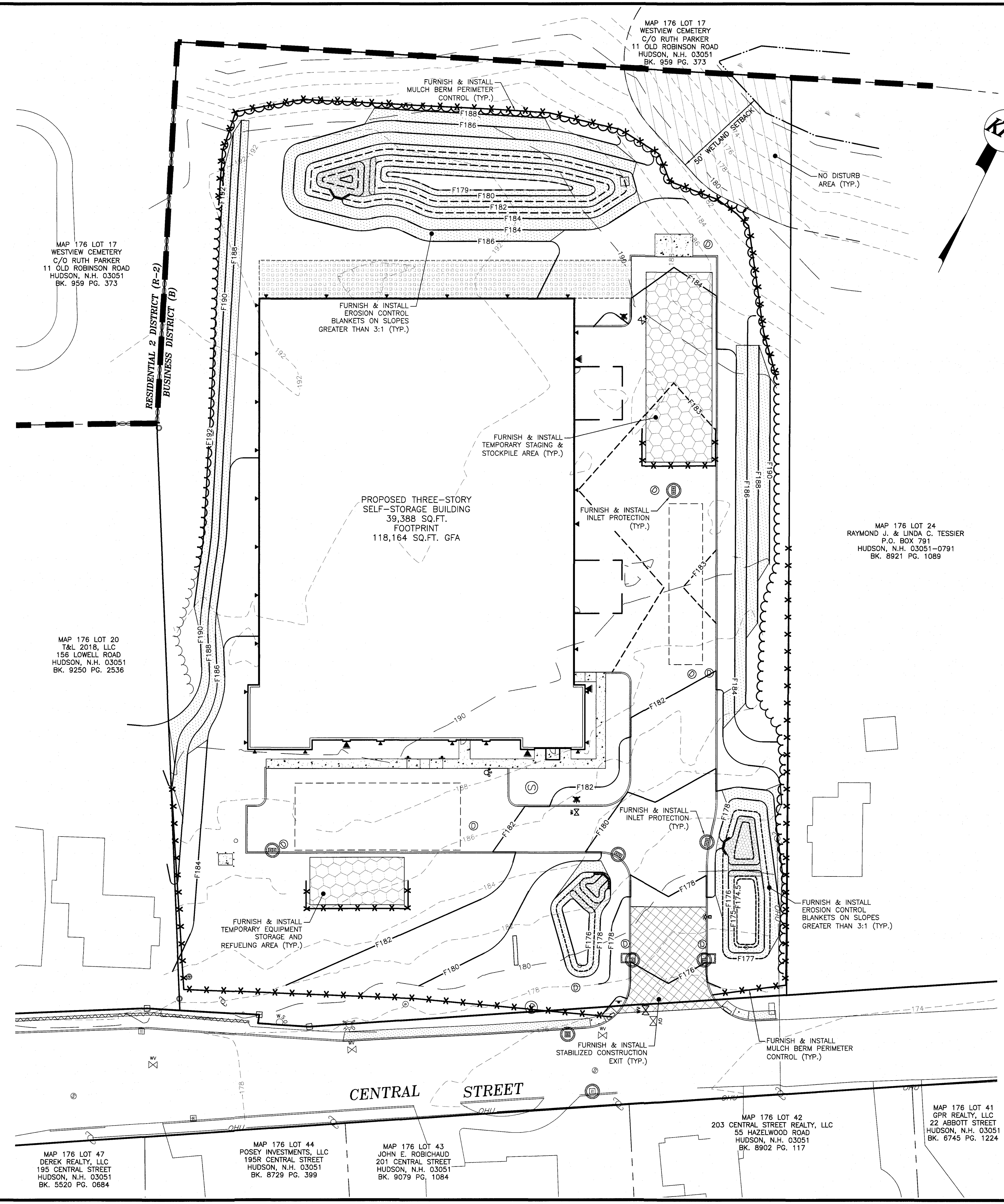
**OWNER OF RECORD:**  
RONALD CRAVEN TRUST  
c/o NANCY CRAVEN TRUST  
88 SPEARE ROAD  
HUDSON, NH 03051  
H.C.R.D. BK. 6079 PG. 1294

**APPLICANT:**  
BLUEBIRD SELF STORAGE LLC.  
125 OCEAN ROAD  
GREENLAND, NH 03840

**KEACH-NORDSTROM ASSOCIATES, INC.**  
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SHEET 7 OF 23



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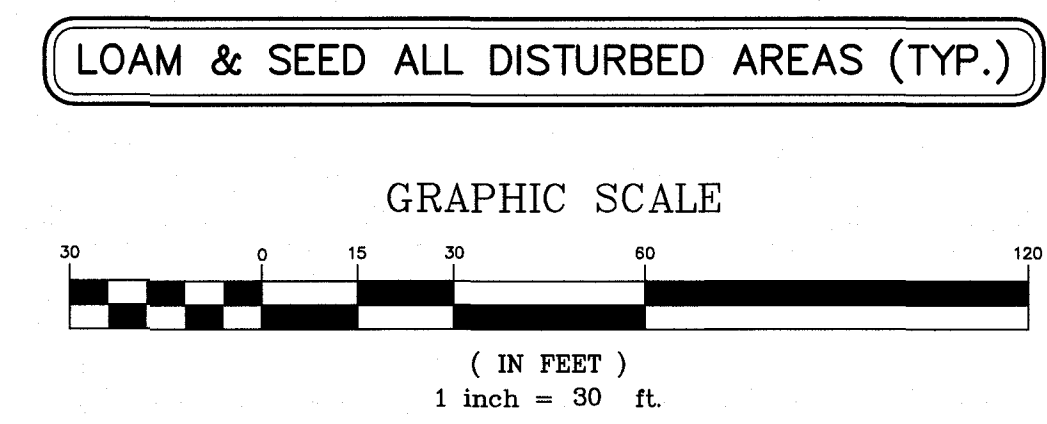
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- EROSION CONTROL NOTES:**
1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE REQUIRED ONSITE TEMPORARY CONSTRUCTION EROSION CONTROL MEASURES AS WELL AS THE PERMANENT EROSION CONTROL MEASURES.
  2. ALL MEASURES IN THE PLAN SHALL MEET AS A MINIMUM THE BEST MANAGEMENT PRACTICES SET FORTH IN VOLUME 3 OF THE NEW HAMPSHIRE STORMWATER MANUAL TITLED "EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION," DATED DECEMBER 2010, 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 TEMPORARILY STABILIZED AS SOON AS PRACTICABLE BUT NO LATER THAN FIVE DAYS FROM THE INITIAL DISTURBANCE WITH SEED AND MULCH, EROSION CONTROL BLANKETS OR CRUSTED STONE OR OTHER SUITABLE MEASURES APPROVED BY THE TOWN ENGINEER OR DESIGNATED REPRESENTATIVE. ALL DISTURBED SOIL AREAS THAT HAVE ACHIEVED FINAL GRADING SHALL BE PERMANENTLY STABILIZED WITHIN THREE DAYS FOLLOWING FINAL GRADING.
  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.
  11. INFILTRATION AREAS ARE TO BE PROTECTED FROM OVER-COMPACTATION DURING CONSTRUCTION.
  12. SLOPES OVER 2:1 TO BE DESIGNED BY A GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION.

**EROSION & SEDIMENT CONTROL LEGEND**

	PERMANENT OUTLET PROTECTION APRON (RIP RAP)
	INLET PROTECTION
	PERIMETER CONTROL
	ORANGE CONSTRUCTION FENCING
	TEMPORARY STONE CHECK DAM
	STABILIZED CONSTRUCTION EXIT
	STAGING AND STOCKPILE AREA
	EROSION CONTROL BLANKETS
	NON DISTURBANCE AREA



**EROSION CONTROL PLAN**  
**BLUEBIRD SELF STORAGE**  
MAP 176 LOTS 21, 22 & 23  
196-202 CENTRAL STREET  
HUDSON, NEW HAMPSHIRE  
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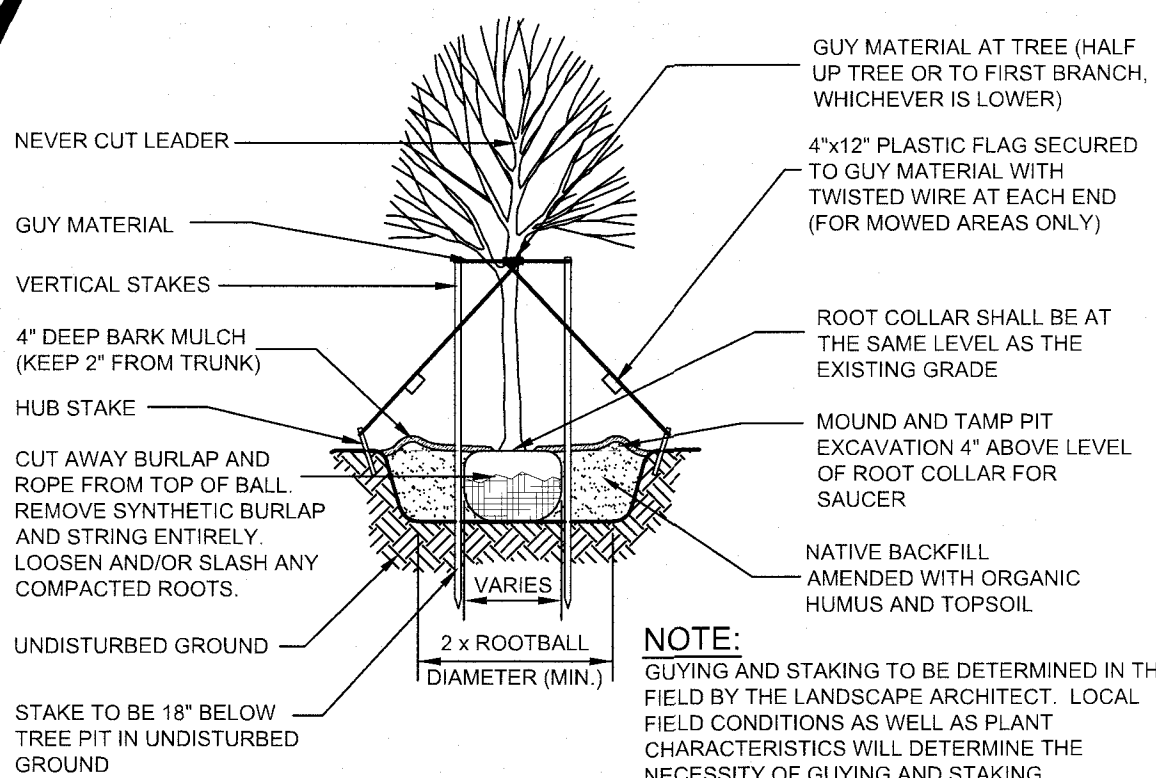
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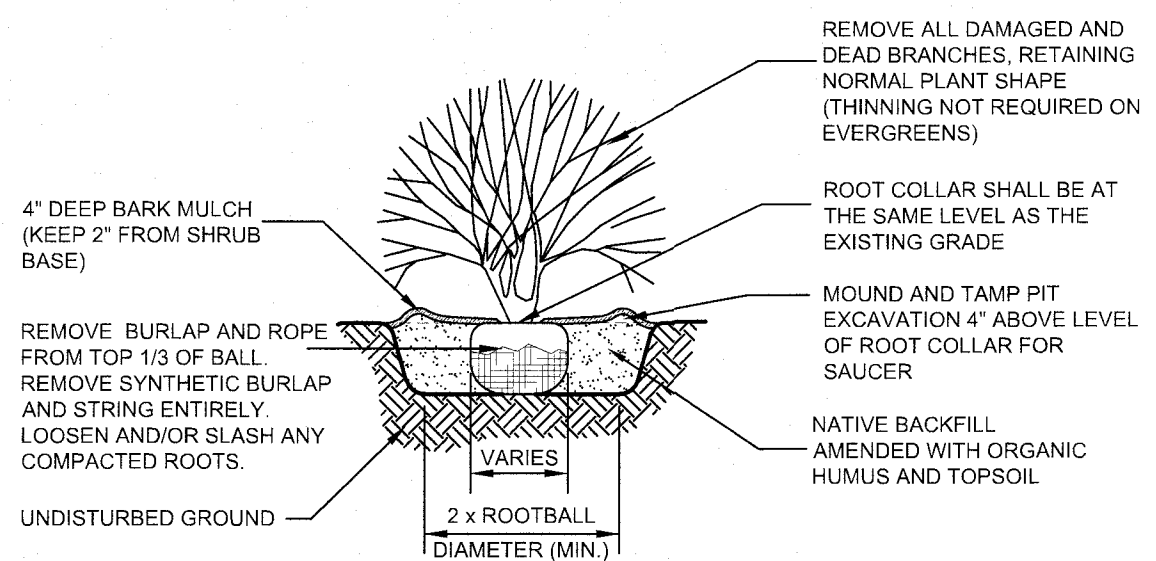
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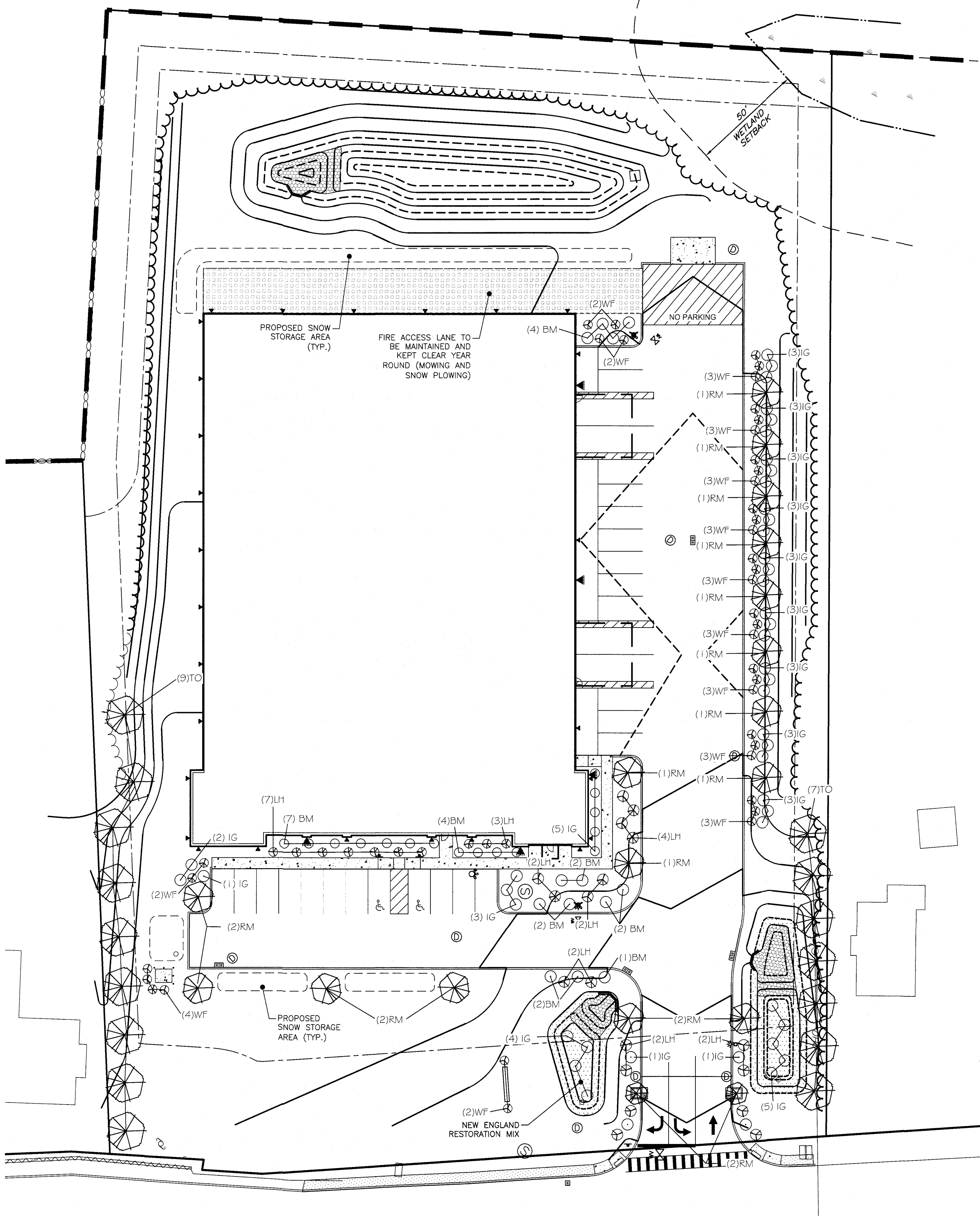




DECIDUOUS TREE PLANTING DETAIL  
NOT TO SCALE  
(JANUARY 2012)



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



#### 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 FOLLOWS: 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. PLANT TYPES SHOWN ARE SUBJECT TO AVAILABILITY. SUBSTITUTE MATERIALS CAN BE IMPLEMENTED WITH APPROVAL FROM KEACH NORDSTROM ASSOCIATES PRIOR TO CONSTRUCTION.

#### LANDSCAPE CALCULATIONS

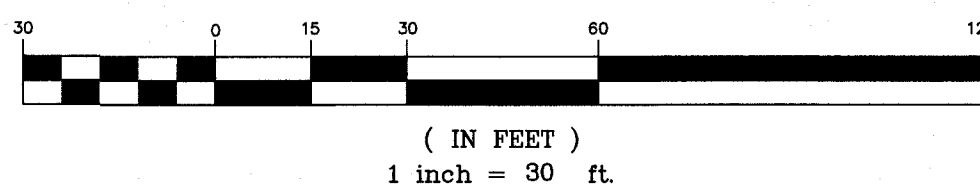
REQUIRED PARKING LOT INTERIOR LANDSCAPE AREA  
PROPOSED PARKING AREA PAVED: 28,870 SF  
10% REQUIRED LANDSCAPE AREA: 2,887 SF  
PROVIDED LANDSCAPE AREA: 8,612 SF

REQUIRED PARKING LOT SHADE TREES AND SHRUBS  
PROPOSED PAVED AREA: 28,870 SF  
SHADE TREES REQUIRED (28,870/1,600): 18 TREES REQUIRED  
(OR 1 TREE/5 PROP. PARKING SPACES) 6 TREES REQUIRED  
SHADE TREES PROVIDED: 18 TREES PROVIDED  
SHRUBS REQUIRED (28,870/200): 145 SHRUBS, OR  
(OR 1.6 x 28 PROP. PARKING SPACES) 45 SHRUBS PROPOSED  
SHRUBS PROVIDED: 145 SHRUBS PROPOSED

#### PLANTING SCHEDULE

Botanical Name/ Common Name	Size	Label	Quantity	Mature Height
<b>Trees</b>				
<i>Acer rubrum</i> 'Redpointe' / Redpointe Red Maple	3-3.5" CAL.	RM	18	40-60'
<i>Thuja Occidentalis</i> / Eastern Arborvitae	3-3.5" CAL.	TO	16	30-40'
<b>Shrubs</b>				
<i>Hydrangea Panicula</i> 'Little Lamb' / Little Lamb Panicle Hydrangea	24"	LH	23	5-6'
<i>Ilex glabra</i> 'Compacta' / Compact Inkberry	#3	IG	45	5-6'
<i>Viburnum Dentatum</i> 'Blue Muffin' / Blue Muffin Viburnum	2.5'-3' B&B	BM	36	5-6'
<i>Weigela Florida</i> 'Wine & Roses' / Wine & Roses Weigela	2.5'-3' B&B	WF	31	5-6'
<b>Seed Mix</b>				
New England Erosion Control/Restoration Mix				

#### GRAPHIC SCALE



( IN FEET )  
1 inch = 30 ft.

### LANDSCAPE PLAN BLUEBIRD SELF STORAGE

MAP 176 LOTS 21, 22 & 23  
196-202 CENTRAL STREET  
HUDSON, NEW HAMPSHIRE  
HILLSBOROUGH COUNTY

#### OWNER OF RECORD:

RONALD CRAVEN TRUST  
c/o NANCY CRAVEN TRUST  
88 SPEARE ROAD  
HUDSON, NH 03051  
H.C.R.D. BK. 6079 PG. 1294

#### APPLICANT:

BLUEBIRD SELF STORAGE LLC.  
125 OCEAN ROAD  
GREENLAND, NH 03840



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 TWO  
YEARS FROM DATE  
OF APPROVAL

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

SIGNATURE DATE: \_\_\_\_\_

SIGNATURE DATE: \_\_\_\_\_

SITE PLANS ARE VALID FOR TWO YEARS 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.

#### REVISIONS

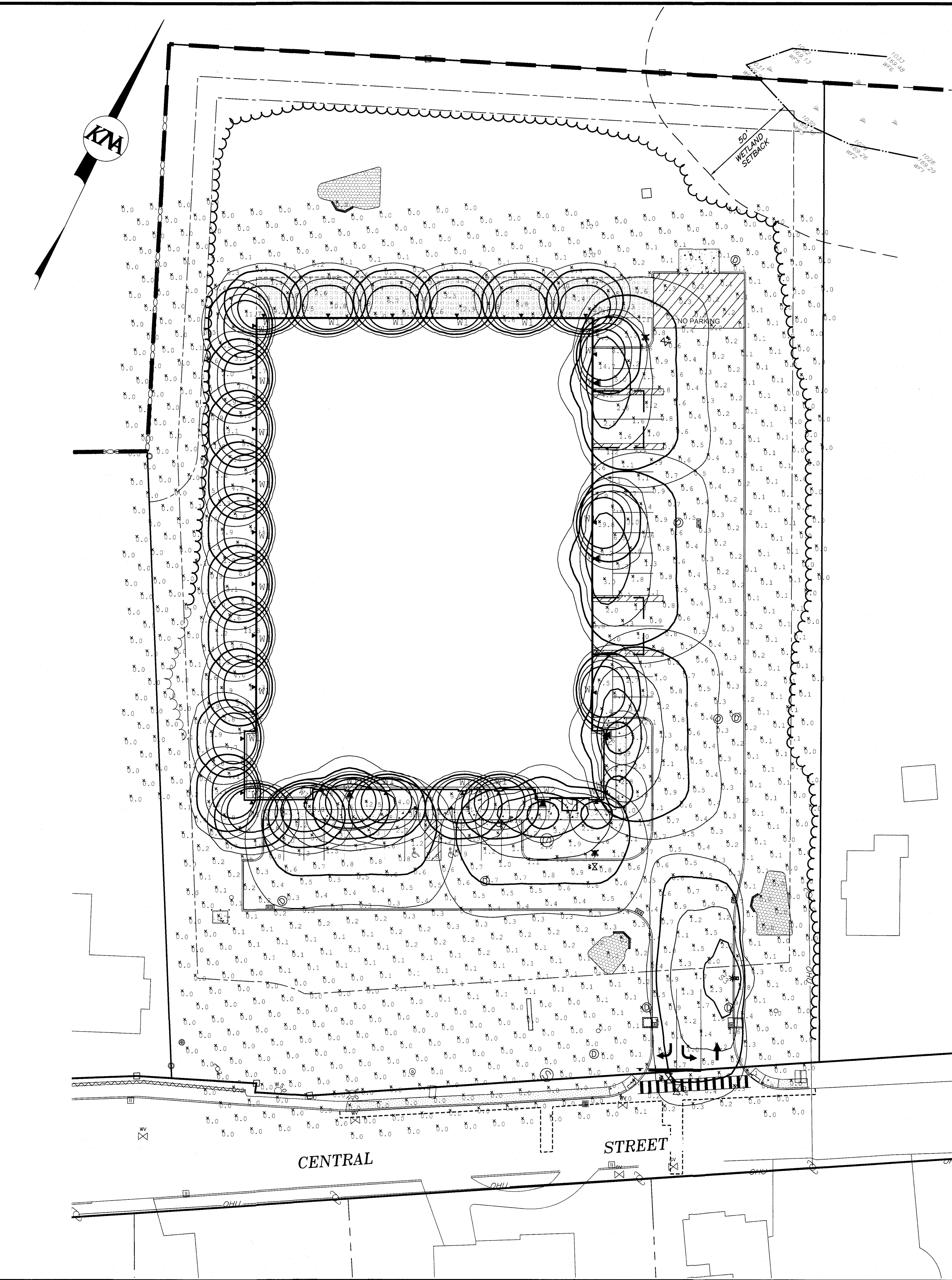
No.	DATE	DESCRIPTION	BY
1	01-21-2022	REVISED GRADING/DRAINAGE PER CLIENT	BES
2	02-14-2022	REVISED PER REVIEW COMMENTS	BES
3	02-21-2022	REVISED PER TOWN COMMENTS	BES
4	02-28-2022	REVISED PER TOWN COMMENTS	BES

DATE: DECEMBER 20, 2021

SCALE: 1" = 30'

PROJECT NO: 21-0709-3

SHEET 9 OF 23



**LIGHTING NOTES:**

1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE LIGHTING/PHOTOMETRICS ON THE SITE DURING BUSINESS HOURS, AT STANDARD OPERATING BRIGHTNESS.
2. ALL LIGHTS/FIXTURES SHALL BE AS SPECIFIED BY CHARRON LIGHTING.
3. ALL PROPOSED LIGHTS/FIXTURES ARE TO BE FULL CUTOFF.
4. FIXTURES SHALL BE MOUNTED AS HEIGHTS AS SPECIFIED IN TABLE.
5. PRIOR TO CONSTRUCTION, THE SITE CONTRACTOR SHALL COORDINATE WITH THE PROJECT ELECTRICIAN FOR THE EXACT LOCATION, LAYOUT, CONDUIT SIZE AND CIRCUITS ASSOCIATED WITH THE SITE LIGHTING.
6. LIGHTING WILL BE ON AT ALL TIMES TO PROVIDE SECURITY AND SAFETY FOR THE FACILITY.

PURSUANT TO THE  
SITE REVIEW  
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PLANNING BOARD,  
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APPROVAL  
GRANTED HEREIN  
EXPIRES TWO  
YEARS FROM DATE  
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APPROVED BY THE HUDSON, NH PLANNING BOARD  
DATE OF MEETING: \_\_\_\_\_

SIGNATURE DATE: \_\_\_\_\_

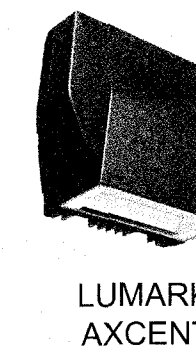
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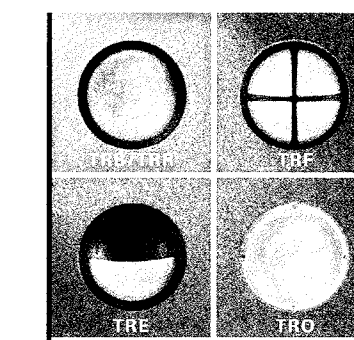
**LEGEND**

- GB-F GRANITE BOUND FOUND
- IPIN-F IRON PIN FOUND
- DH-F DRILL HOLE FOUND
- UTILITY POLE
- PROPOSED SIGN
- PROPOSED LIGHT
- PROPOSED HYDRANT
- PROPOSED WELL
- PROPOSED SEWER MANHOLE
- PROPOSED DRAINAGE MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED OUTLET STRUCTURE
- ABUTTER LINE
- PROPERTY LINE
- OVERHEAD UTILITIES
- TREELINE
- EDGE OF PAVEMENT
- STONEWALL
- BUILDING SETBACK
- ZONE LINE
- PROPOSED TREELINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED VERTICAL GRANITE CURB
- PROPOSED SWALE
- EASEMENT
- SITE LIGHTING
- BUILDING WALL PACK LIGHTING

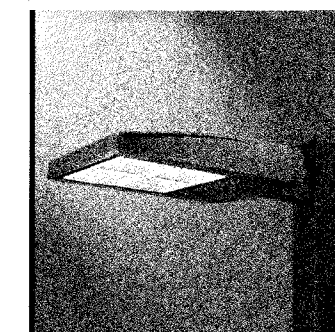
SEE SHEET 1 FOR NOTES  
& REFERENCE PLANS



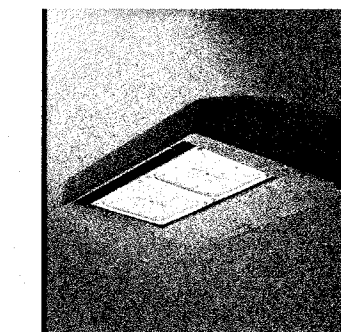
LUMARK  
AXCENT



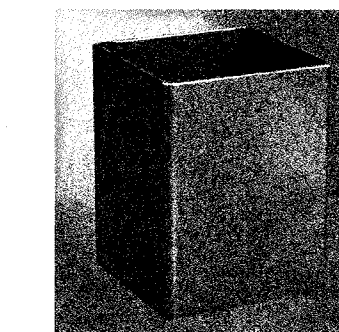
TR 11 LED



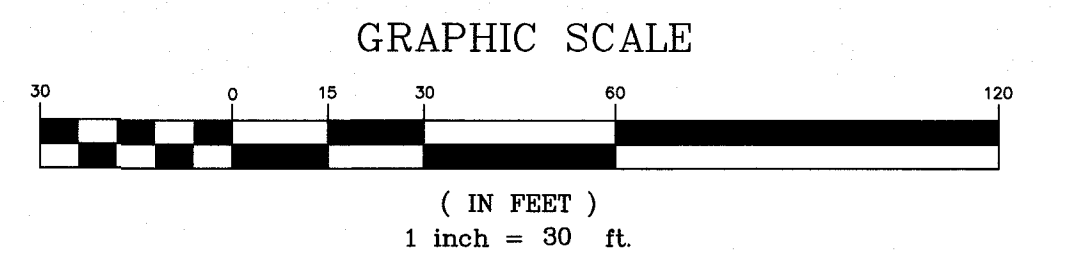
GLEON  
GALLEON LED



GWC GALLEON  
WALL



SSS SQUARE  
STRAIGHT STEEL



LUMINAIRE SCHEDULE				
SYMBOL	QTY	LABEL	ARRANGEMENT	DESCRIPTION
☼	1	S3	SINGLE	GLEON-SA1C-740-U-SL3-HSS-MS/DIM-L20/ SSS4A20SFN1 (20' AFG)
◀	5	W	SINGLE	GWC-SA1C-740-U-SL4-MA/DIM-L20/ WALL MTD 18' AFG
◀	25	W1	SINGLE	AXCS3A-MSP/DIM-L12 (9' AFG)
◀	4	W2	SINGLE	TRE11-LD4-25W-35-OPL-WH-UNV-EDD1/WALL MTD 13' AFG

STATAREA\_1  
FRONT PARKING LOT AREA  
ILLUMINANCE (FC)  
AVERAGE = 1.02  
MAXIMUM = 6.2  
MINIMUM = 0.2  
AVG/MIN RATIO = 5.10  
MAX/MIN RATIO = 31.00

STATAREA\_2  
SIDE PARKING LOT AREA  
ILLUMINANCE (FC)  
AVERAGE = 0.96  
MAXIMUM = 8.0  
MINIMUM = 0.2  
AVG/MIN RATIO = 4.80  
MAX/MIN RATIO = 40.00



IN ASSOCIATION WITH:



P.O. BOX 4550  
MANCHESTER, NH 03108  
(603) 624-4827  
FAX (603) 624-9764  
SALES@CHARRONNH.COM

**LIGHTING PLAN  
BLUEBIRD SELF STORAGE**

MAP 176 LOTS 21, 22 & 23  
196-202 CENTRAL STREET  
HUDSON, NEW HAMPSHIRE  
HILLSBOROUGH COUNTY

**OWNER OF RECORD:**  
RONALD CRAVEN TRUST  
c/o NANCY CRAVEN TRUST  
88 SPEARE ROAD  
HUDSON, NH 03051  
H.C.R.D. BK. 6079 PG. 1294

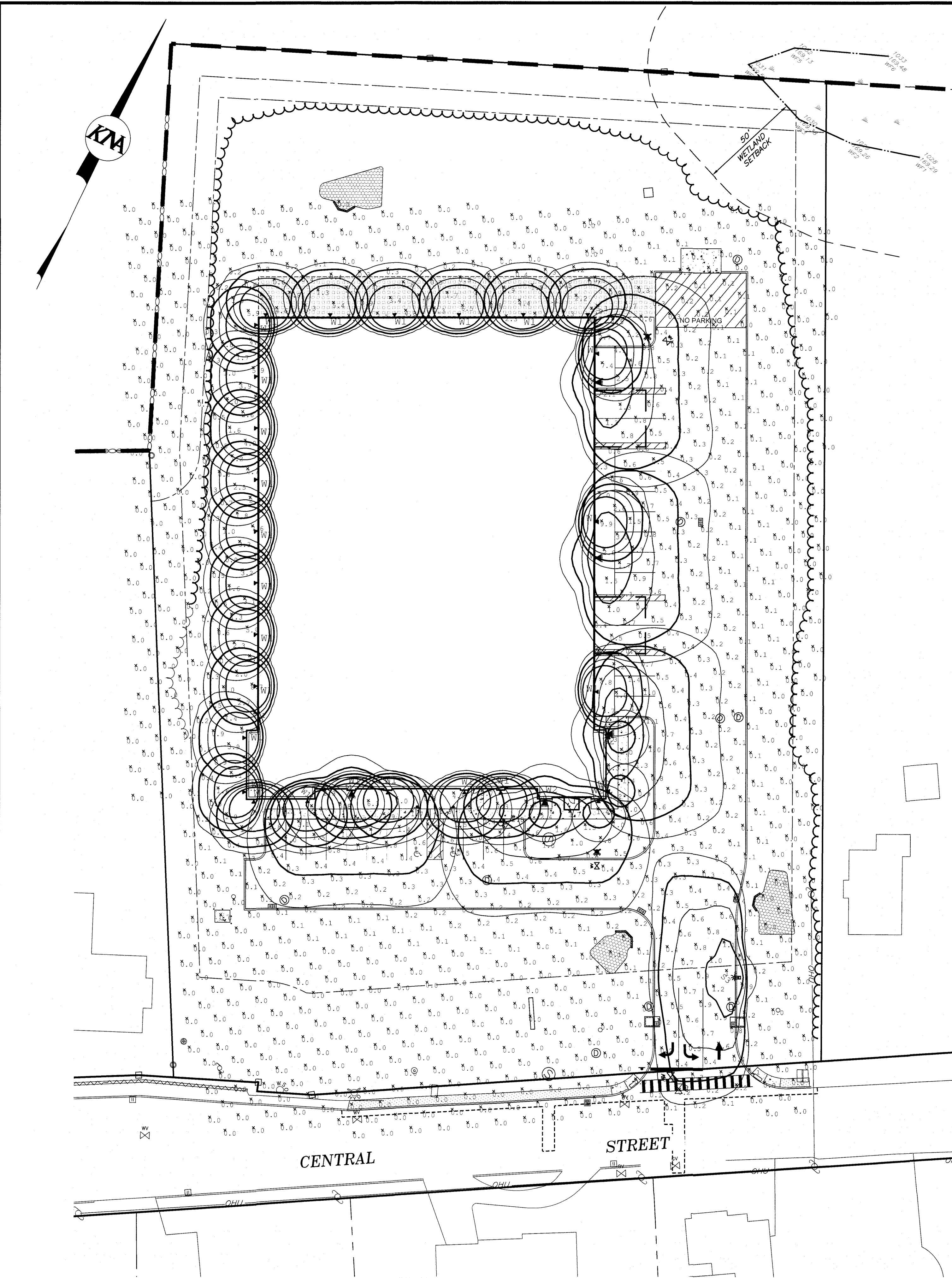
**APPLICANT:**  
BLUEBIRD SELF STORAGE LLC.  
125 OCEAN ROAD  
GREENLAND, NH 03840

**KMA** 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	01-21-2022	REVISED GRADING/DRAINAGE PER CLIENT	RES
2	02-14-2022	REVISED PER REVIEW COMMENTS	RES
3	02-21-2022	REVISED PER TOWN COMMENTS	RES
4	02-28-2022	REVISED PER TOWN COMMENTS	RES

DATE: DECEMBER 20, 2021  
PROJECT NO: 21-0709-3  
SCALE: 1" = 30'  
SHEET 10 OF 23





**LIGHTING NOTES:**

1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE LIGHTING/PHOTOMETRICS ON THE SITE DURING OFF HOURS, DIMMED TO 50% OPERATING BRIGHTNESS.
2. ALL LIGHTS/FIXTURES SHALL BE AS SPECIFIED BY CHARRON LIGHTING.
3. ALL PROPOSED LIGHTS/FIXTURES ARE TO BE FULL CUTOFF.
4. FIXTURES SHALL BE MOUNTED AS HEIGHTS AS SPECIFIED IN TABLE.
5. PRIOR TO CONSTRUCTION, THE SITE CONTRACTOR SHALL COORDINATE WITH THE PROJECT ELECTRICIAN FOR THE EXACT LOCATION, LAYOUT, CONDUIT SIZE AND CIRCUITS ASSOCIATED WITH THE SITE LIGHTING.
6. LIGHTING WILL BE ON AT ALL TIMES TO PROVIDE SECURITY AND SAFETY FOR THE FACILITY.

PURSUANT TO THE  
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REGULATIONS OF  
THE HUDSON  
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THE SITE PLAN  
APPROVAL  
GRANTED HEREIN  
EXPIRES TWO  
YEARS FROM DATE  
OF APPROVAL

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

\_\_\_\_\_  
SIGNATURE DATE: \_\_\_\_\_

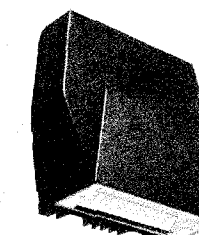
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SIGNATURE DATE: \_\_\_\_\_

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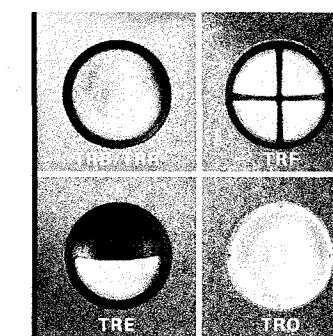
**LEGEND**

- GB-F GRANITE BOUND FOUND
- IPIN-F IRON PIN FOUND
- DH-F DRILL HOLE FOUND
- UTILITY POLE
- PROPOSED SIGN
- PROPOSED LIGHT
- PROPOSED HYDRANT
- PROPOSED WELL
- PROPOSED SEWER MANHOLE
- PROPOSED DRAINAGE MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED OUTLET STRUCTURE
- ABUTTER LINE
- PROPERTY LINE
- OVERHEAD UTILITIES
- TREELINE
- EDGE OF PAVEMENT
- STONEMALL
- BUILDING SETBACK
- ZONE LINE
- PROPOSED TREELINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED VERTICAL GRANITE CURB
- PROPOSED SWALE
- EASEMENT
- SITE LIGHTING
- BUILDING WALL PACK LIGHTING

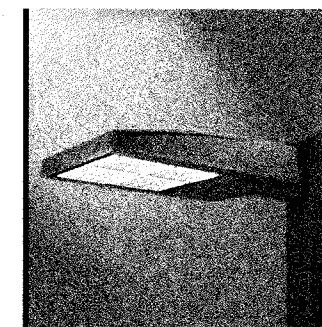
SEE SHEET 1 FOR NOTES  
& REFERENCE PLANS



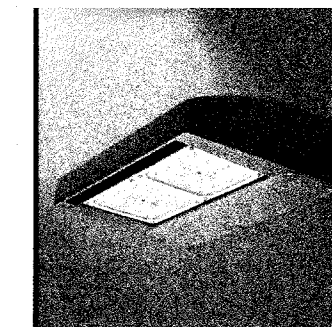
LUMARK  
AXCENT



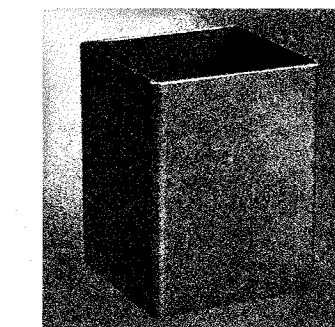
TR 11 LED



GLEON  
GALLEON LED

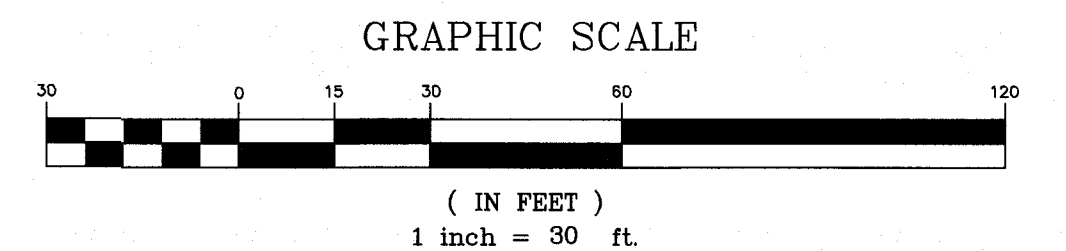


GWC GALLEON  
WALL



SSS SQUARE  
STRAIGHT STEEL

LUMINAIRE SCHEDULE				
SYMBOL	QTY	LABEL	ARRANGEMENT	DESCRIPTION
☐*	1	S3	SINGLE	GLEON-SA1C-740-U-SL3-HSS-MS/DIM-L20/ SSS4A20SFN1 (20' AFG)
◀	5	W	SINGLE	GWC-SA1C-740-U-SL4-MA/DIM-L20/ WALL MTD 18' AFG
◀	25	W1	SINGLE	AXCS3A-MSP/DIM-L12 (9' AFG)
◀	4	W2	SINGLE	TRE11-LD4-25W-35-OPL-WH-UNV-EDD1/WALL MTD 13' AFG



IN ASSOCIATION WITH:



P.O. BOX 4550  
MANCHESTER, NH 03108  
(603) 624-4827  
FAX (603) 624-8764  
SALES@CHARRONINC.COM

**LIGHTING PLAN**  
**BLUEBIRD SELF STORAGE**

MAP 176 LOTS 21, 22 & 23  
196-202 CENTRAL STREET  
HUDSON, NEW HAMPSHIRE  
HILLSBOROUGH COUNTY

**OWNER OF RECORD:**

RONALD CRAVEN TRUST  
c/o NANCY CRAVEN TRUST  
88 SPEARE ROAD  
HUDSON, NH 03051  
H.C.R.D. BK. 6079 PG. 1294

**APPLICANT:**

BLUEBIRD SELF STORAGE LLC.  
125 OCEAN ROAD  
GREENLAND, NH 03840

**KMA**  
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	01-21-2022	REVISED GRADING/DRAINAGE PER CLIENT	BES
2	02-14-2022	REVISED PER REVIEW COMMENTS	BES
3	02-21-2022	REVISED PER TOWN COMMENTS	BES
4	02-28-2022	REVISED PER TOWN COMMENTS	BES

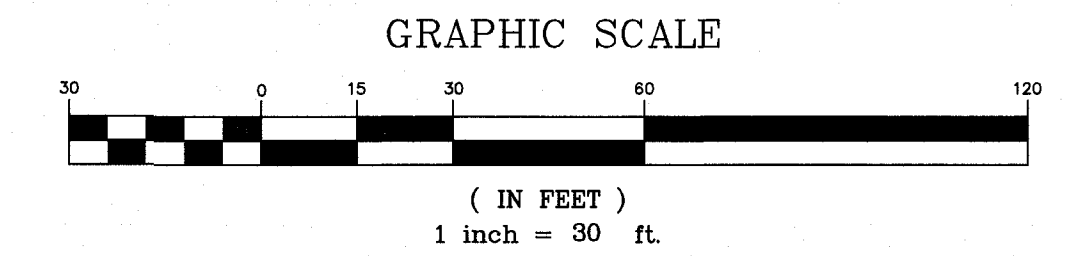
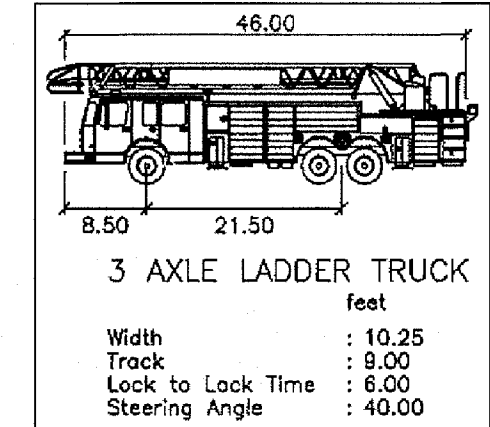
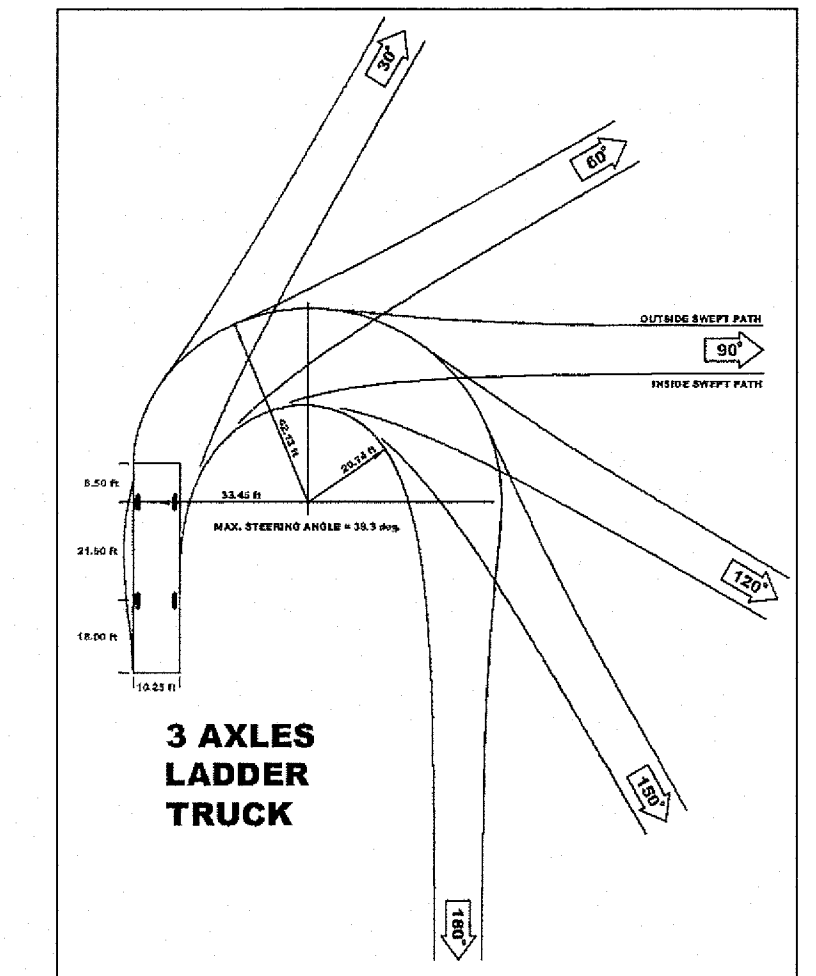
DATE: DECEMBER 20, 2021

SCALE: 1" = 30'

PROJECT NO: 21-0709-3

SHEET 11 OF 23

NOTES:  
1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE REVERSE TURNING MOTION OF A FIRE TRUCK THROUGH THE PROPOSED SITE.



**FIRE TRUCK TURNING PLAN  
BLUEBIRD SELF STORAGE**

MAP 176 LOTS 21, 22 & 23  
196-202 CENTRAL STREET  
HUDSON, NEW HAMPSHIRE  
HILLSBOROUGH COUNTY

**OWNER OF RECORD:**  
RONALD CRAVEN TRUST  
c/o NANCY CRAVEN TRUST  
88 SPEARE ROAD  
HUDSON, NH 03051  
H.C.R.D. BK. 6079 PG. 1294

**APPLICANT:**  
BLUEBIRD SELF STORAGE LLC.  
125 OCEAN ROAD  
GREENLAND, NH 03840

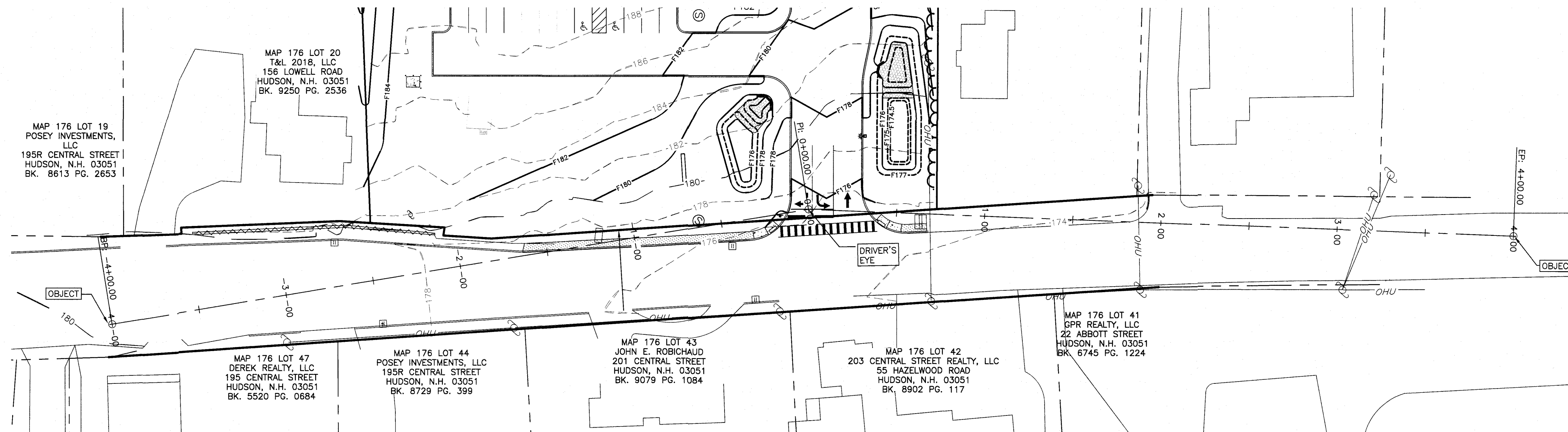
**KM** KEACH-NORDSTROM ASSOCIATES, INC.  
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10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881



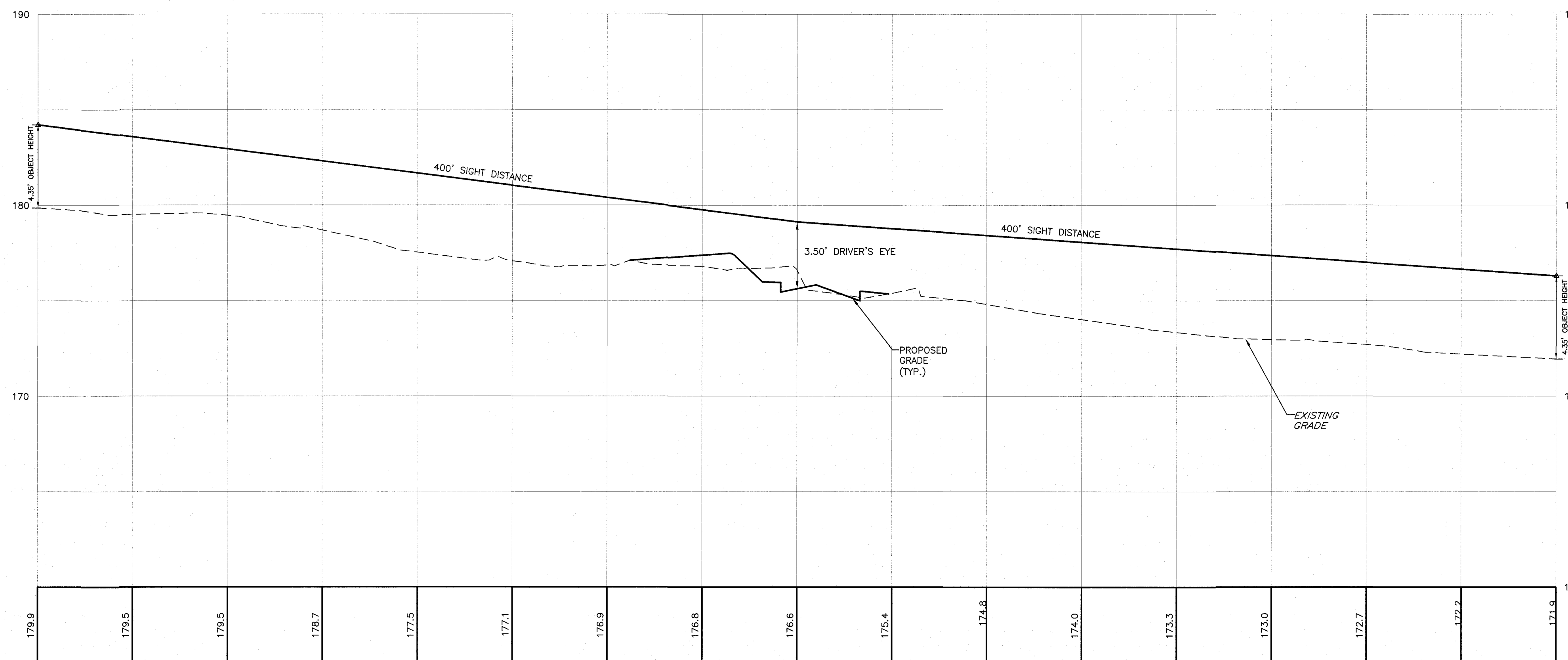
PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES TWO YEARS FROM DATE OF APPROVAL	APPROVED BY THE HUDSON, NH PLANNING BOARD	
	DATE OF MEETING: _____	
	_____ SIGNATURE	_____ DATE:
	_____ SIGNATURE	_____ DATE:
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3	02-21-2022	REVISED PER TOWN COMMENTS	BES
4	02-28-2022	REVISED PER TOWN COMMENTS	BES
DATE: DECEMBER 20, 2021		SCALE: 1" = 30'	
PROJECT NO: 21-0709-3		SHEET 12 OF 23	





SIGHT DISTANCE PLAN  
SCALE: 1" = 40'



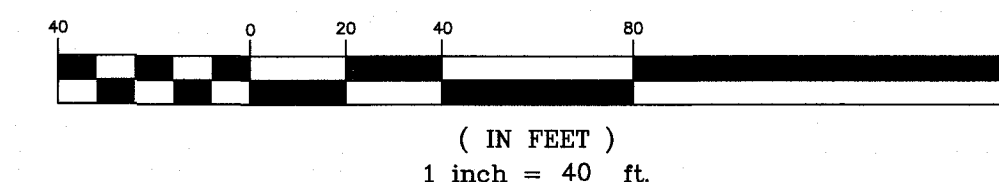
SIGHT DISTANCE PROFILE  
SCALE: 1" = 40'(HORIZ.)  
1" = 4'(VERT.)

NOTES:  
1. SIGHT DISTANCE WAS CALCULATED USING TABLE 3-2 (STOPPING SIGHT DISTANCE ON GRADES) FOUND IN AASHTO'S, "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS 2018 7TH EDITION" AS REQUIRED BY HTC-193-10(E).

LEGEND

- UTILITY POLE
- ABUTTER LINE
- PROPERTY LINE
- OVERHEAD UTILITIES
- TREELINE
- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- BITUMINOUS CURB
- 10' CONTOUR
- 2' CONTOUR
- BUILDING SETBACK
- PROPOSED SIGN
- PROPOSED LIGHT
- PROPOSED DRAINAGE MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED TREELINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED BITUMINOUS CURB
- PROPOSED 2' CONTOUR
- PROPOSED SWALE
- SITE LIGHTING

GRAPHIC SCALE



SIGHT DISTANCE PLAN & PROFILE  
BLUEBIRD SELF STORAGE

MAP 176 LOTS 21, 22 & 23  
196-202 CENTRAL STREET  
HUDSON, NEW HAMPSHIRE  
HILLSBOROUGH COUNTY

OWNER OF RECORD:  
RONALD CRAVEN TRUST  
c/o NANCY CRAVEN TRUST  
88 SPEARE ROAD  
HUDSON, NH 03051  
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APPLICANT:  
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10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

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DATE: DECEMBER 20, 2021

PROJECT NO: 21-0709-3

SCALE: 1" = 40'

SHEET 13 OF 23

PURSUANT TO THE  
SITE REVIEW  
REGULATIONS OF  
THE HUDSON  
PLANNING BOARD,  
THE SITE PLAN  
APPROVAL  
GRANTED HEREIN  
EXPIRES TWO  
YEARS FROM DATE  
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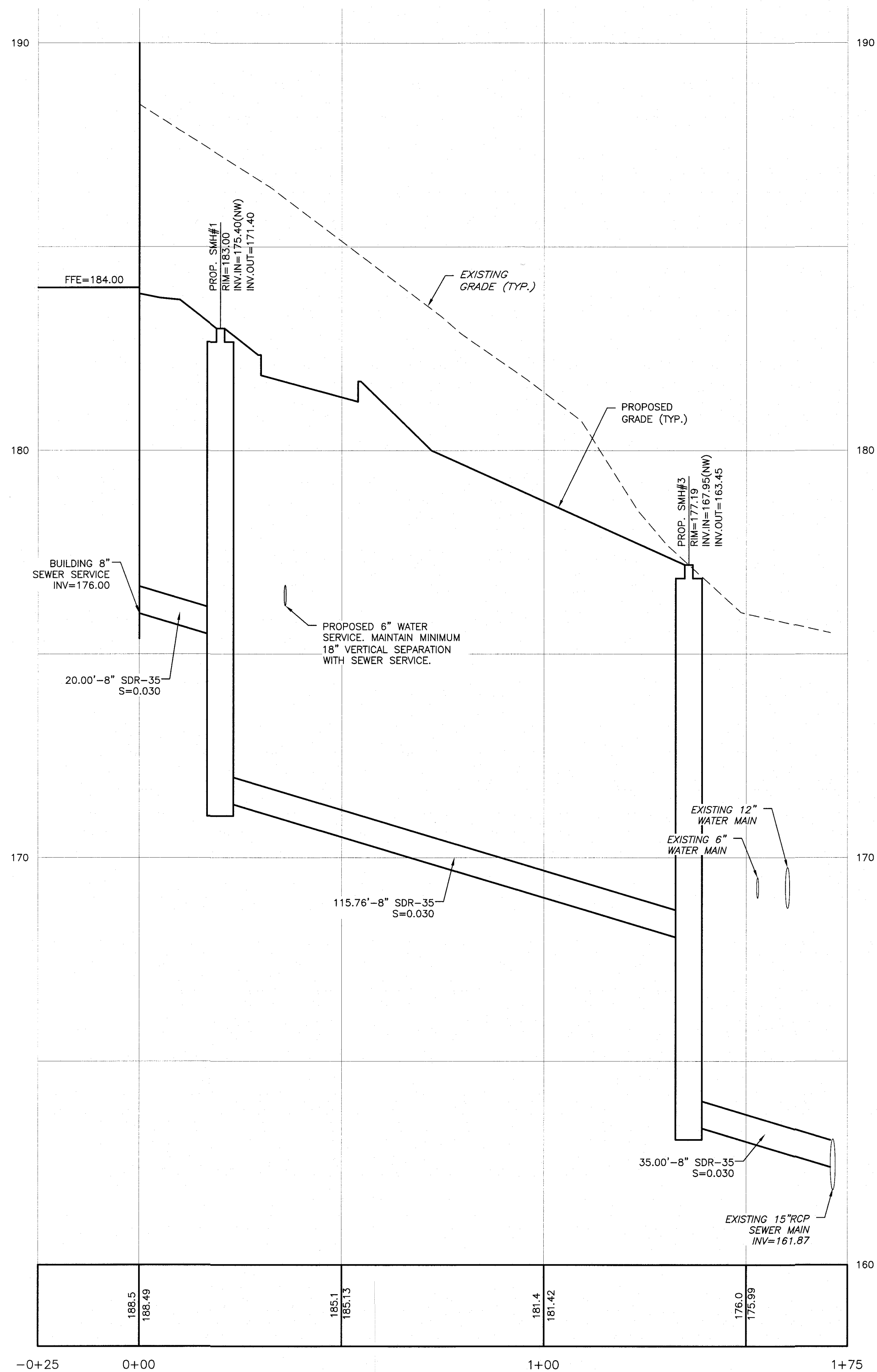
APPROVED BY THE HUDSON, NH PLANNING BOARD  
DATE OF MEETING: \_\_\_\_\_

SIGNATURE DATE: \_\_\_\_\_

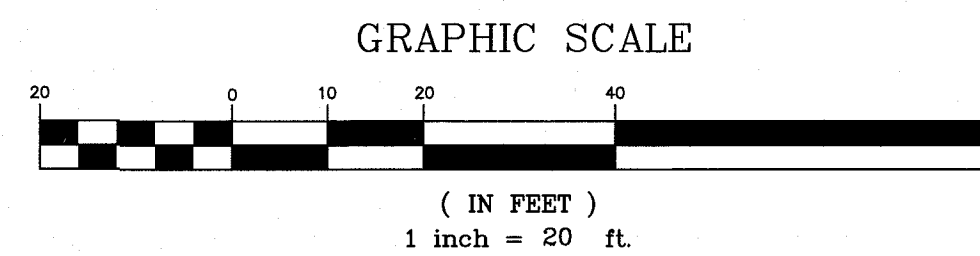
SIGNATURE DATE: \_\_\_\_\_

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MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING  
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**SEWER PROFILE**  
 SCALE: 1" = 20'(HORIZ.)  
 1" = 2'(VERT.)



**SEWER PROFILE**  
**BLUEBIRD SELF STORAGE**  
 MAP 176 LOTS 21, 22 & 23  
 196-202 CENTRAL STREET  
 HUDSON, NEW HAMPSHIRE  
 HILLSBOROUGH COUNTY

<b>OWNER OF RECORD:</b> RONALD CRAVEN TRUST c/o NANCY CRAVEN TRUST 88 SPEARE ROAD HUDSON, NH 03051 H.C.R.D. BK. 6079 PG. 1294	<b>APPLICANT:</b> BLUEBIRD SELF STORAGE LLC. 125 OCEAN ROAD GREENLAND, NH 03840
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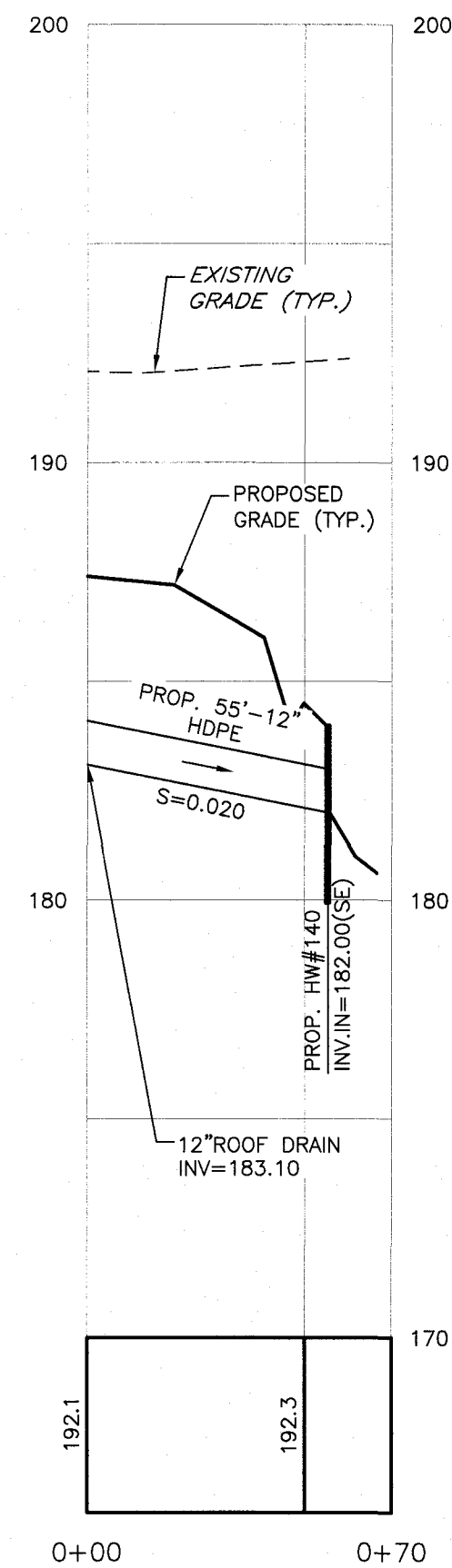

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 Civil Engineering Land Surveying Landscape Architecture  
 10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

REVISIONS			
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4	02-28-2022	REVISED PER TOWN COMMENTS	BES
DATE: DECEMBER 20, 2021		SCALE: AS SHOWN	
PROJECT NO: 21-0709-3		SHEET 14 OF 23	

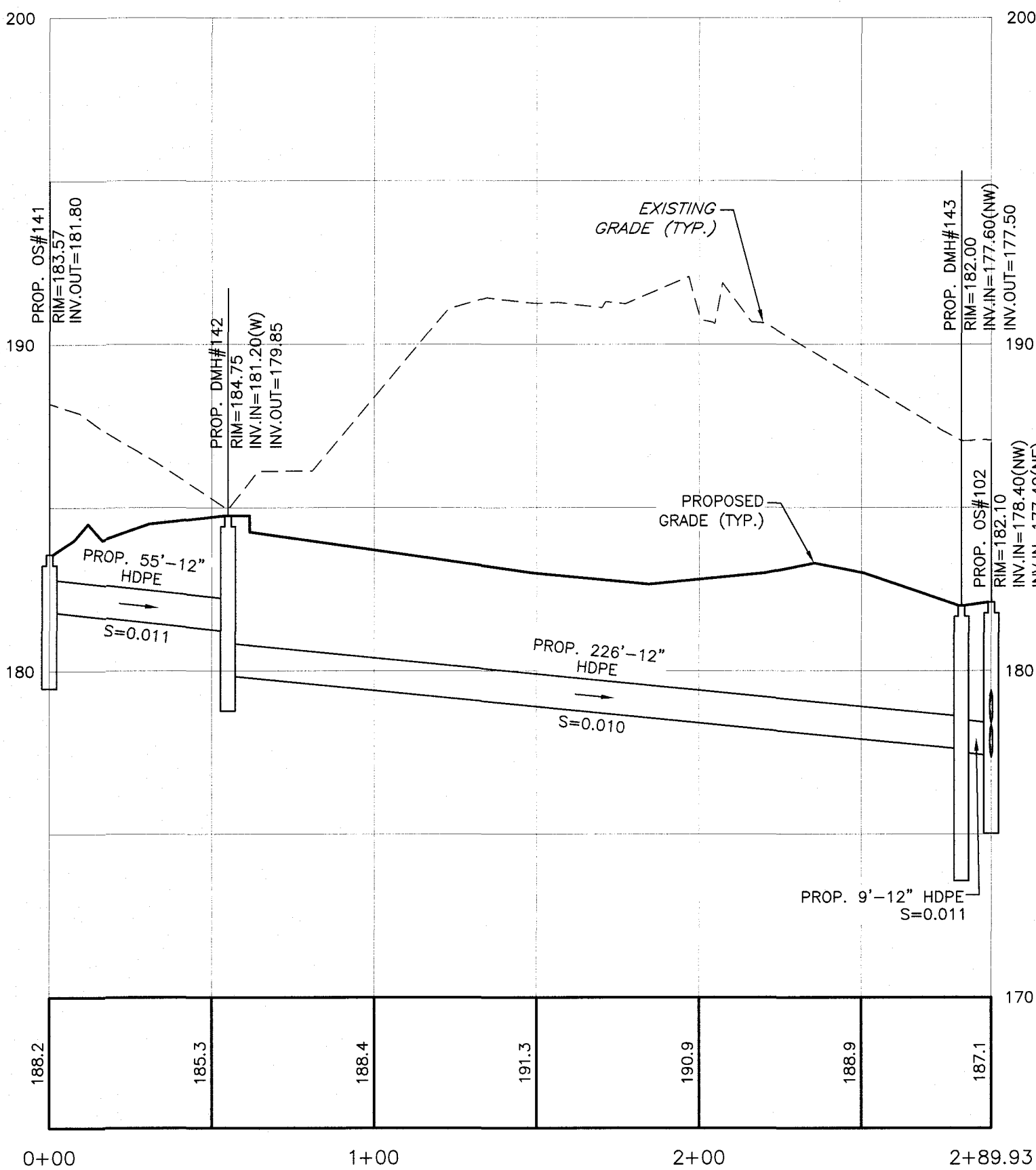
PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES TWO YEARS FROM DATE OF APPROVAL	APPROVED BY THE HUDSON, NH PLANNING BOARD DATE OF MEETING: _____
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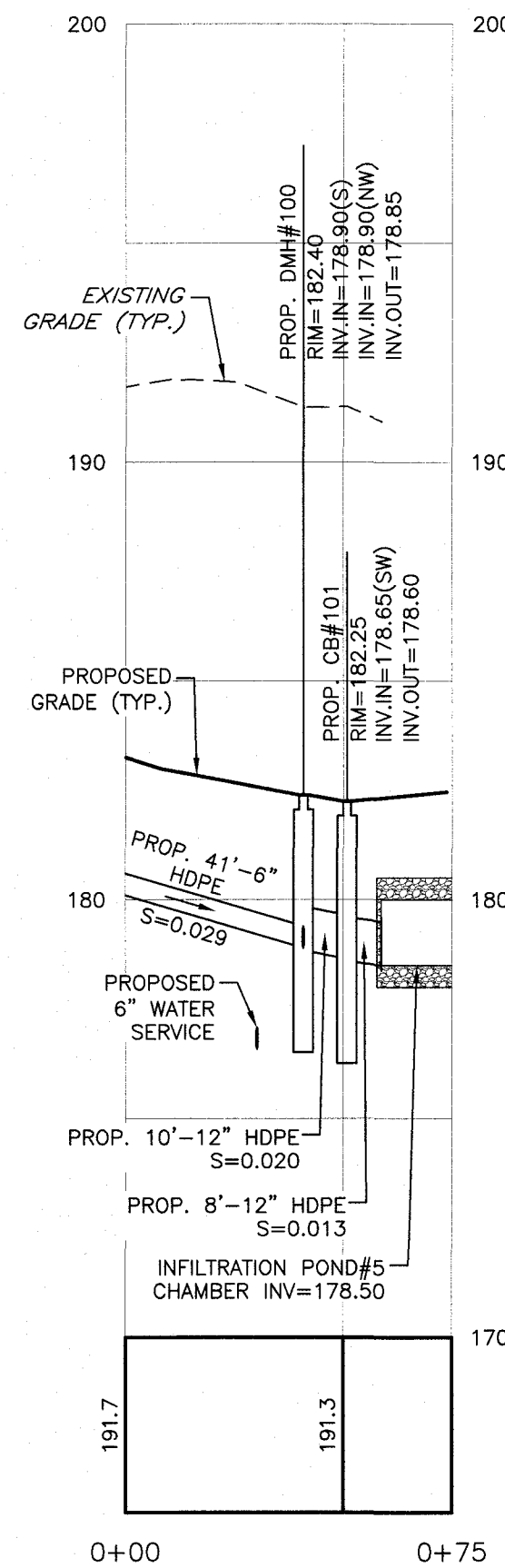




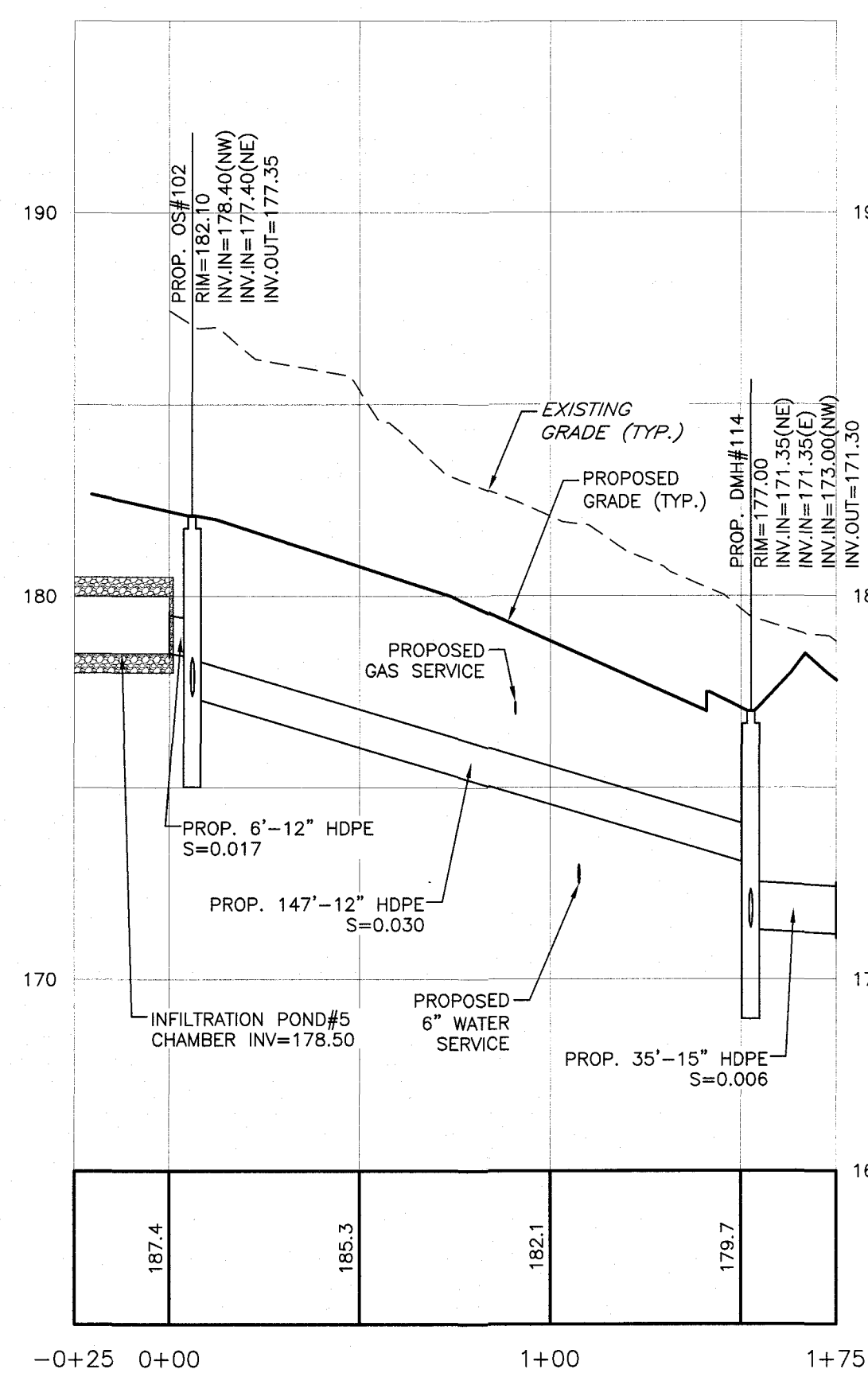
**DRAINAGE PROFILE**  
**ROOF DRAIN TO POND#1**  
SCALE: 1" = 40'(HORIZ.)  
1" = 4'(VERT.)



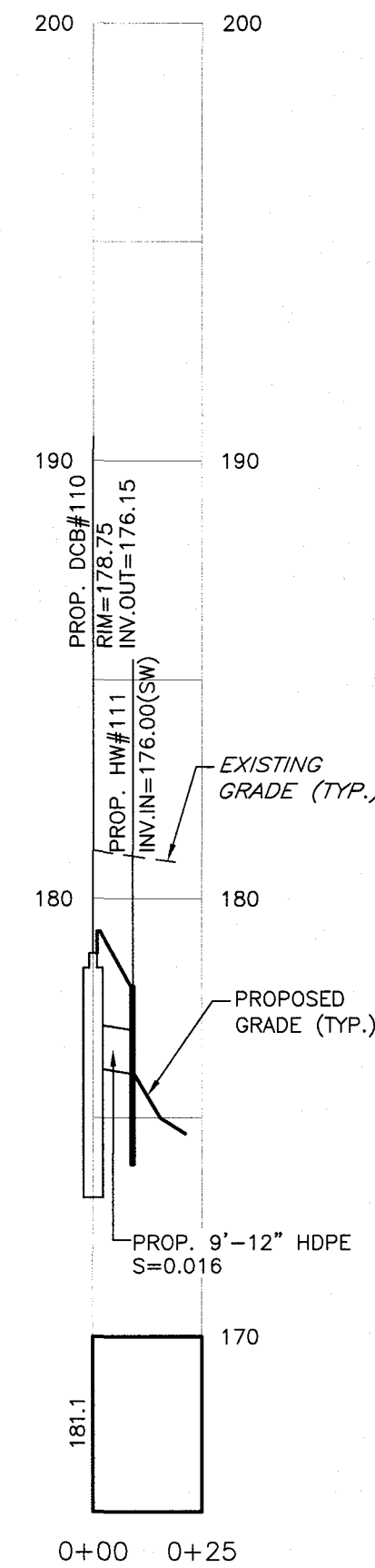
**DRAINAGE PROFILE**  
**OS#141 TO DMH#143**  
SCALE: 1" = 40'(HORIZ.)  
1" = 4'(VERT.)



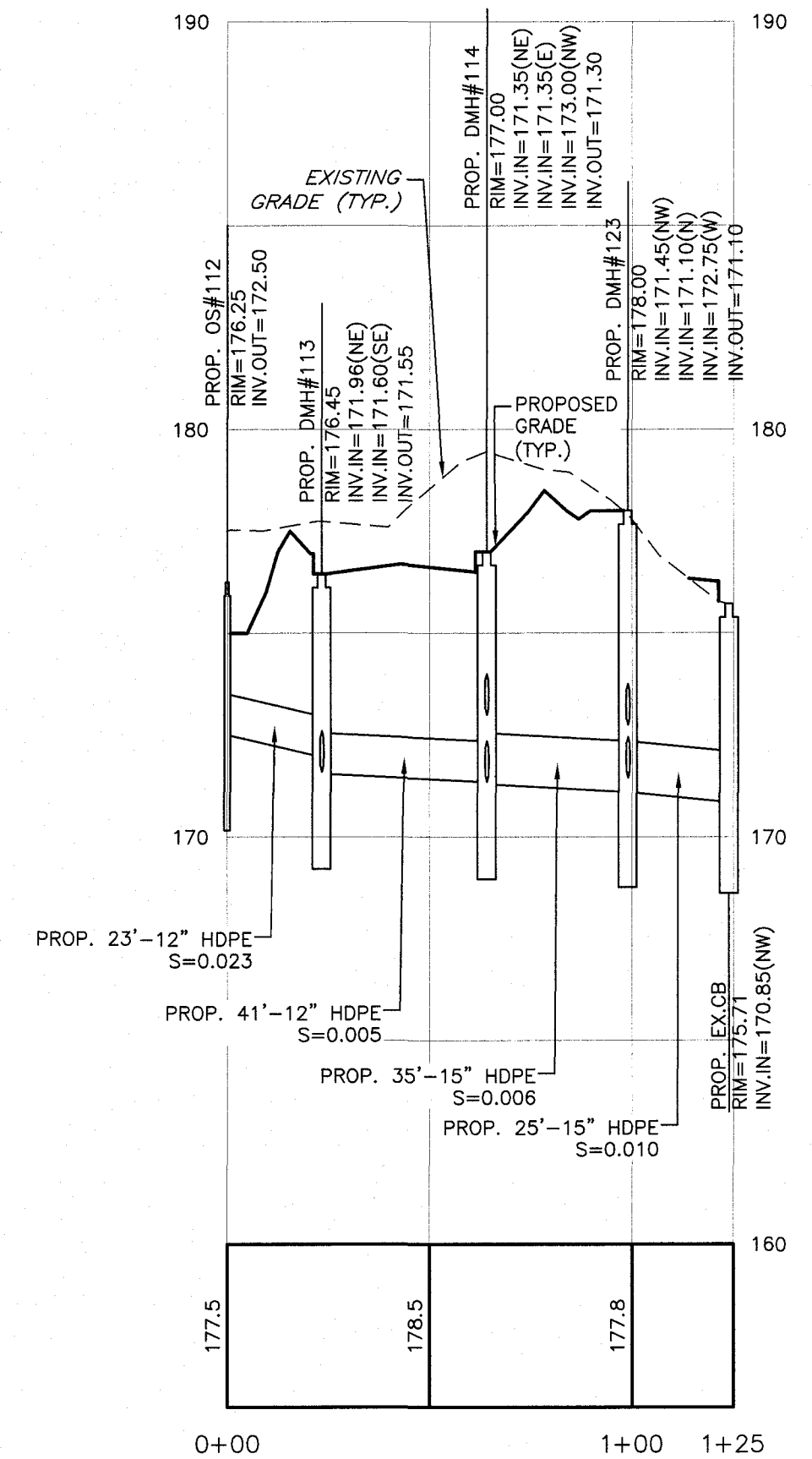
**DRAINAGE PROFILE**  
**AWNING ROOF DRAIN TO IP#5**  
SCALE: 1" = 40'(HORIZ.)  
1" = 4'(VERT.)



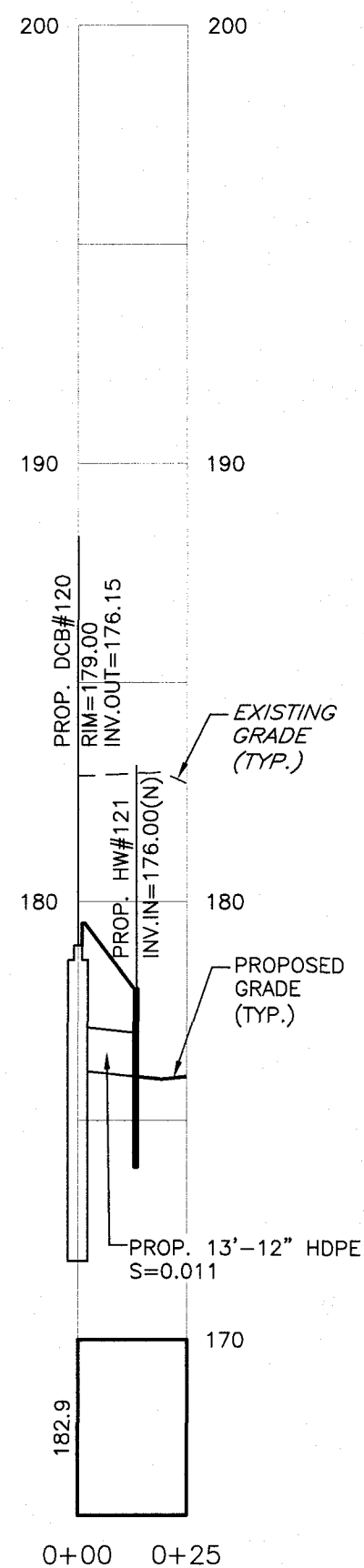
**DRAINAGE PROFILE**  
**IP#5 TO DMH#123**  
SCALE: 1" = 40'(HORIZ.)  
1" = 4'(VERT.)



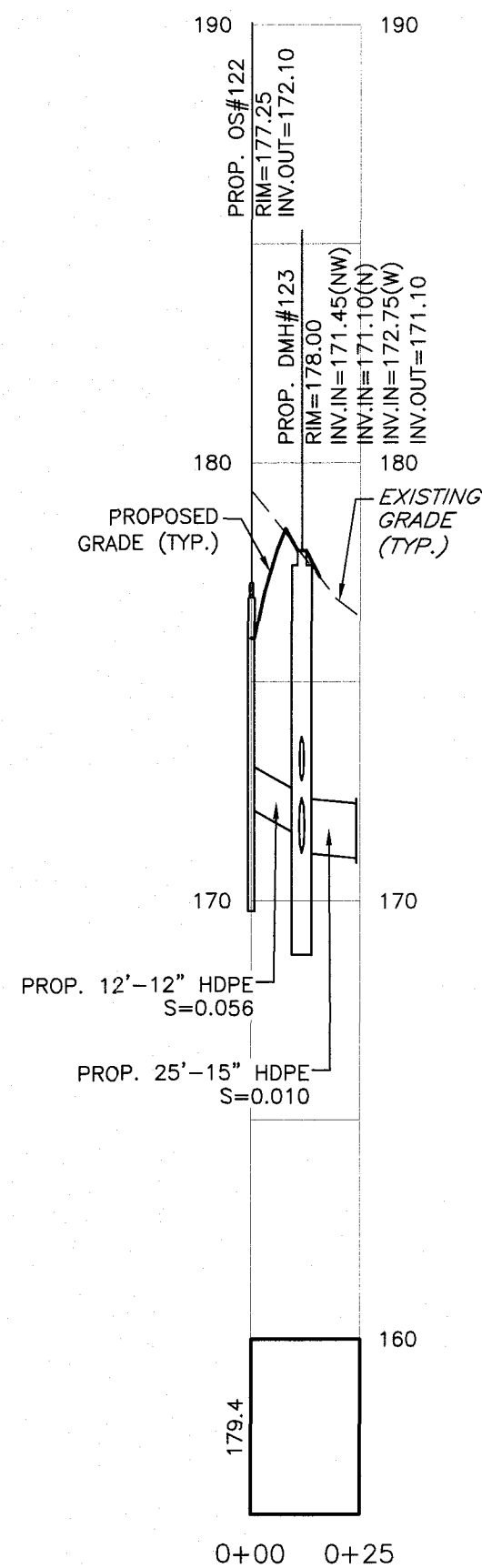
**DRAINAGE PROFILE**  
**DCB#110 TO HW#111**  
SCALE: 1" = 40'(HORIZ.)  
1" = 4'(VERT.)



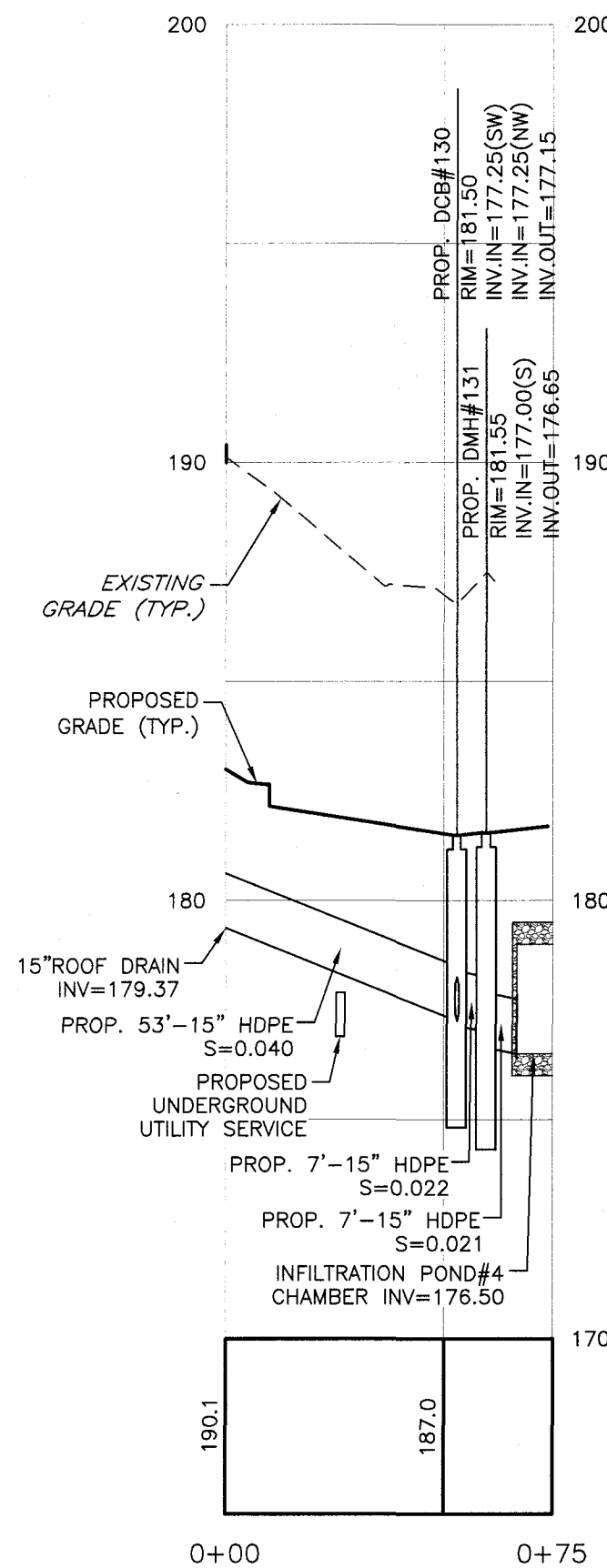
**DRAINAGE PROFILE**  
**OS#112 TO EXIST.CB**  
SCALE: 1" = 40'(HORIZ.)  
1" = 4'(VERT.)



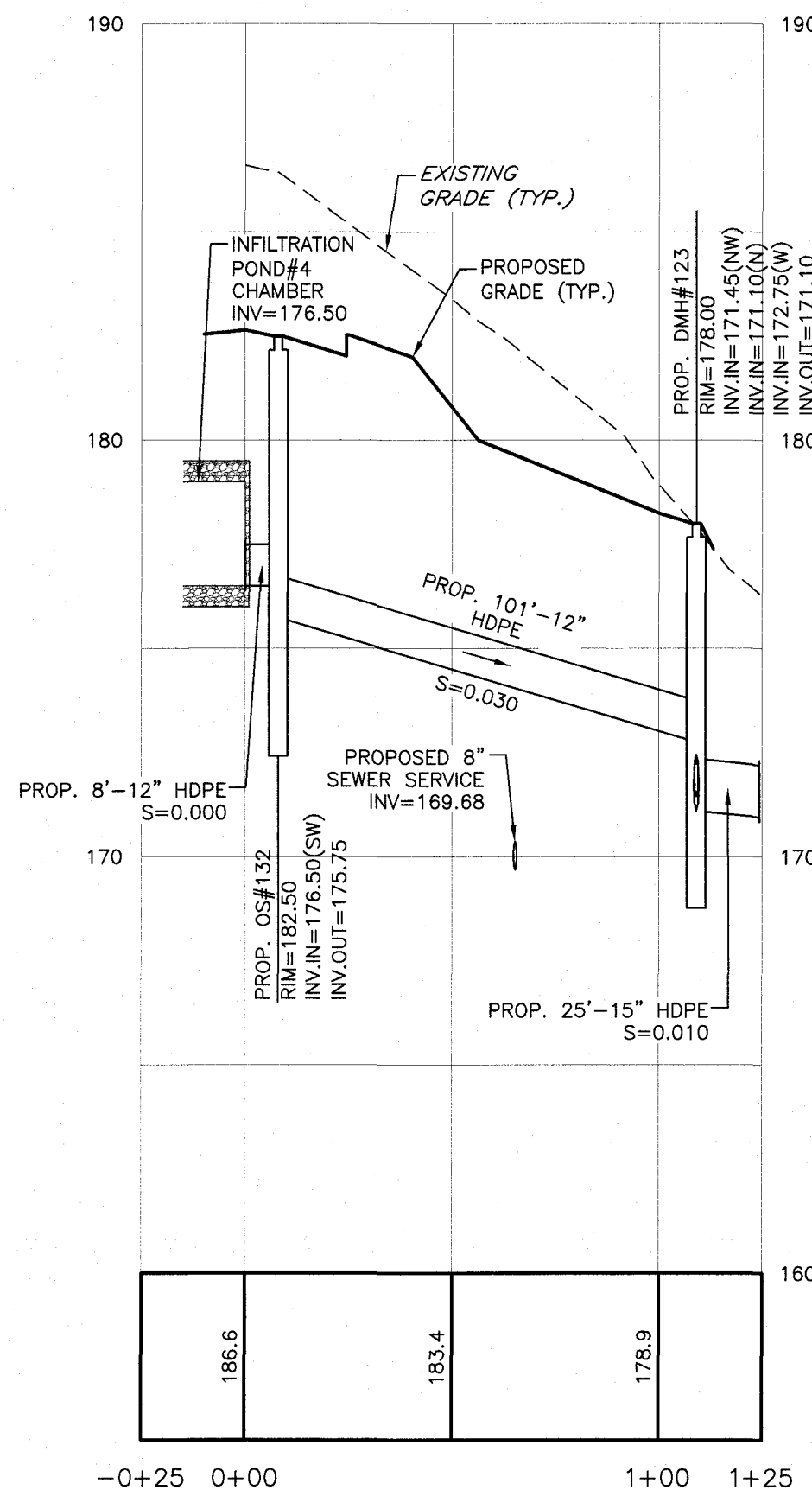
**DRAINAGE PROFILE**  
**DCB#120 TO HW#121**  
SCALE: 1" = 40'(HORIZ.)  
1" = 4'(VERT.)



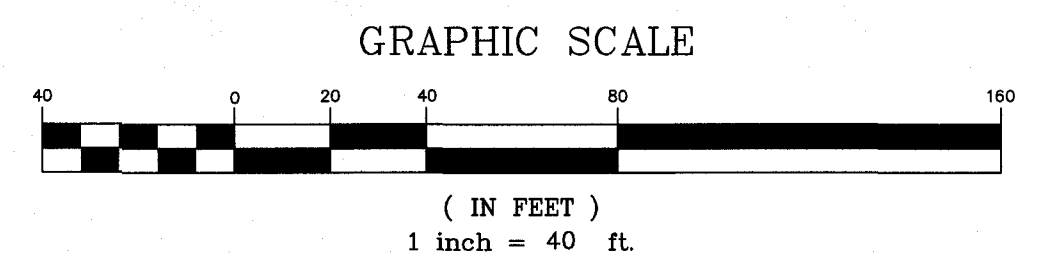
**DRAINAGE PROFILE**  
**OS#122 TO DMH#123**  
SCALE: 1" = 40'(HORIZ.)  
1" = 4'(VERT.)



**DRAINAGE PROFILE**  
**ROOF DRAIN TO IP#4**  
SCALE: 1" = 40'(HORIZ.)  
1" = 4'(VERT.)



**DRAINAGE PROFILE**  
**IP#4 TO DMH#123**  
SCALE: 1" = 40'(HORIZ.)  
1" = 4'(VERT.)



**DRAINAGE PROFILES**  
**BLUEBIRD SELF STORAGE**  
MAP 176 LOTS 21, 22 & 23  
196-202 CENTRAL STREET  
HUDSON, NEW HAMPSHIRE  
HILLSBOROUGH COUNTY

**OWNER OF RECORD:**  
RONALD CRAVEN TRUST  
c/o NANCY CRAVEN TRUST  
88 SPEARE ROAD  
HUDSON, NH 03051  
H.C.R.D. BK. 6079 PG. 1294

**APPLICANT:**  
BLUEBIRD SELF STORAGE LLC.  
125 OCEAN ROAD  
GREENLAND, NH 03840

**KM 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 TWO  
YEARS FROM DATE  
OF APPROVAL

**APPROVED BY THE HUDSON, NH PLANNING BOARD**  
**DATE OF MEETING:** \_\_\_\_\_

\_\_\_\_\_  
SIGNATURE DATE: \_\_\_\_\_

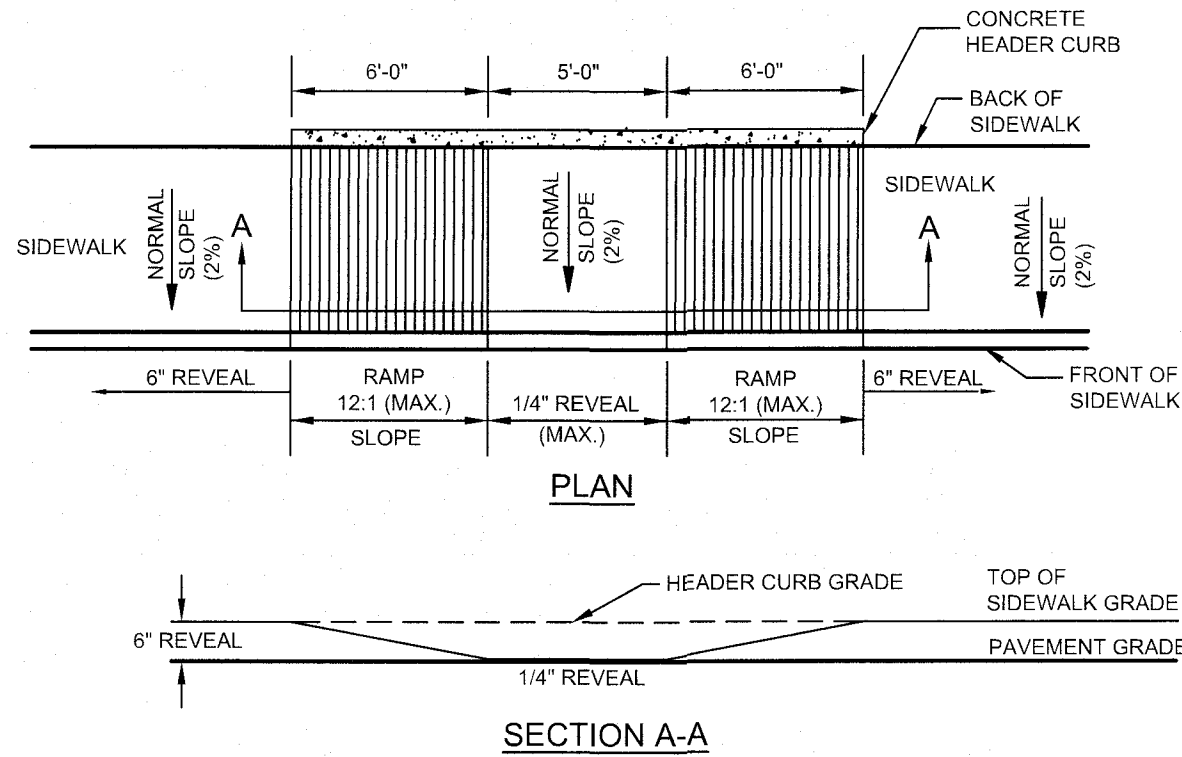
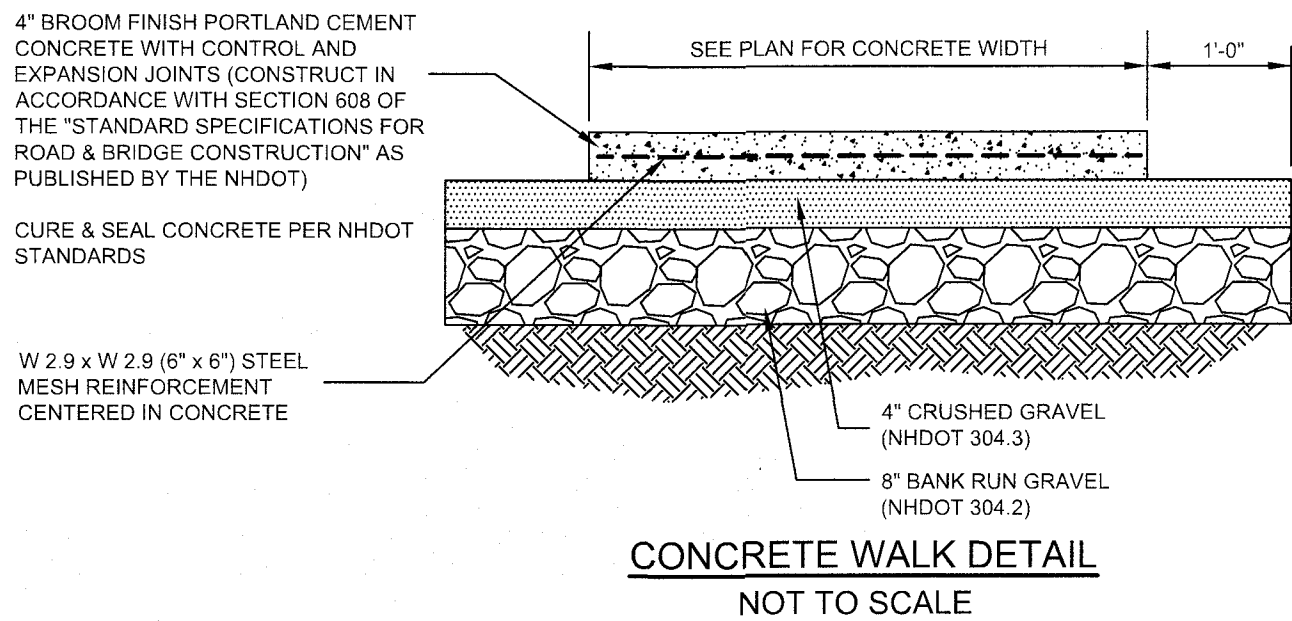
\_\_\_\_\_  
SIGNATURE DATE: \_\_\_\_\_

SITE PLANS ARE VALID FOR TWO YEARS 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.

REVISIONS			
No.	DATE	DESCRIPTION	BY
1	01-21-2022	REVISED GRADING/DRAINAGE PER CLIENT	BES
2	02-14-2022	REVISED PER REVIEW COMMENTS	BES
3	02-21-2022	REVISED PER TOWN COMMENTS	BES
4	02-28-2022	REVISED PER TOWN COMMENTS	BES

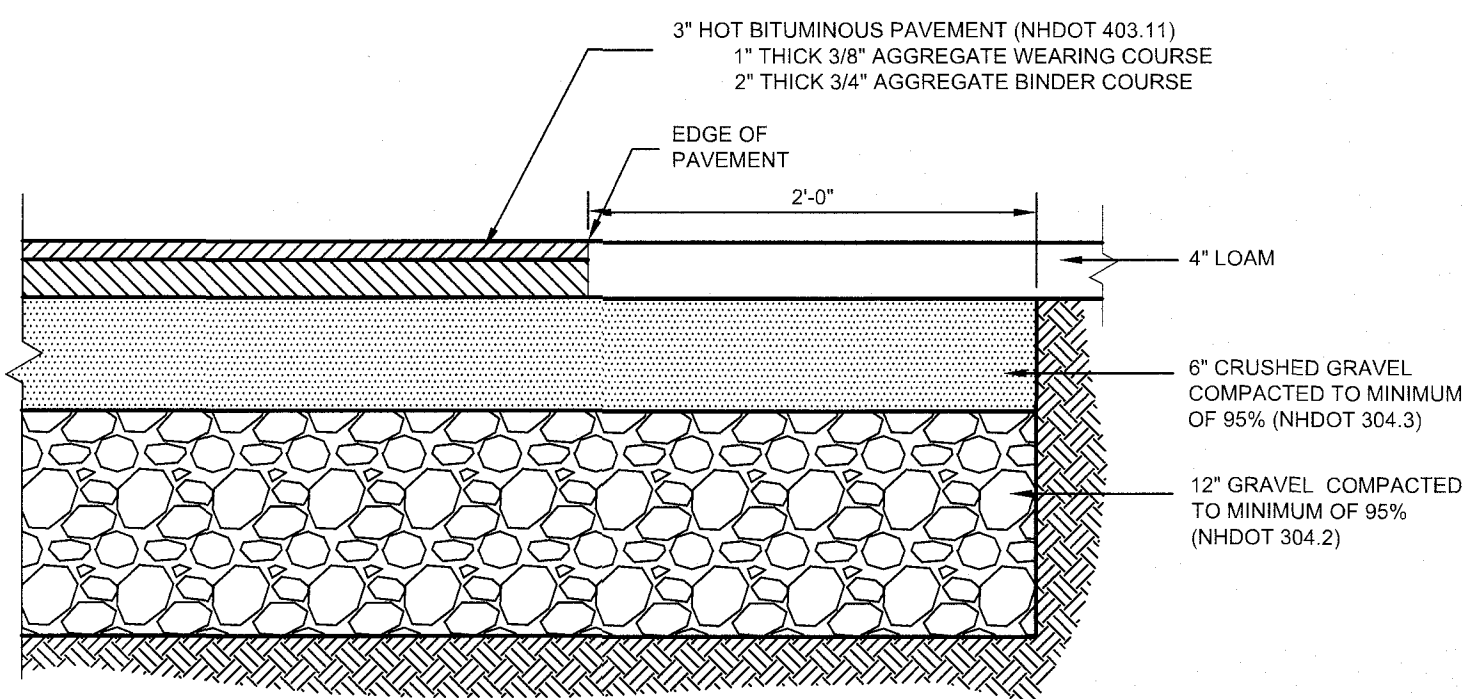
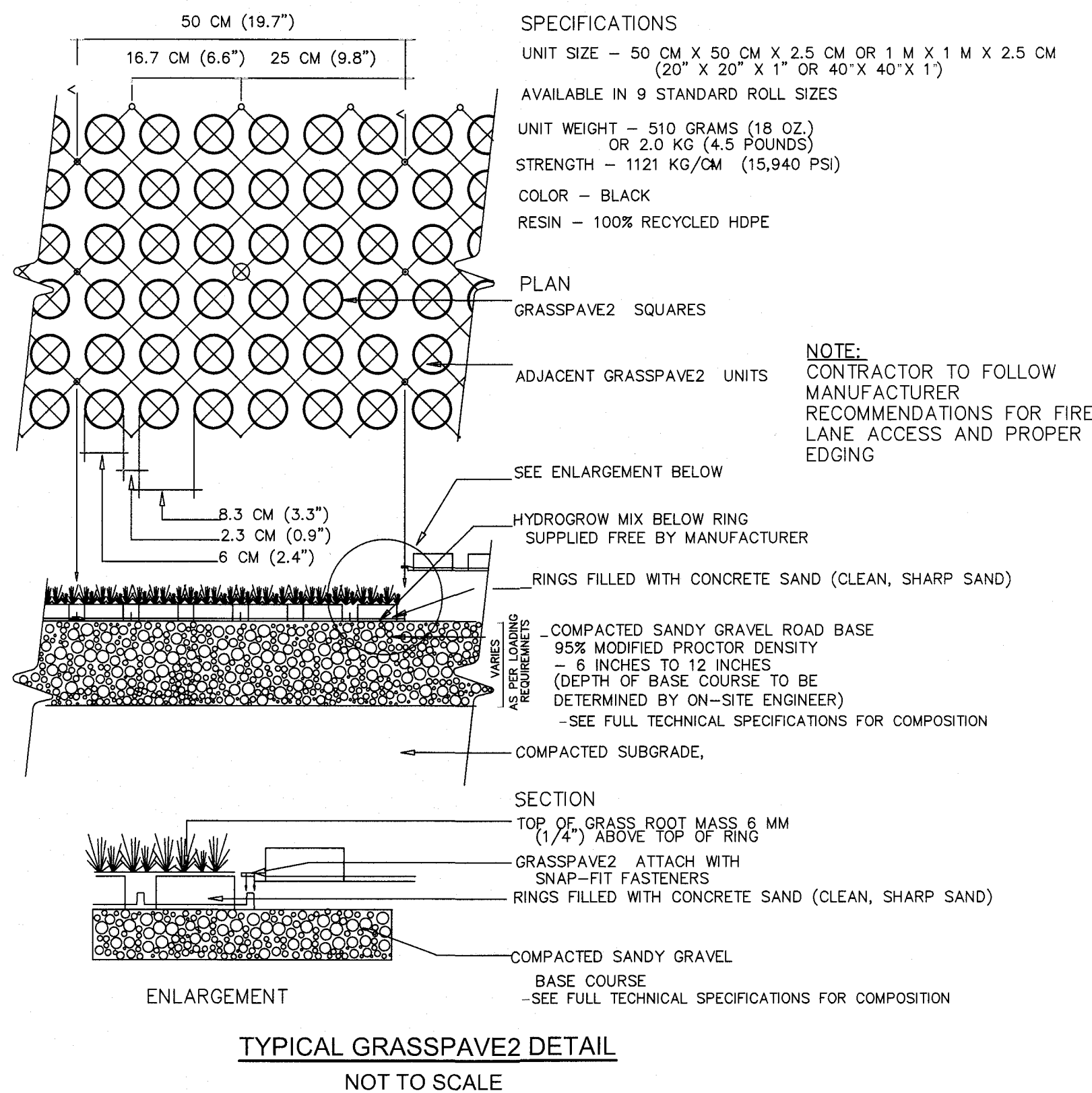
**DATE:** DECEMBER 20, 2021  
**PROJECT NO:** 21-0709-3

**SCALE:** AS SHOWN  
**SHEET** 15 OF 23

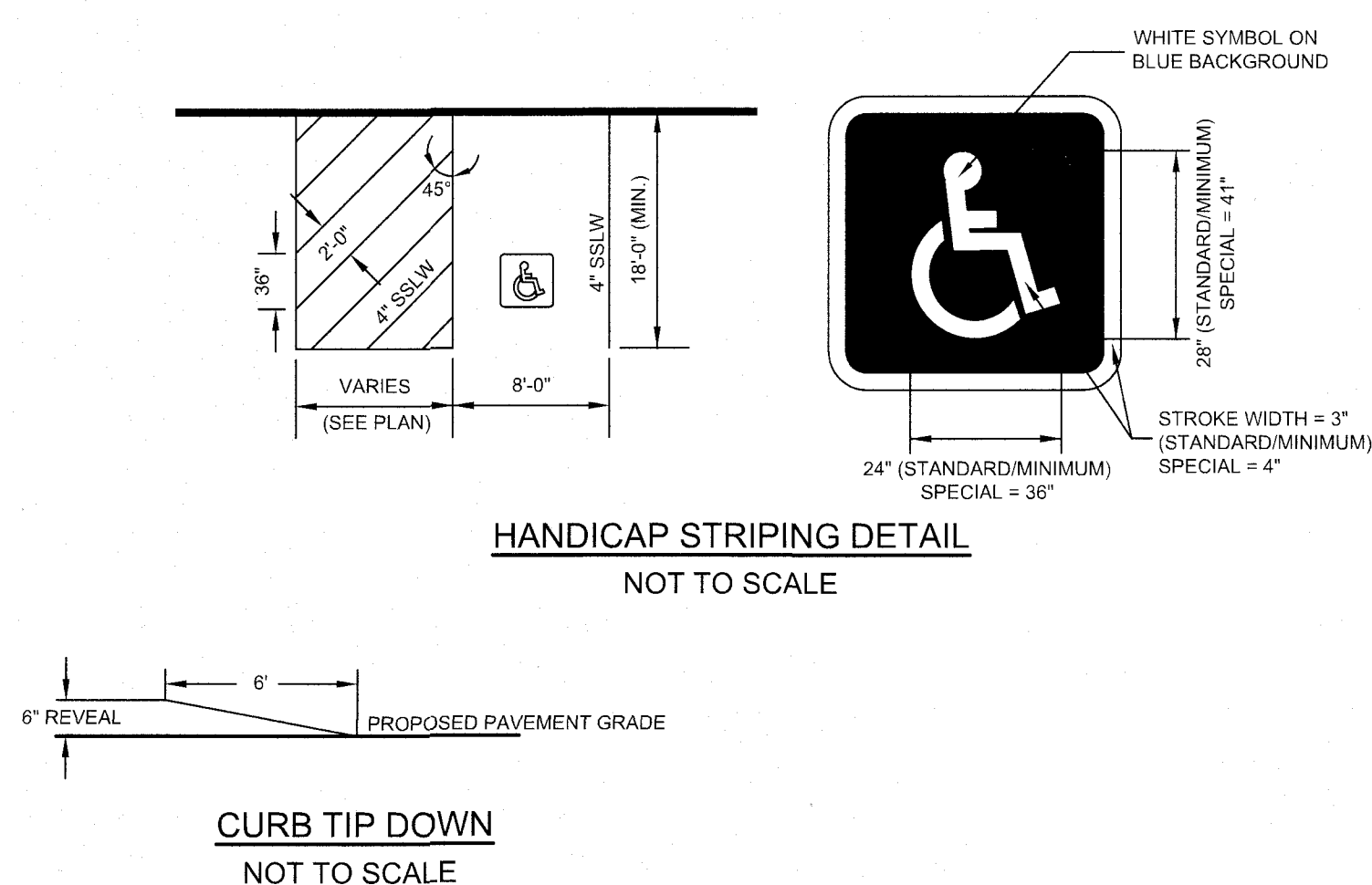
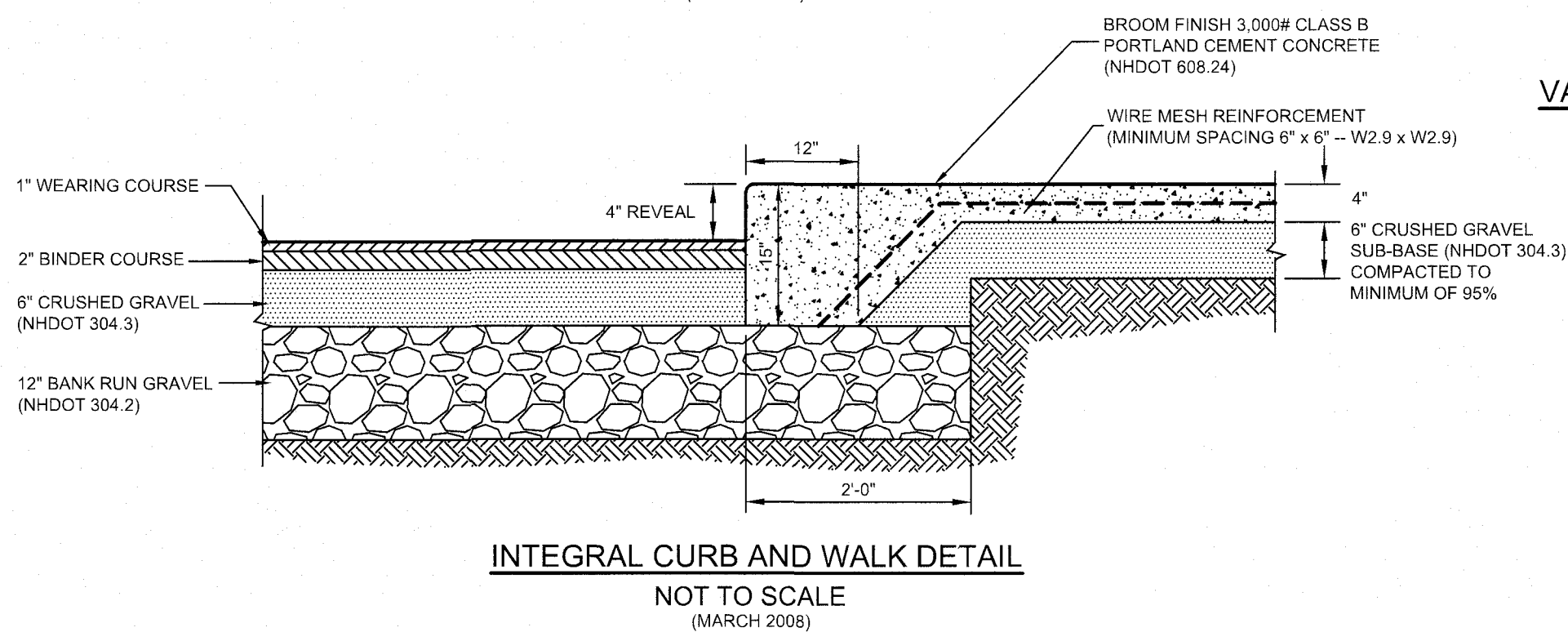
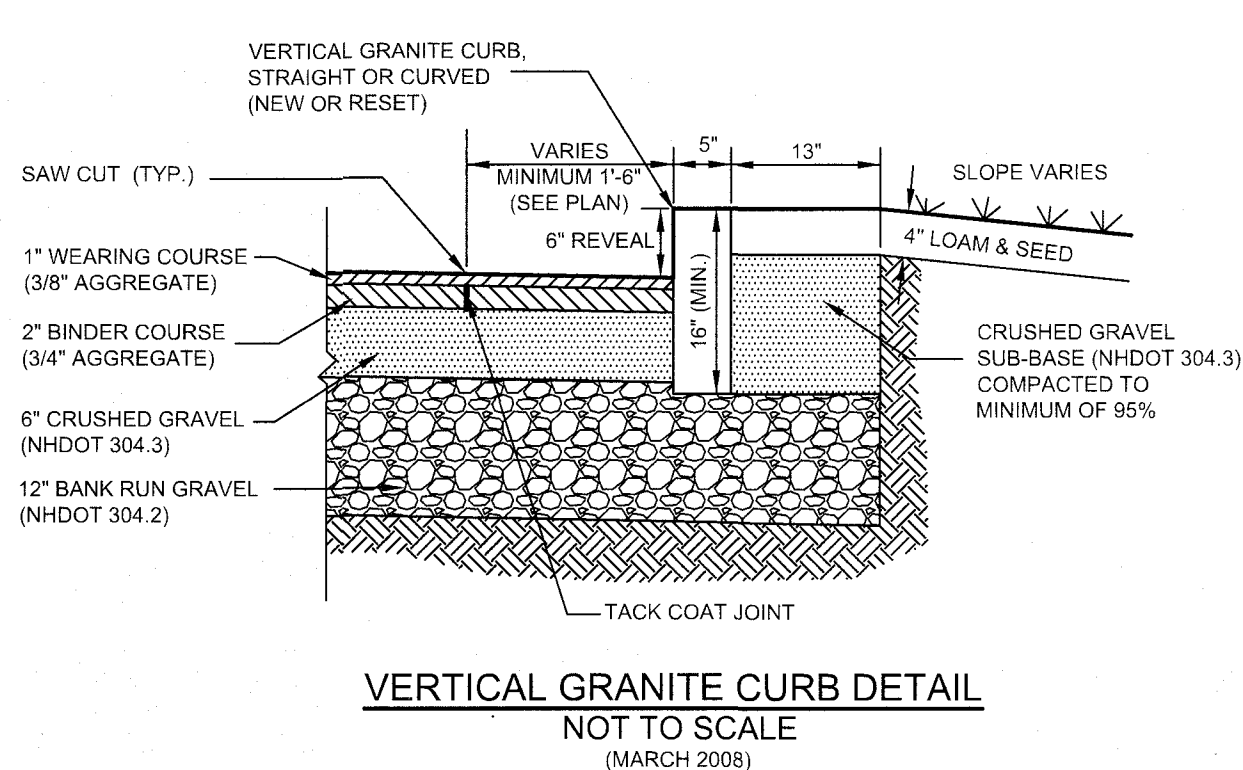
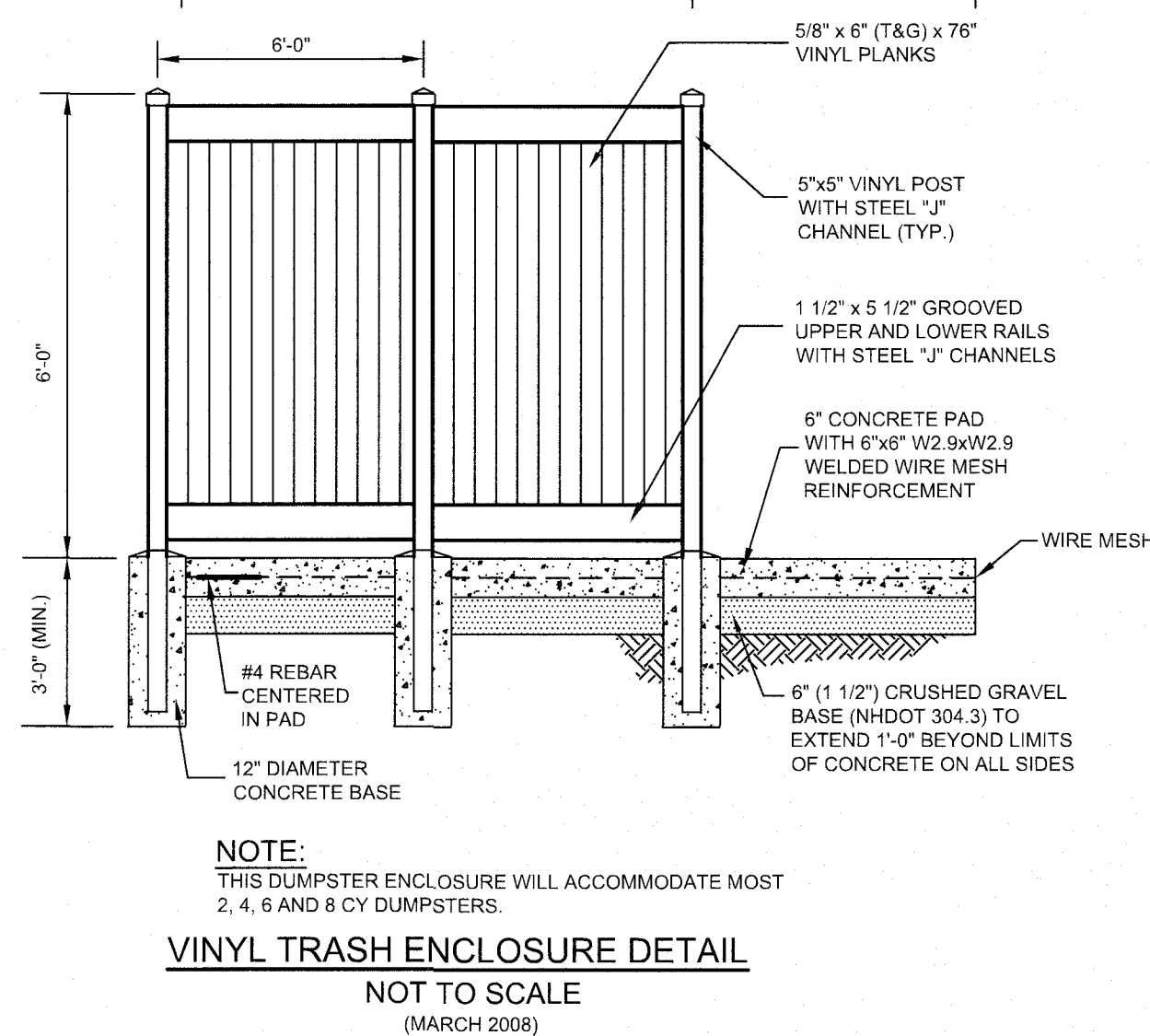
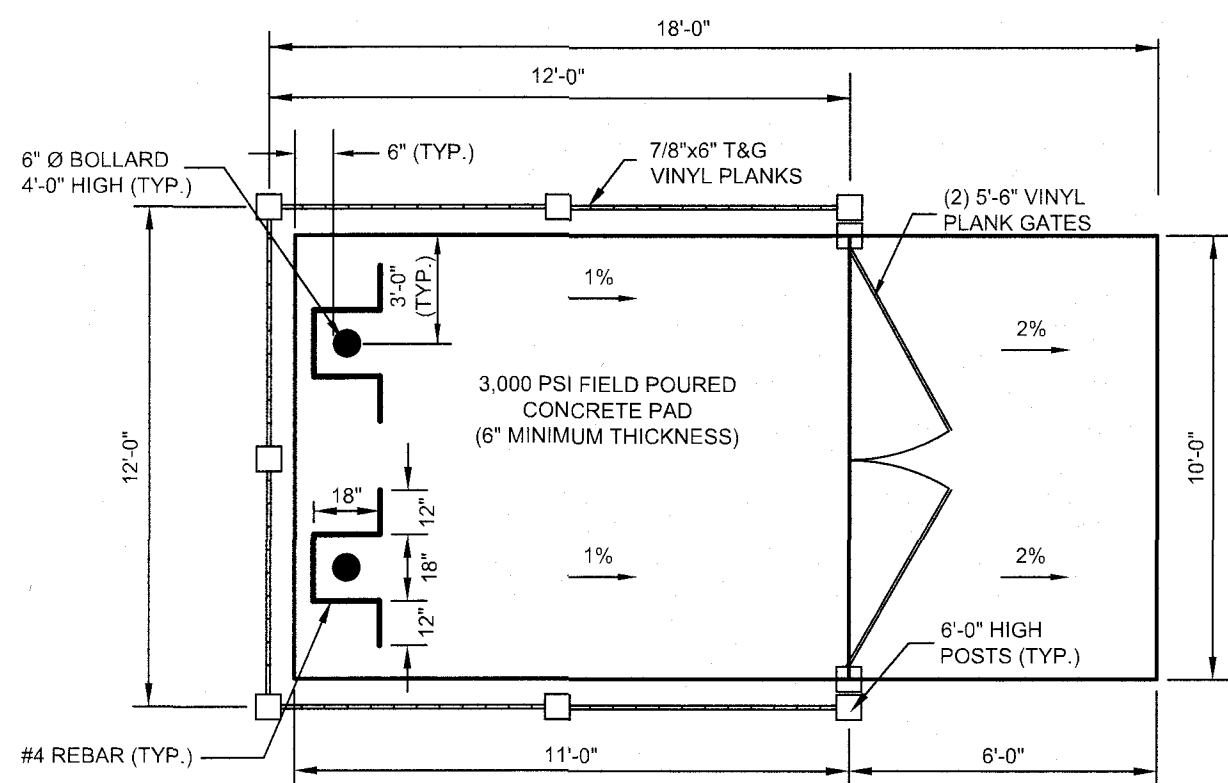


- NOTES:**
1. A BROOM FINISH TRANSVERSE TO THE SLOPE OF THE RAMP SHALL BE USED ON PORTLAND CEMENT CONCRETE RAMPS.
  2. MAINTAIN THE NORMAL PAVEMENT PROFILE THROUGHOUT THE RAMP AREA.
  3. MAINTAIN A MAXIMUM 1/4" OF CURB REVEAL AT THE RAMP, SEE SECTION A-A

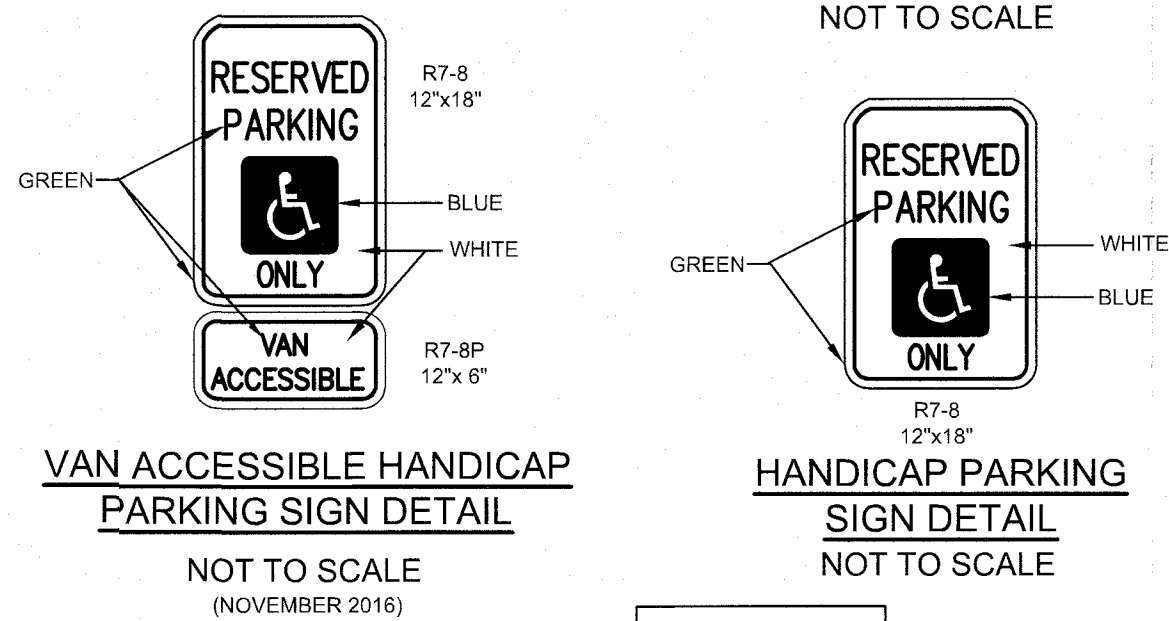
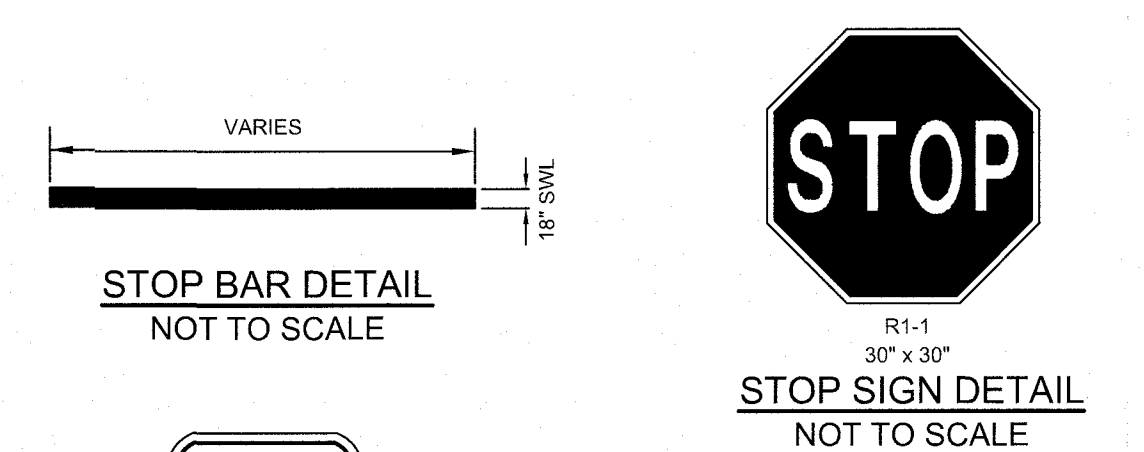
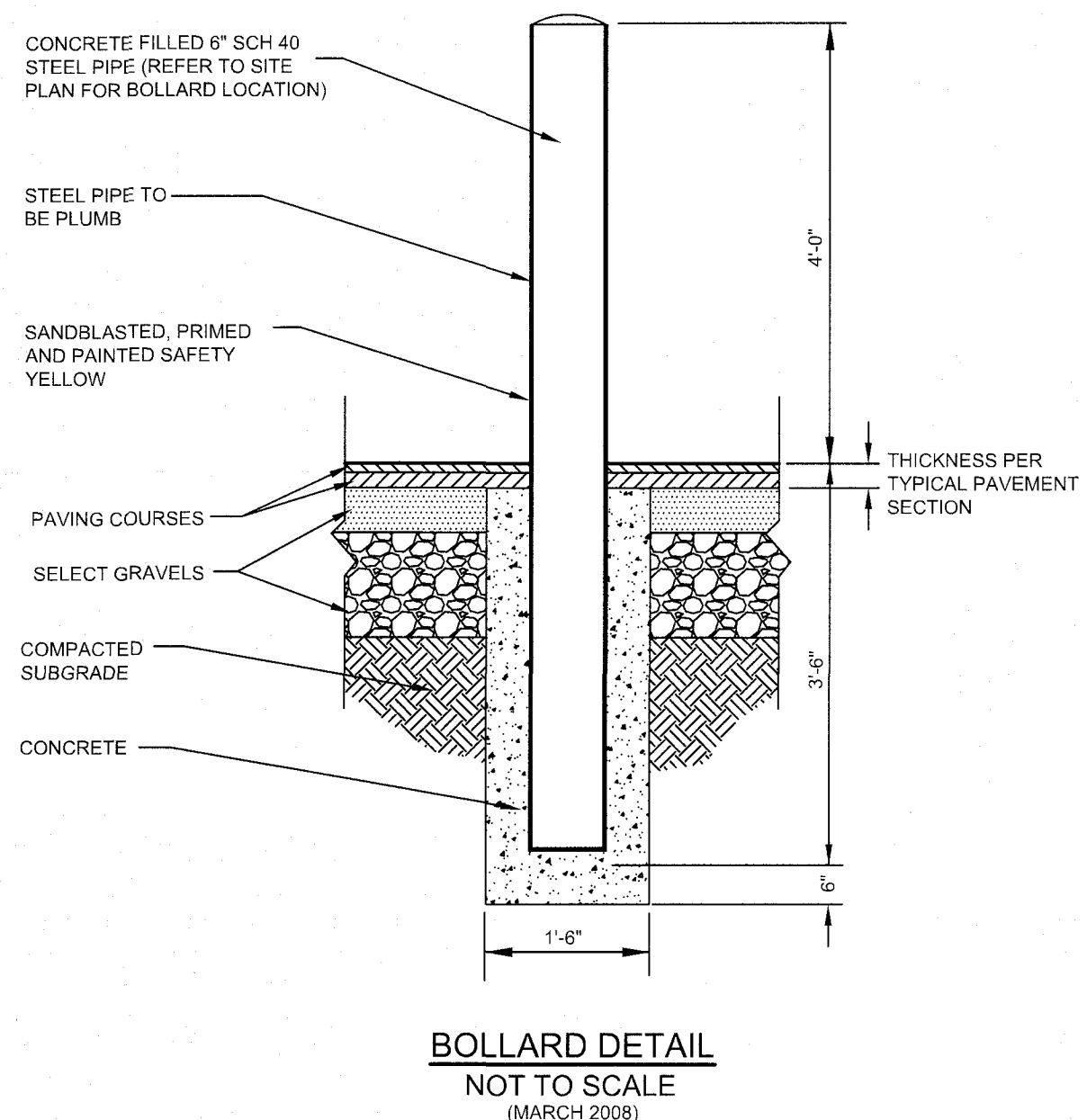
**SIDEWALK RAMP**  
NOT TO SCALE  
(JUNE 2012)



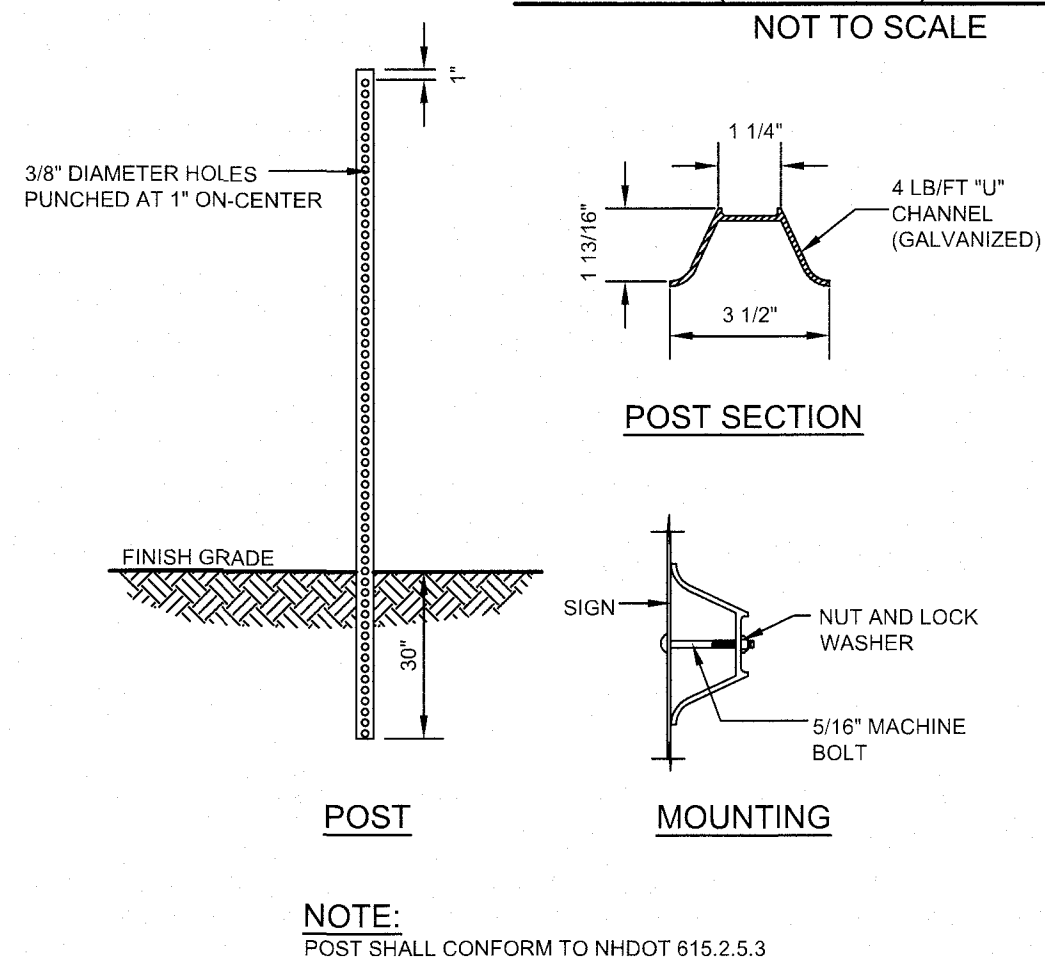
**DRIVEWAY AND PARKING LOT SECTION**  
NOT TO SCALE  
(MARCH 2008)



**CURB TIP DOWN**  
NOT TO SCALE



**THROUGH (STRAIGHT) ARROW DETAIL**  
NOT TO SCALE



**CONSTRUCTION DETAILS**  
**BLUEBIRD SELF STORAGE**  
MAP 176 LOTS 21, 22 & 23  
196-202 CENTRAL STREET  
HUDSON, NEW HAMPSHIRE  
HILLSBOROUGH COUNTY

**OWNER OF RECORD:**  
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**APPLICANT:**  
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**KMA**  
**KEACH-NORDSTROM ASSOCIATES, INC.**  
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DATE: DECEMBER 20, 2021		SCALE: N.T.S.	
PROJECT NO: 21-0709-3		SHEET 16 OF 23	

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

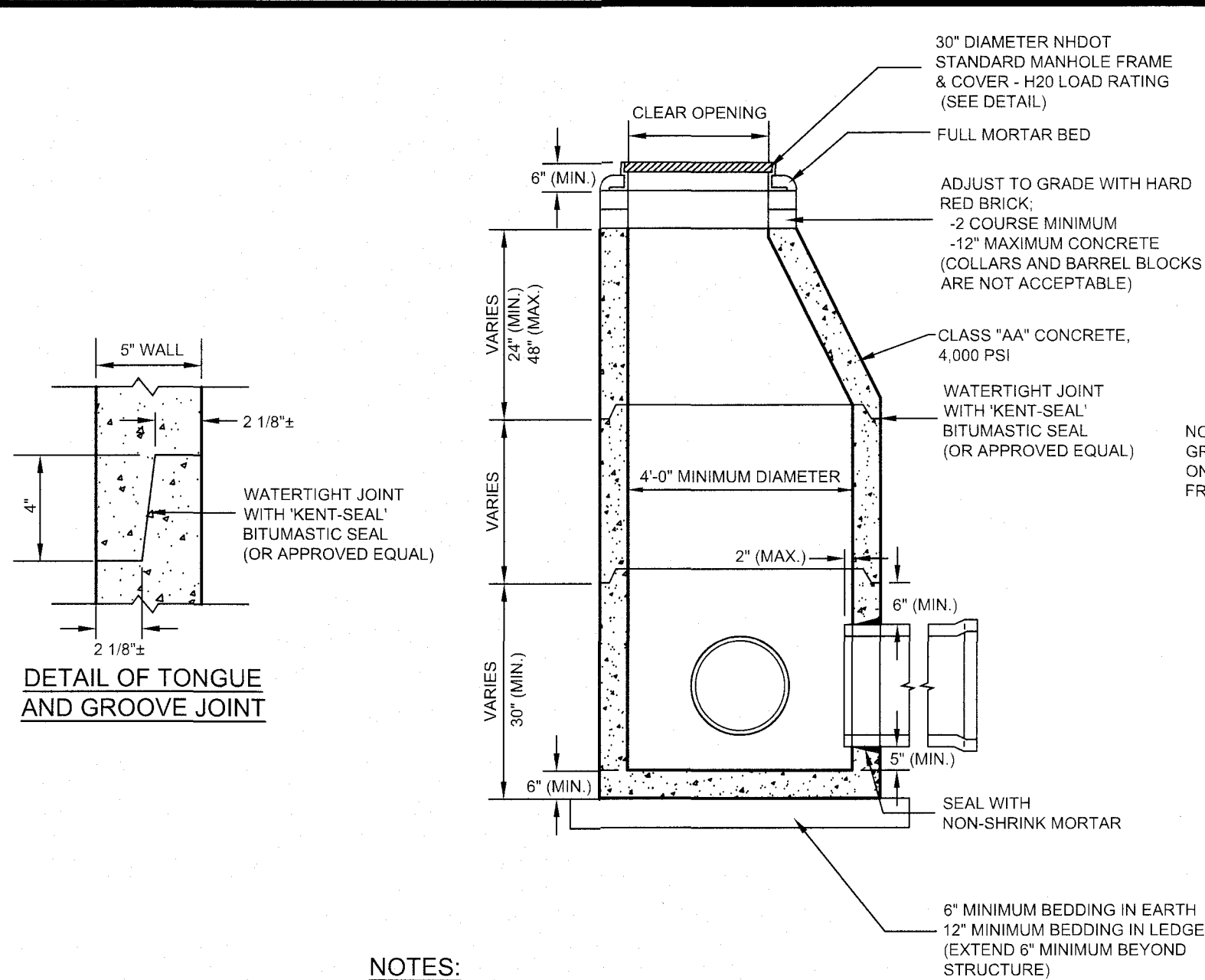
**APPROVED BY THE HUDSON, NH PLANNING BOARD**  
**DATE OF MEETING:** \_\_\_\_\_

\_\_\_\_\_  
SIGNATURE DATE: \_\_\_\_\_

\_\_\_\_\_  
SIGNATURE DATE: \_\_\_\_\_

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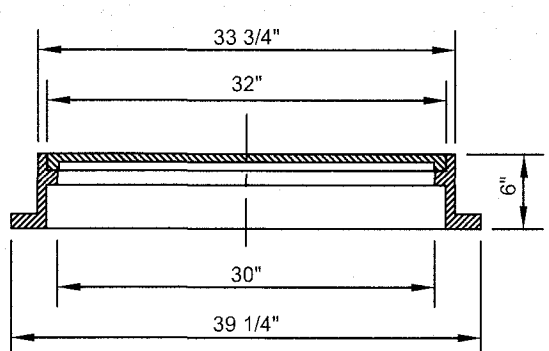
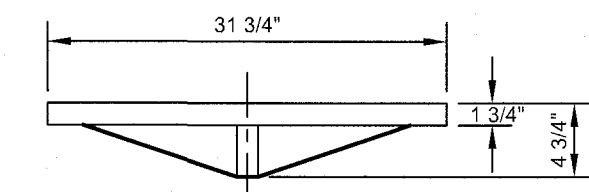
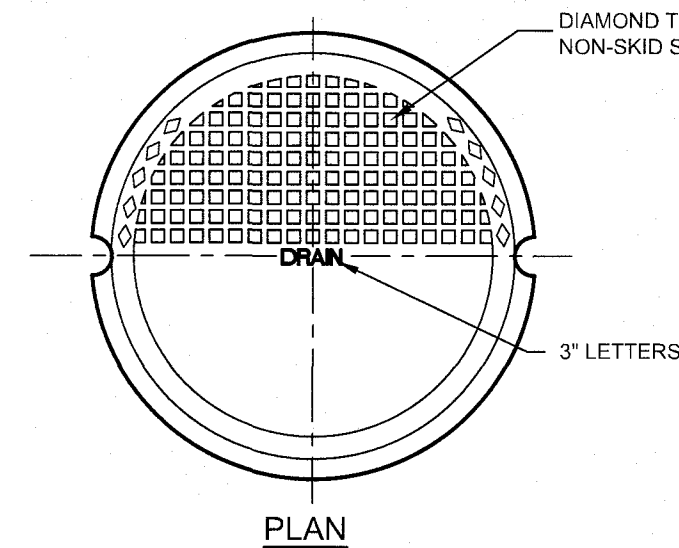




- NOTES:**
1. STEPS ARE NOT ALLOWED.
  2. ALL SECTIONS SHALL BE CONCRETE CLASS AA (4,000 PSI). CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ. IN. PER L.F. IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER OF THE WALL.
  3. THE TONGUE OR THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL 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)



#### SECTION

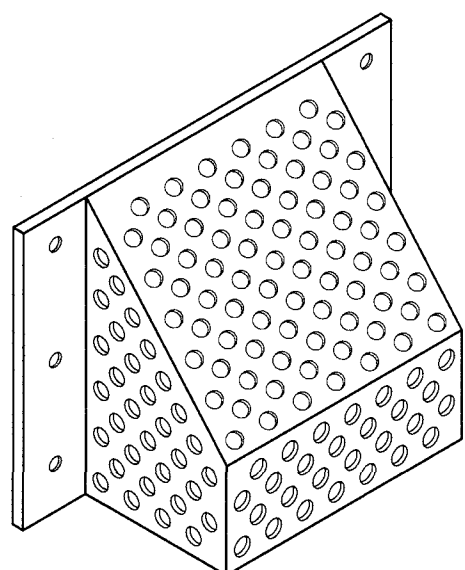
#### DRAIN MANHOLE FRAME AND COVER DETAIL

NOT TO SCALE  
(JANUARY 2012)

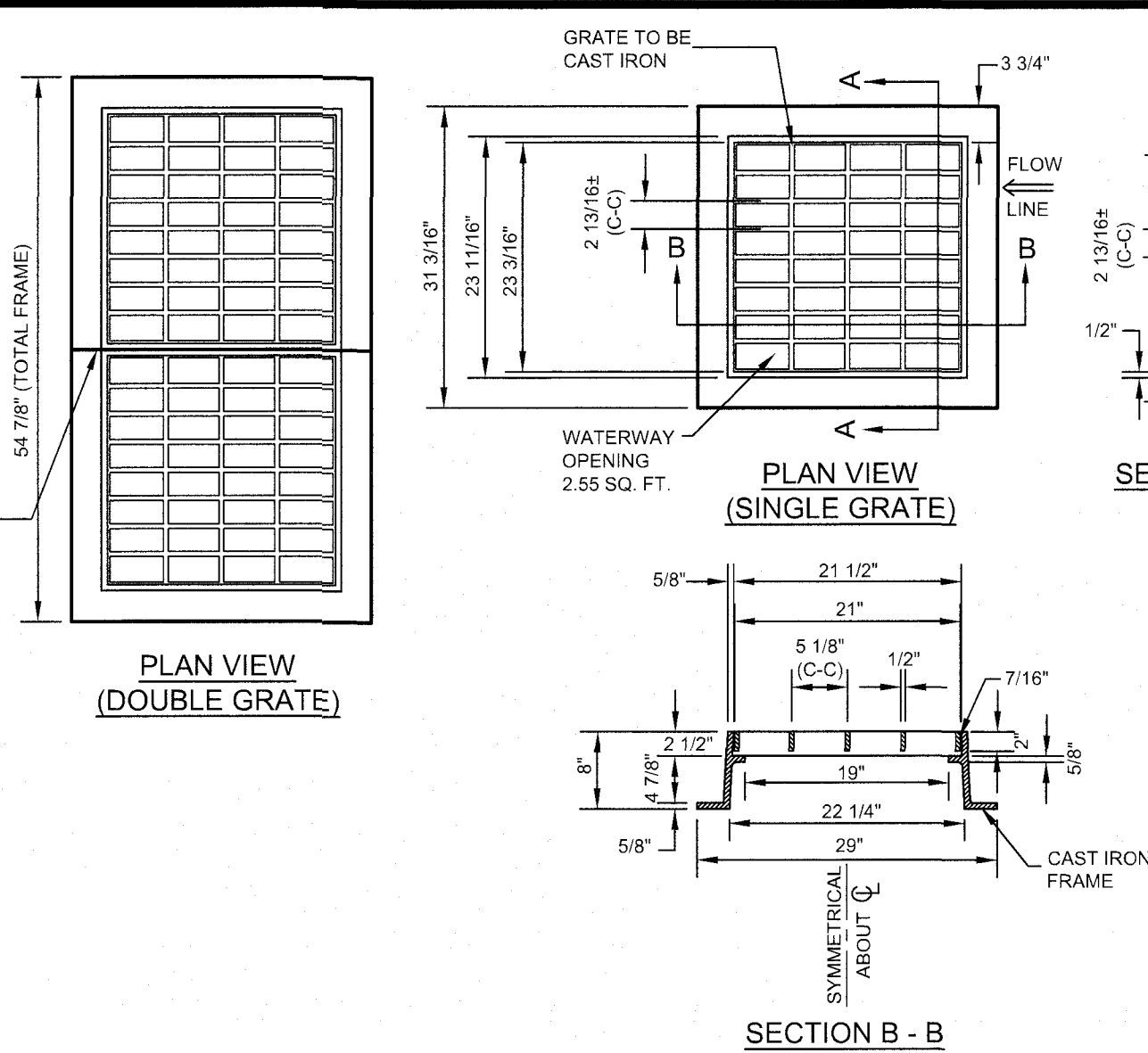
**NOTES:**  
NEW HAMPSHIRE MAINTAINS A CLEAR OPENING DESIGNATION OF 30" FOR ITS MANHOLE CASTINGS.

- FEATURES:**
- 3" LETTERING
  - COVERS MARKED DRAIN
  - NON-ROCKING COVER
  - DIAMOND SURFACE DESIGN

- SPECIFICATIONS:**
- FULLY MACHINED FRAME AND COVER
  - H-20 LOAD RATED
  - GRAY CAST IRON MEETS ASTM A48 CLASS 30



#### ISOMETRIC

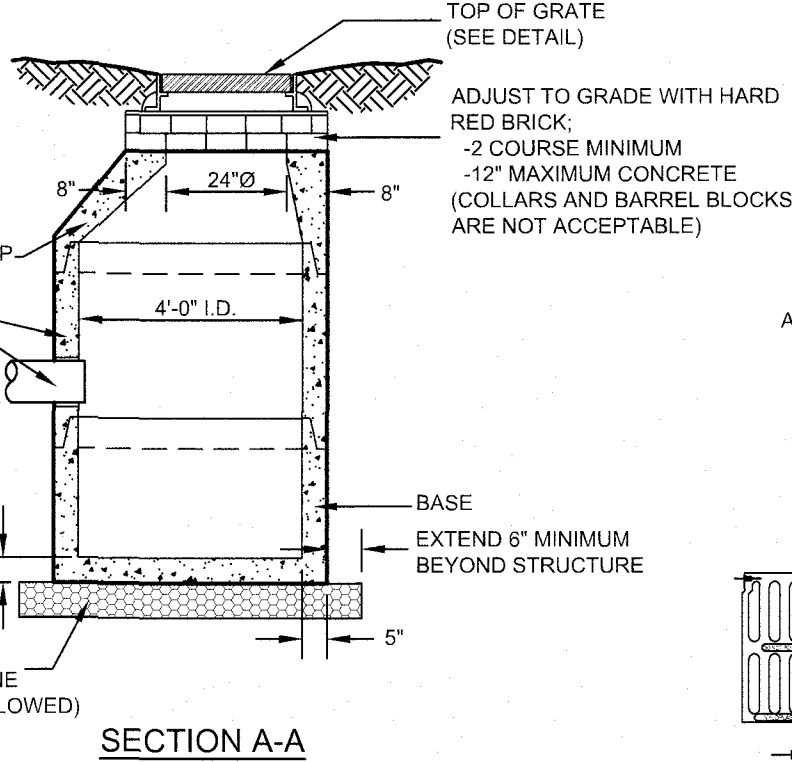
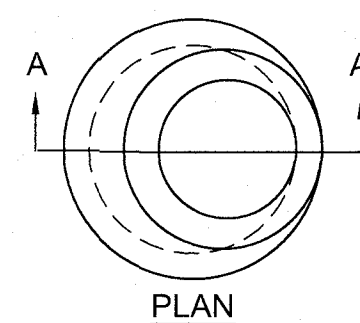


#### SECTION B - B

#### TYPE B FRAME & GRATE DETAIL

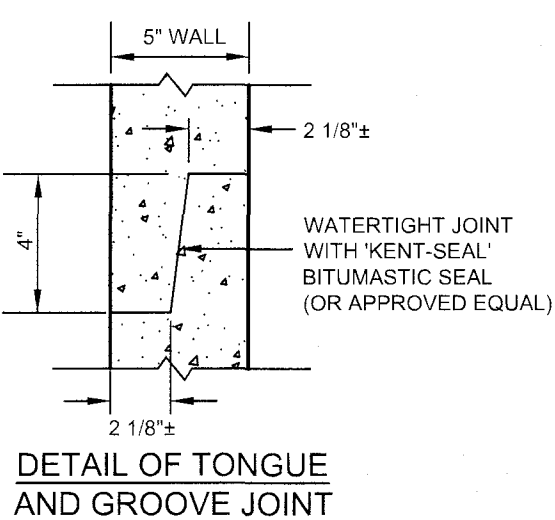
NOT TO SCALE  
(MARCH 2008)

- 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.

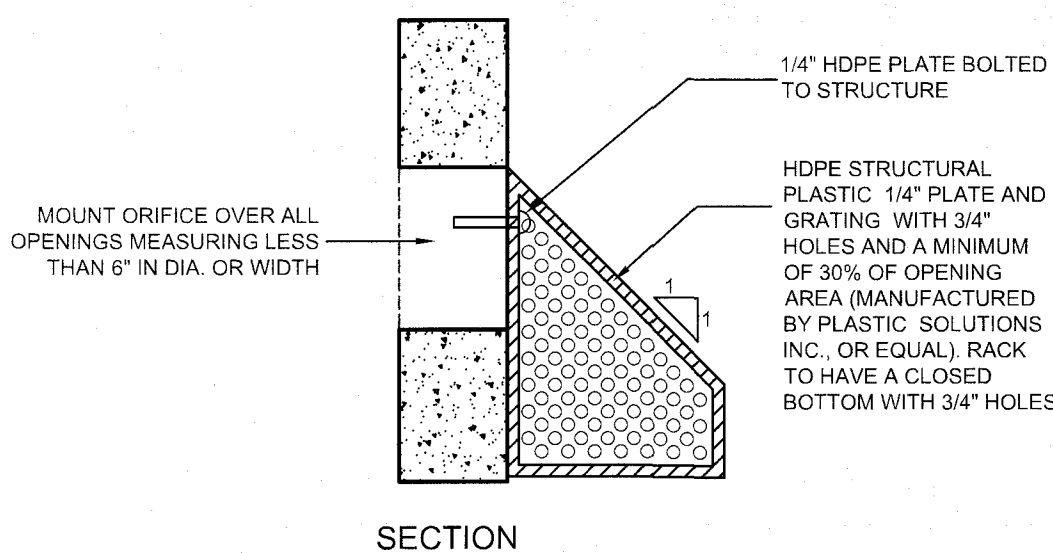


#### PRECAST REINFORCED CATCH BASIN

NOT TO SCALE  
(MAY 2012)



#### DETAIL OF TONGUE AND GROOVE JOINT



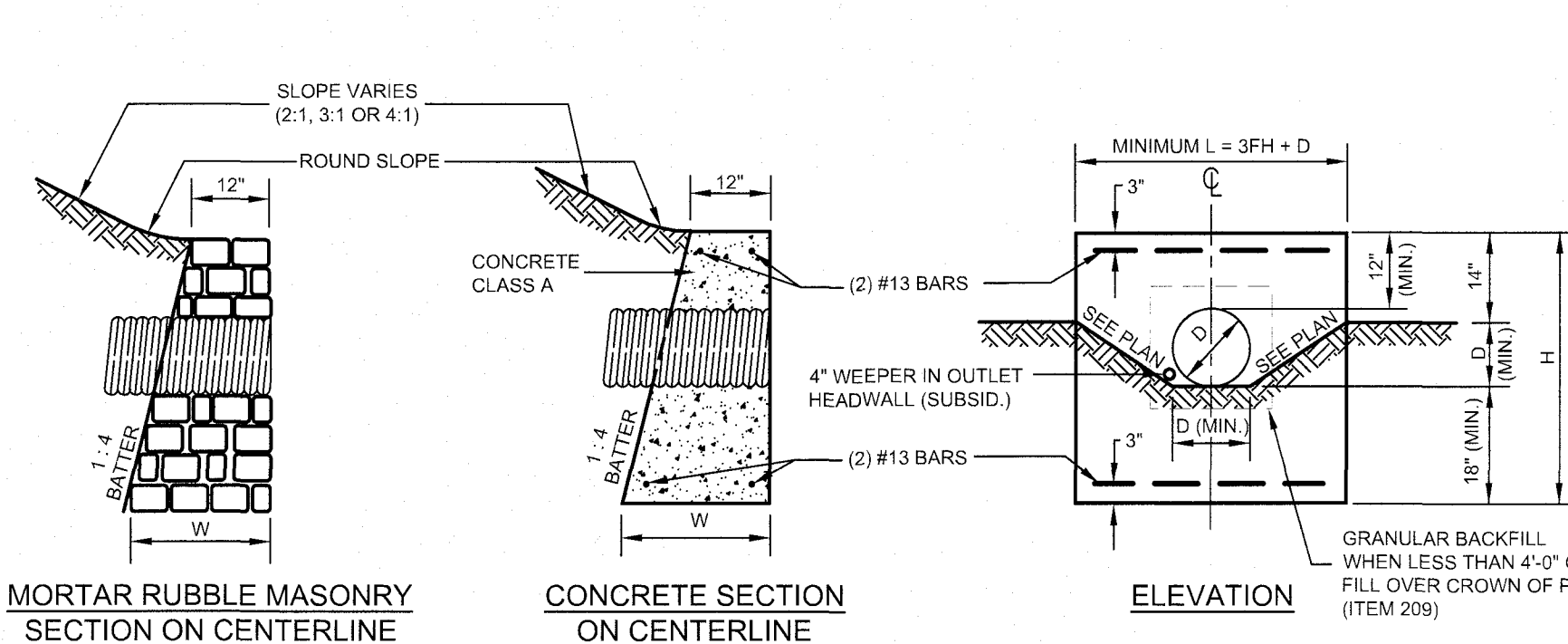
#### SECTION

#### TRASH RACK DETAIL

NOT TO SCALE

#### NYLOPLAST 15" DRAIN BASIN DETAIL

NOT TO SCALE



#### MORTAR RUBBLE MASONRY SECTION ON CENTERLINE

#### CONCRETE SECTION ON CENTERLINE

#### ELEVATION

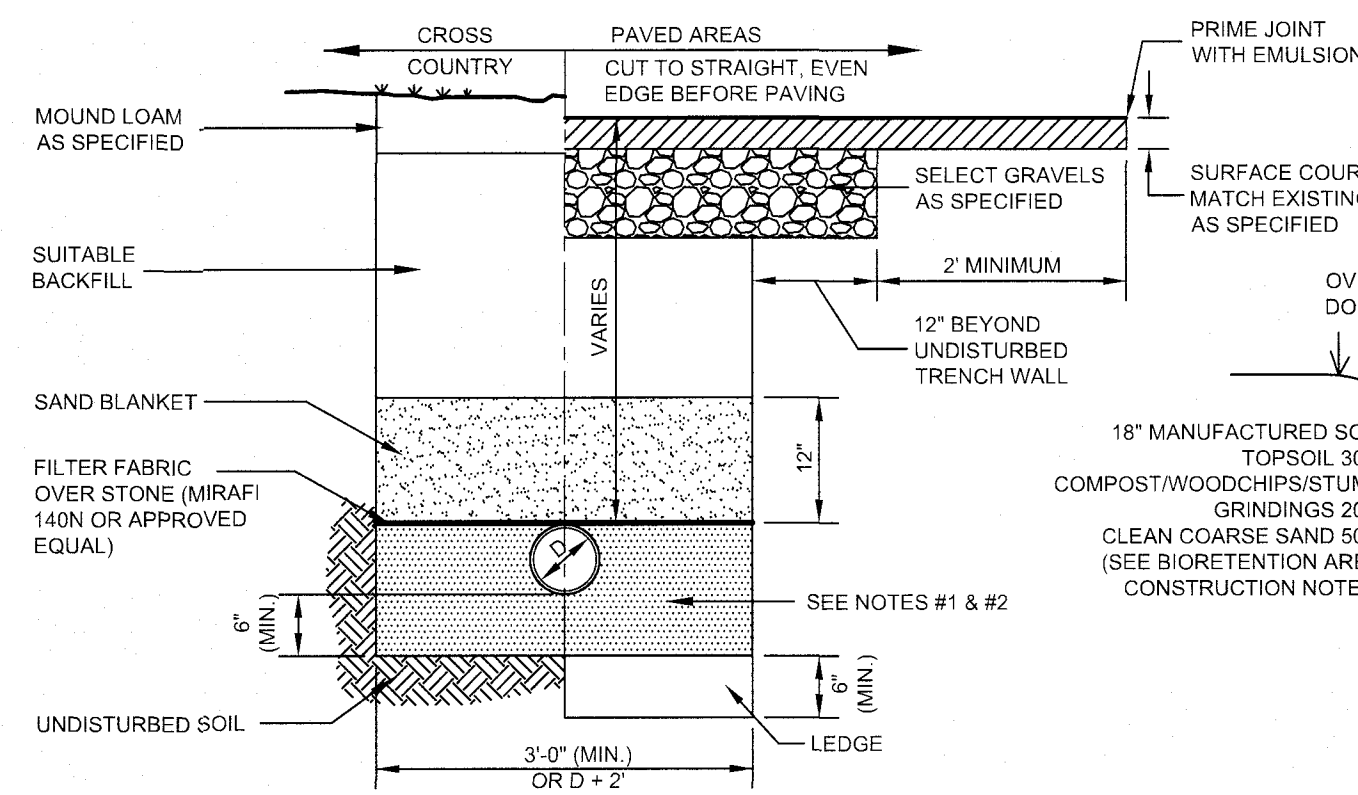
**NOTE:**  
DIMENSIONS SHOWN ARE TO PAYMENT LINES. MORTAR RUBBLE MASONRY TO BE STEPPED OUTSIDE PAYMENT LINES ON SLOPING FACES.

DIAMETER D (INCH)	AREA OF PIPE (SQ. FT.)	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 (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	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'-6"	3'-6"	10"	1'-10 1/2"	0.28	1.057
15"	1.23	0.202	1.73	0.85	11	3'-10"	0.120	0.947	0.35	4'-8"	3'-6"	1'-4"	1'-11 1/4"	0.31	1.232
18"	1.77	0.222	2.52	1.13	14	5'-2"	0.130	1.111	0.39	5'-6"	4'-0"	1'-4"	2'-0"	0.35	1.406

**NOTE:** STEEL QUANTITIES ARE FOR CONCRETE HEADWALLS ONLY.

#### MORTAR RUBBLE MASONRY AND CONCRETE HEADWALLS

NOT TO SCALE

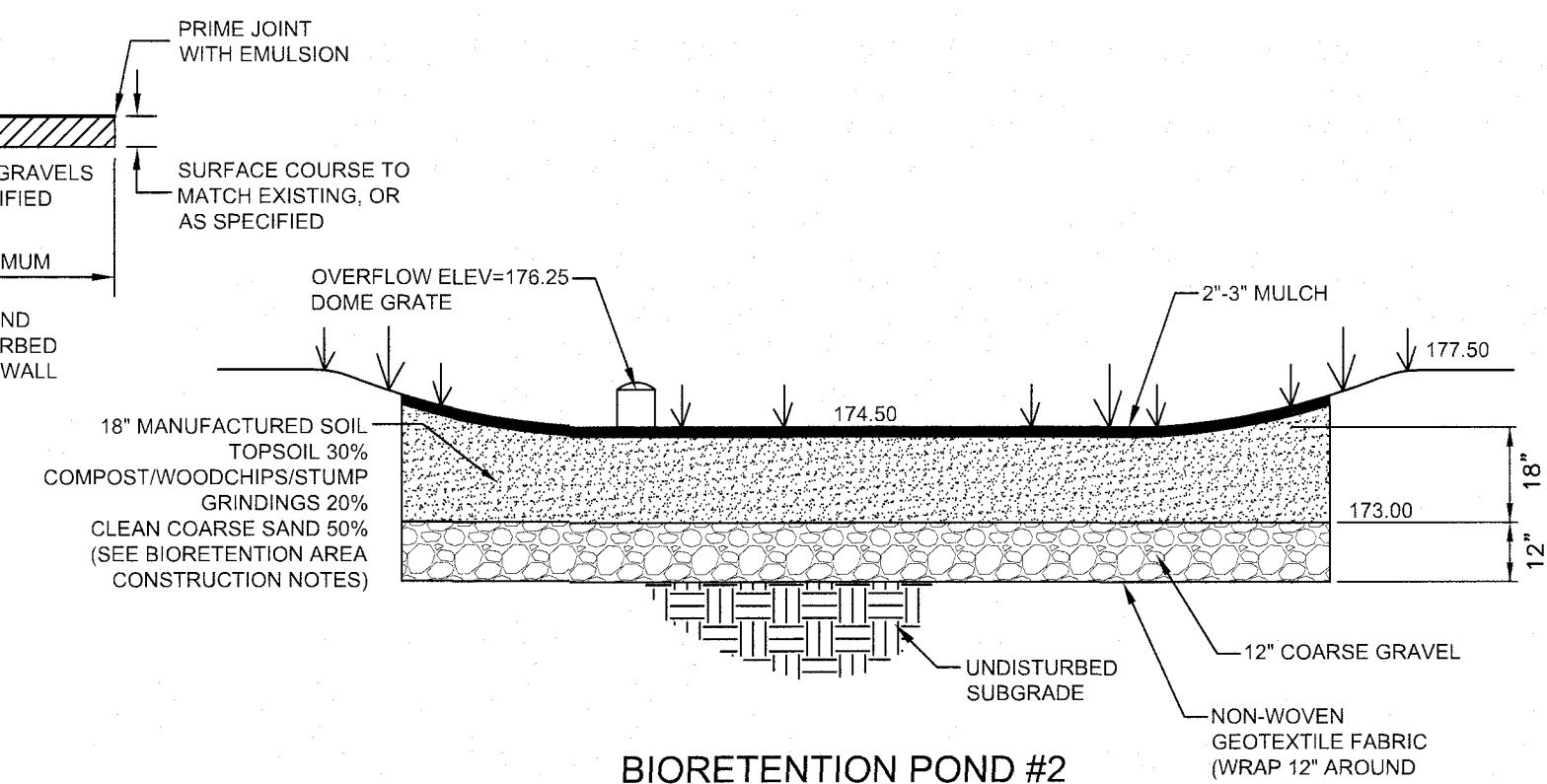


#### NOTES

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.

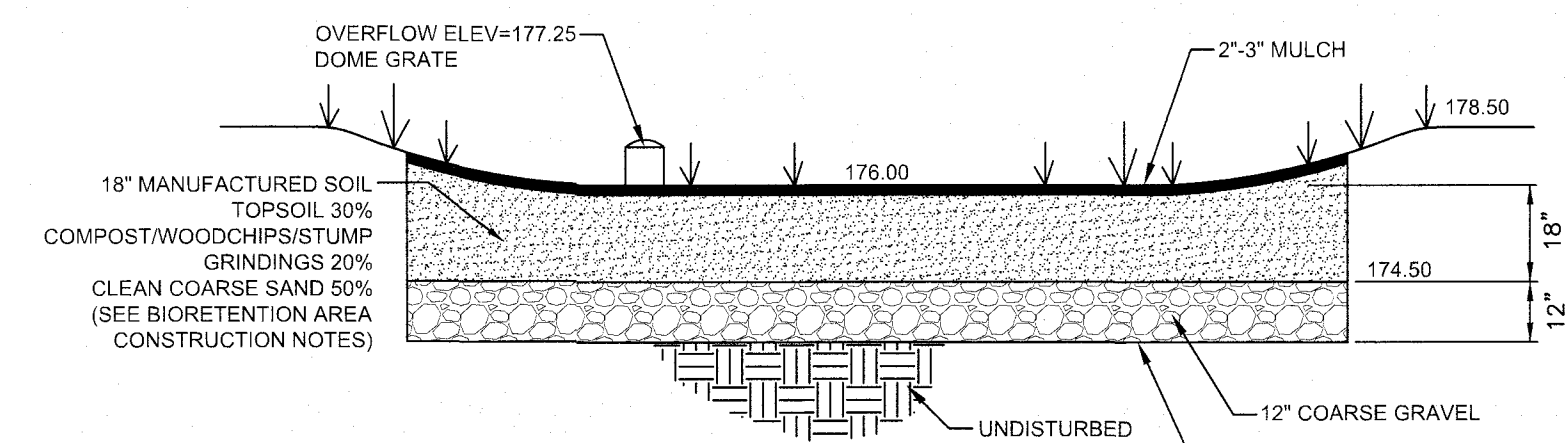
#### STORM DRAINAGE TRENCH DETAIL

NOT TO SCALE  
(MARCH 2008)



#### BIORETENTION POND #2

NOT TO SCALE



#### BIORETENTION POND #3

NOT TO SCALE

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

## CONSTRUCTION DETAILS BLUEBIRD SELF STORAGE

MAP 176 LOTS 21, 22 & 23  
196-202 CENTRAL STREET  
HUDSON, NEW HAMPSHIRE  
HILLSBOROUGH COUNTY

**OWNER OF RECORD:**  
RONALD CRAVEN TRUST  
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HUDSON, NH 03051  
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DATE: DECEMBER 20, 2021

SCALE: N.T.S.

PROJECT NO: 21-0709-3

SHEET 17 OF 23

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

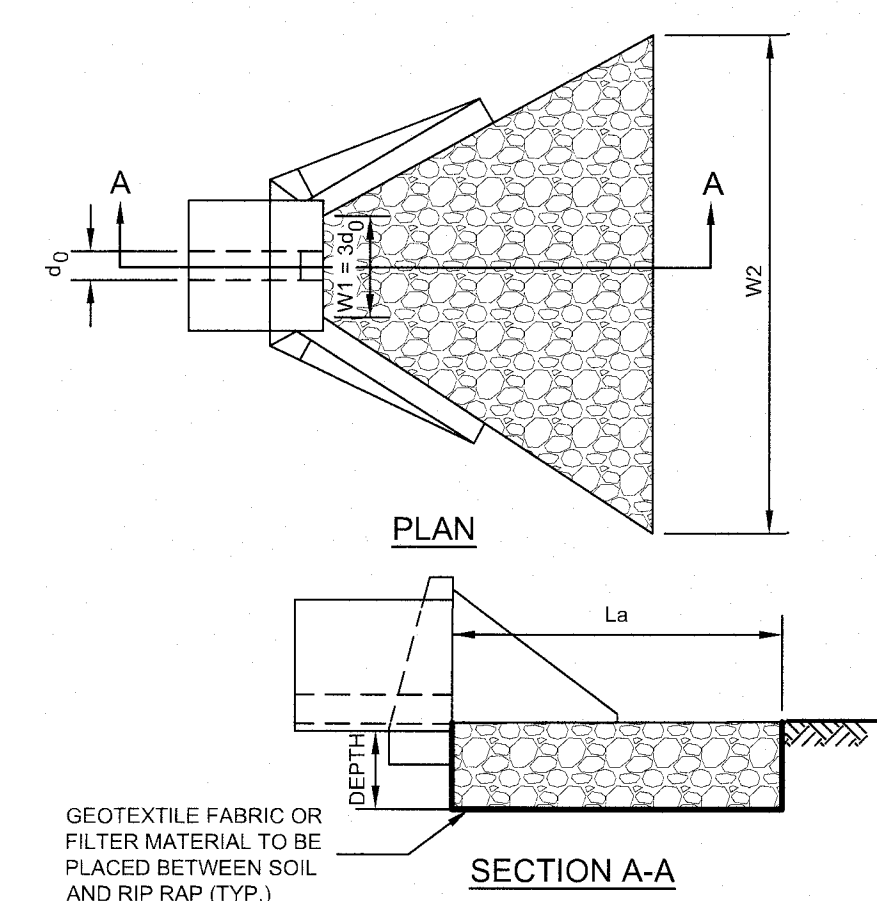
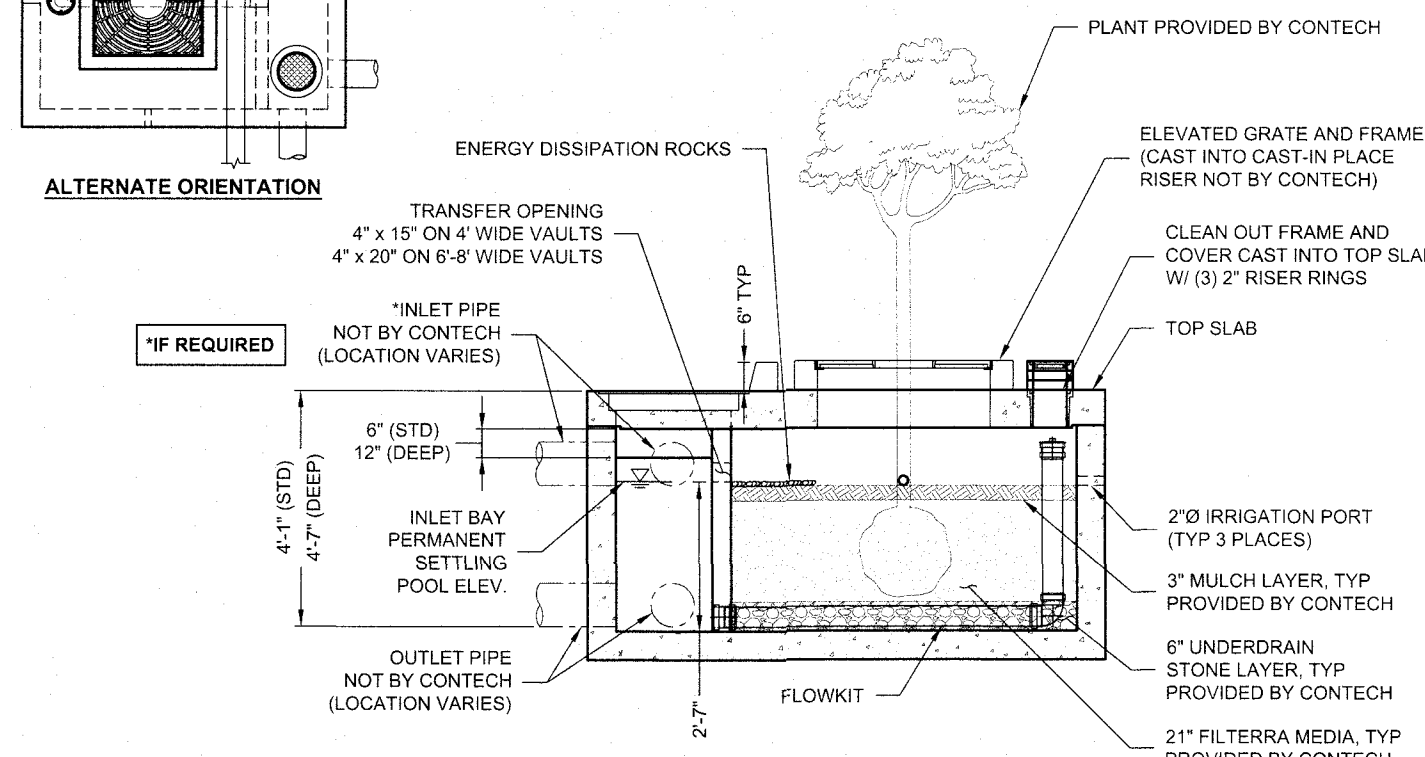
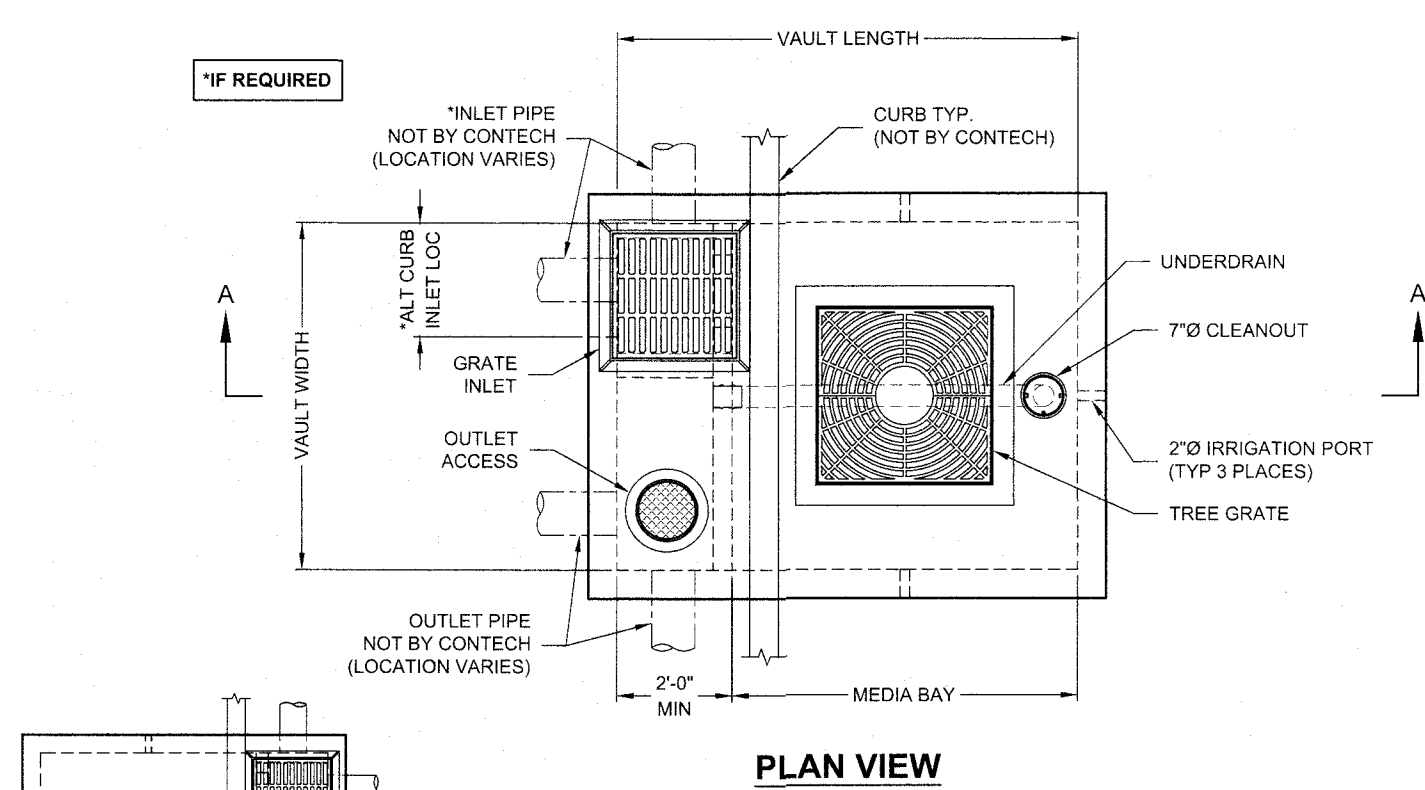
APPROVED BY THE HUDSON, NH PLANNING BOARD  
DATE OF MEETING: \_\_\_\_\_

\_\_\_\_\_  
SIGNATURE DATE: \_\_\_\_\_

\_\_\_\_\_  
SIGNATURE DATE: \_\_\_\_\_

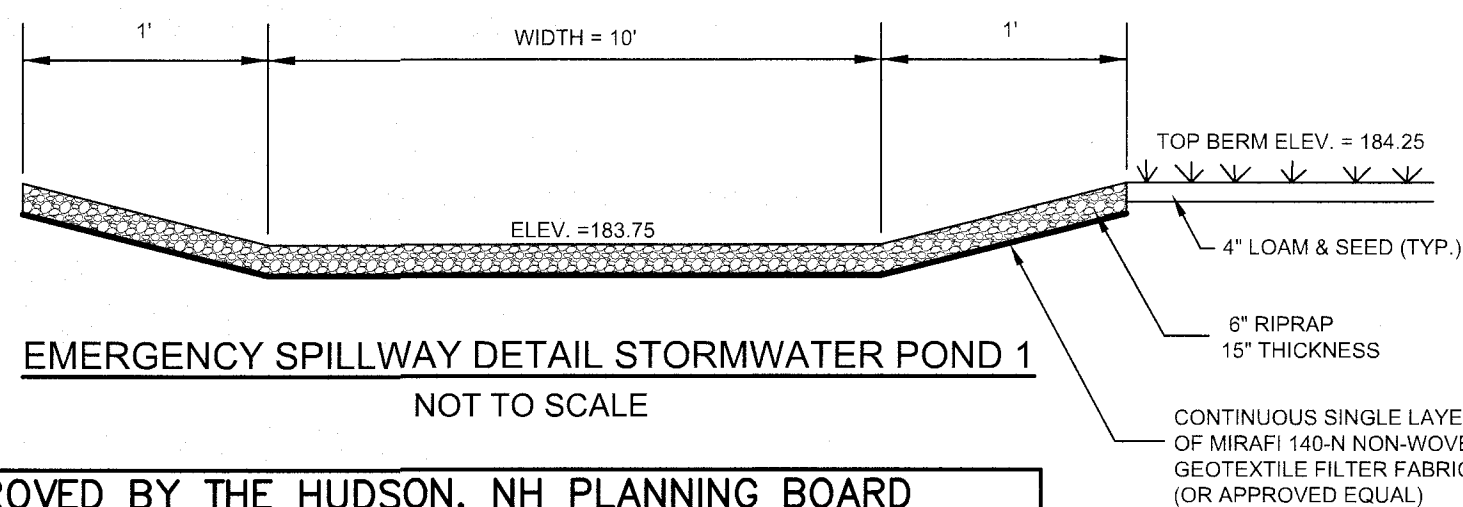
SITE PLANS ARE VALID FOR TWO YEARS FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.





LOCATION	La	W1	W2	d50	DEPTH
HW#111	10'	3'	7'	4"	10"
HW#121	8'	3'	6'	4"	10"
HW#140	13'	3'	8'	4"	10"
HW#143	8'	3'	6'	4"	10"

**PIPE OUTLET TO FLAT AREA WITH NO DEFINED CHANNEL**  
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: \_\_\_\_\_

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FTPD-G STANDARD HEIGHT CONFIGURATION							
DESIGNATION (OPTIONS: -P)	AVAILABILITY	MEDIA BAY SIZE	VAULT SIZE (W x L)	WEIR LENGTH/ MAX CURB OPENING	*MAX BYPASS FLOW (CFS)	GRATE INLET/ OUTLET ACCESS SIZE	TREE GRATE QTY & SIZE
FTPD0404-G	N/A CA	4 x 4	4 x 6	1'-8"	1.4	12"SQ/12"Ø	(1) 2'5" x 2'5"
FTPD0404S-G	CA ONLY	4 x 4.5	4 x 6.5	1'-8"	1.4	12"SQ/12"Ø	(1) 2'5" x 2'5"
FTPD0406-G	N/A MID-ATL	4 x 6	4 x 8	1'-8"	1.4	12"SQ/12"Ø	(1) 3' x 3'
FTPD0406S-G	MID-ATL ONLY	4.5 x 5.83	4.5 x 7.83	1'-8"	1.4	12"SQ/12"Ø	(1) 3' x 3'
FTPD0604-G	ALL	6 x 4	6 x 6	1'-8"	1.4	24"SQ/12"Ø	(1) 2'5" x 2'5"
FTPD0606-G	ALL	6 x 6	6 x 8	1'-8"	1.4	24"SQ/12"Ø	(1) 3' x 3'
FTPD0608-G	ALL	6 x 8	6 x 10	1'-8"	1.4	24"SQ/12"Ø	(1) 4' x 4'
FTPD0810-G	ALL	8 x 10	8 x 12	1'-8"	1.4	24"SQ/12"Ø	(1) 4' x 4'
FTPD0810S-G	ALL	8 x 10.5	8 x 14	2'-6"	2.1	24"SQ/24"Ø	(1) 4' x 4'
FTPD0810S-G	ALL	8 x 10.5	8 x 14	3'-0"	2.5	24"SQ/24"Ø	(1) 4' x 4'
FTPD0812S-G	ALL	8 x 12.5	8 x 16	3'-0"	2.5	24"SQ/24"Ø	(2) 4' x 4'

N/A = NOT AVAILABLE

FTPD-GD DEEP OPTION CONFIGURATION							
DESIGNATION (OPTIONS: -P)	AVAILABILITY	MEDIA BAY SIZE	VAULT SIZE (W x L)	WEIR LENGTH/ MAX CURB OPENING	*MAX BYPASS FLOW (CFS)	GRATE INLET/ OUTLET ACCESS SIZE	TREE GRATE QTY & SIZE
FTPD0404-GD	N/A CA	4 x 4	4 x 6	1'-8"	4.6	12"SQ/12"Ø	(1) 2'5" x 2'5"
FTPD0404S-GD	CA ONLY	4 x 4.5	4 x 6.5	1'-8"	4.6	12"SQ/12"Ø	(1) 2'5" x 2'5"
FTPD0406-GD	N/A MID-ATL	4 x 6	4 x 8	1'-8"	4.6	12"SQ/12"Ø	(1) 3' x 3'
FTPD0406S-GD	MID-ATL ONLY	4.5 x 5.83	4.5 x 7.83	1'-8"	4.6	12"SQ/12"Ø	(1) 3' x 3'
FTPD0604-GD	ALL	6 x 4	6 x 6	1'-8"	4.6	24"SQ/12"Ø	(1) 2'5" x 2'5"
FTPD0606-GD	ALL	6 x 6	6 x 8	1'-8"	4.6	24"SQ/12"Ø	(1) 3' x 3'
FTPD0608-GD	ALL	6 x 8	6 x 10	1'-8"	4.6	24"SQ/12"Ø	(1) 4' x 4'
FTPD0810-GD	ALL	8 x 10	8 x 12	1'-8"	4.6	24"SQ/12"Ø	(1) 4' x 4'
FTPD0810S-GD	ALL	8 x 10.5	8 x 14	2'-6"	6.8	24"SQ/24"Ø	(1) 4' x 4'
FTPD0810S-GD	ALL	8 x 10.5	8 x 14	3'-0"	8.2	24"SQ/24"Ø	(1) 4' x 4'
FTPD0812S-GD	ALL	8 x 12.5	8 x 16	3'-0"	8.2	24"SQ/24"Ø	(2) 4' x 4'

N/A = NOT AVAILABLE

\*MAX BYPASS FLOW IS INTERNAL FLOW. SITE SPECIFIC ANALYSIS IS REQUIRED TO DETERMINE GRATE INLET FLOW CAPACITY

**TREE BOX - FILTERRA PEAK DIVERSION - GRATE (FTPD-G)**  
NOT TO SCALE

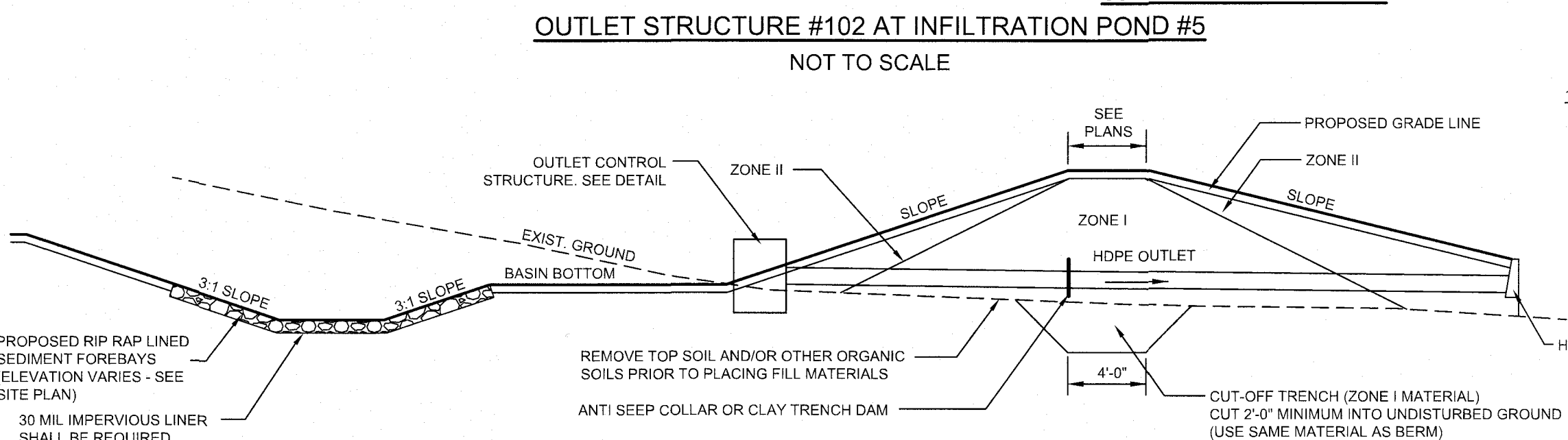
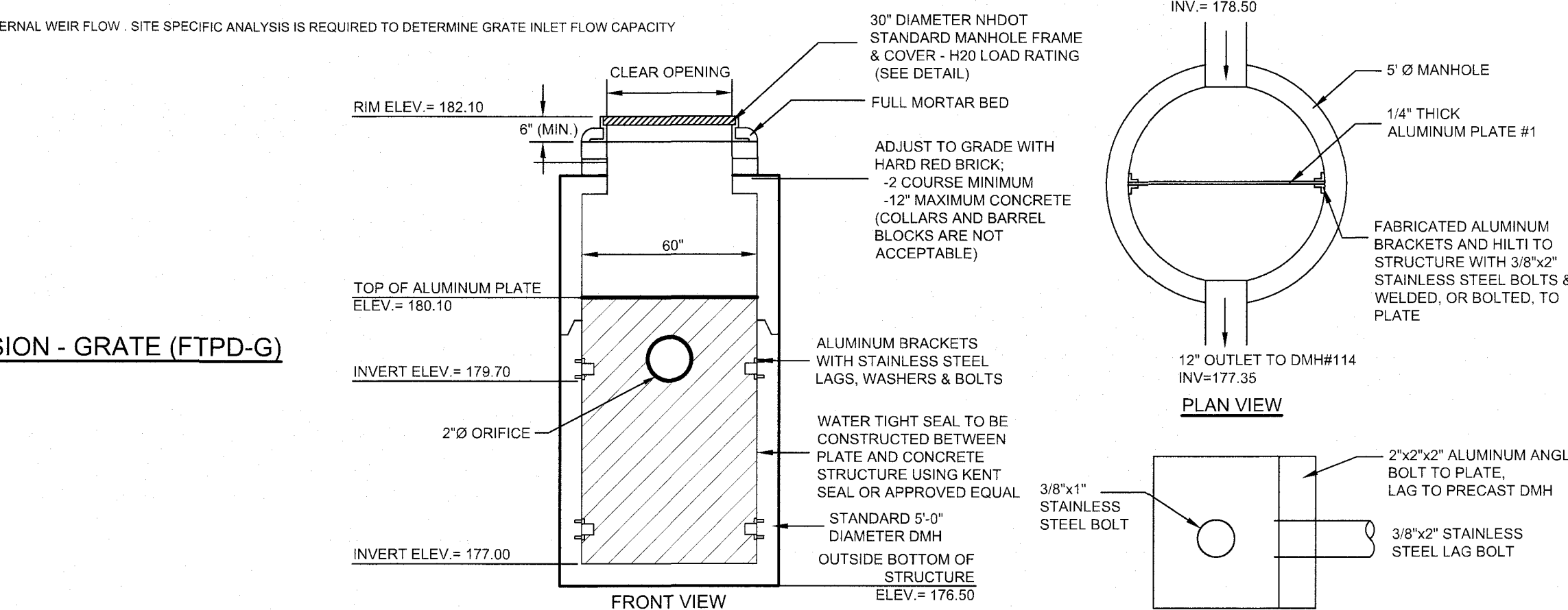
TABLE 7-24 - RECOMMENDED RIP RAP GRADATION RANGES	
PERCENT OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE
100%	1.5 TO 2.0 d50
85%	1.3 TO 1.8 d50
50%	1.0 TO 1.5 d50
15%	0.3 TO 0.5 d50

**CONSTRUCTION SPECIFICATIONS:**

- THE SUBGRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC AND RIP RAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
- THE ROCK OR GRAVEL USED FOR FILTER OR RIP RAP SHALL CONFORM TO THE SPECIFIED GRADATION.
- 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.
- 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.

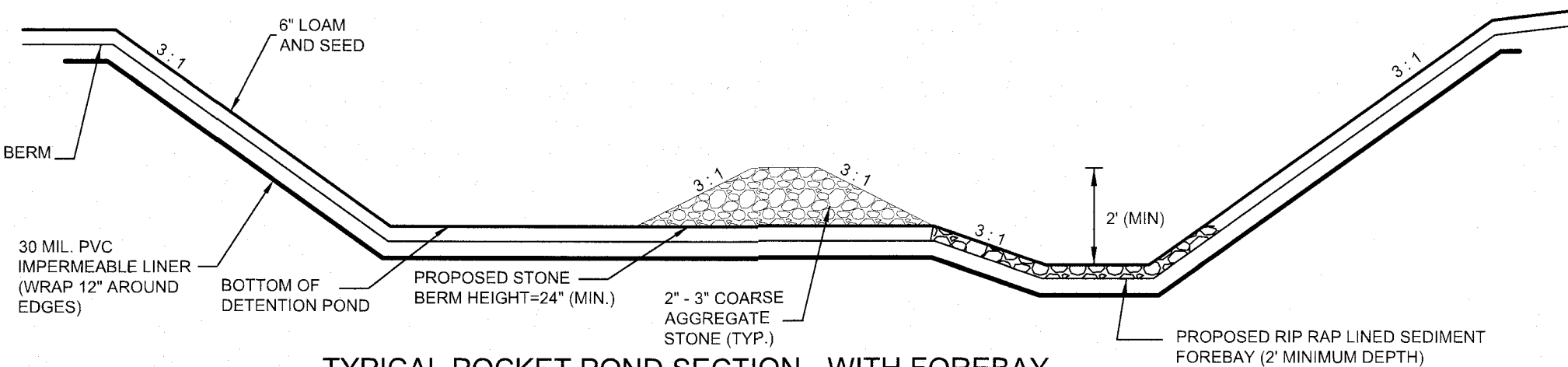
**MAINTENANCE:**

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.



**STORMWATER PONDS CONSTRUCTION SEQUENCE**

- CONTRACTOR TO NOTIFY DIG-SAFE 72 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- CUT AND CLEAR TREES AND BRUSH FROM CONSTRUCTION AREAS TO THE EXTENT NECESSARY. ALL BRANCHES, TOPS AND BRUSH TO BE PROPERLY DISPOSED OF BY CONTRACTOR.
- PRIOR TO GRUBBING OF CLEARED AREAS, ALL SILTATION BARRIERS DESIGNED FOR USE AS TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED AS CALLED FOR ON PROJECT PLANS.
- COMPLETE GRUBBING OPERATIONS. ALL STUMPS AND SIMILAR DEBRIS SHALL BE PROPERLY DISPOSED OF BY CONTRACTOR. ORGANIC MATERIAL SUITABLE FOR USE AS TOPSOIL SHALL BE STOCKPILED IN UPLAND AREAS. ALL STOCKPILES SHALL BE SEEDED WITH WINTER RYE AND, IF NECESSARY, SURROUNDED WITH HAY BALES IN ORDER TO PREVENT LOSS DUE TO EROSION.
- CONSTRUCT TEMPORARY CULVERTS AS NECESSARY TO FACILITATE CONSTRUCTION ACTIVITIES. ALL SUCH CROSSINGS SHALL BE PROTECTED WITH HAY BALE BARRIERS TO LIMIT EROSION.
- CONSTRUCT CUT-OFF TRENCH (PART OF ZONE I).
- CONSTRUCT OUTLET AND OVERFLOW STRUCTURE, CULVERT, ANTI SEEP COLLARS, HEADWALL, AND RIP RAP OUTLET PROTECTION AS SHOWN ON PLANS.
- CONSTRUCT ZONE I PORTION OF EARTH EMBANKMENT.
- CONSTRUCT ZONE II PORTION OF EARTH EMBANKMENT.
- APPLY TOPSOIL TO SLOPES AND OTHER AREAS DISTURBED BY CONSTRUCTION. TOPSOIL USED MAY BE NATIVE ORGANIC MATERIAL SCREENED SO AS TO BE FREE OF ROOTS, BRANCHES, STONES, AND OTHER DELETERIOUS MATERIALS. TOPSOIL SHALL BE APPLIED SO AS TO PROVIDE A MINIMUM OF A 4-INCH COMPACTED THICKNESS. UPON COMPLETION OF TOPSOILING, FINISHED SECTIONS ARE TO BE LIMED, SEEDED AND MULCHED. CONSTRUCTION PERSONNEL SHALL INSPECT COMPLETED SECTIONS OF WORK ON A REGULAR BASIS AND REMEDY ANY PROBLEM AREAS UNTIL A HEALTHY STAND OF GRASS HAS BECOME ESTABLISHED.
- MAINTAIN, REPAIR, AND REPLACE AS NECESSARY TEMPORARY EROSION CONTROL MEASURES UNTIL SUCH TIME AS THE ENTIRE CONSTRUCTION AREA HAS BEEN STABILIZED (A MINIMUM OF ONE WINTER SHALL HAVE PASSED).
- AFTER STABILIZATION, REMOVE AND SUITABLY DISPOSE OF TEMPORARY EROSION CONTROL MEASURES.
- MONITOR CONSTRUCTION ACTIVITIES ARE BEING PERFORMED IN SUCH A WAY AS NOT TO ENDANGER THE INTEGRITY OF EARTH EMBANKMENTS, STORMWATER CONTROL STRUCTURE, CULVERT AND RIP RAP OUTLET PROTECTION.



**MATERIAL TYPE/SPECIFICATIONS**

**ZONE I**

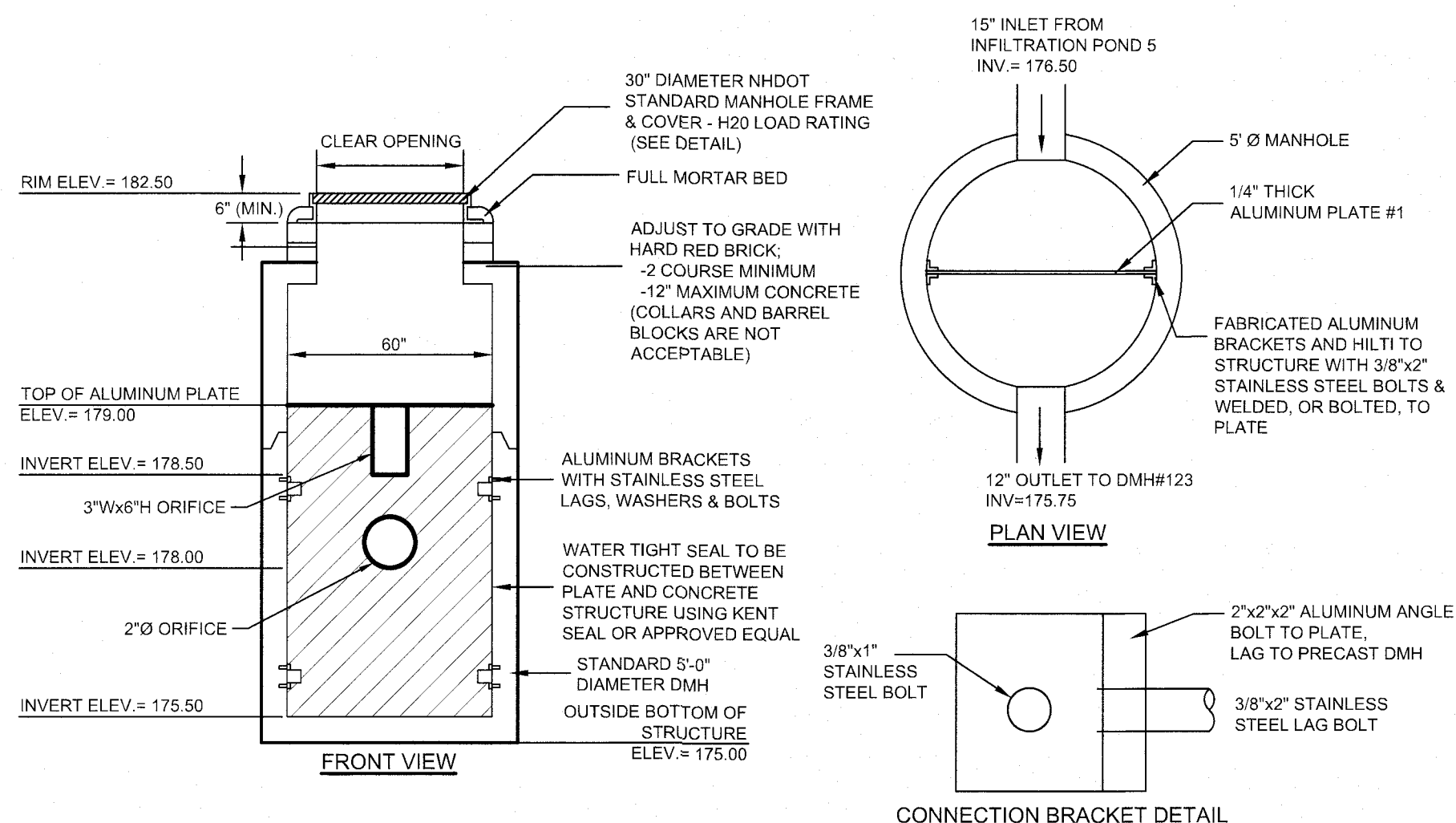
WELL GRADED MIXTURE OF GRAVEL, SAND, SILT OR CLAY WITH MAX. 6-INCH SIZE STONE AND GEADATION AS INDICATED BELOW. PLACE IN MAX. 12-INCH THICK LIFTS TO 95% OF MAX. DRY DENSITY IN ACCORDANCE WITH ASTM D1557. SCARIFY SURFACE PRIOR TO PLACING SUBSEQUENT LIFT. IN ADDITION, REMOVE ORGANIC SOILS.

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

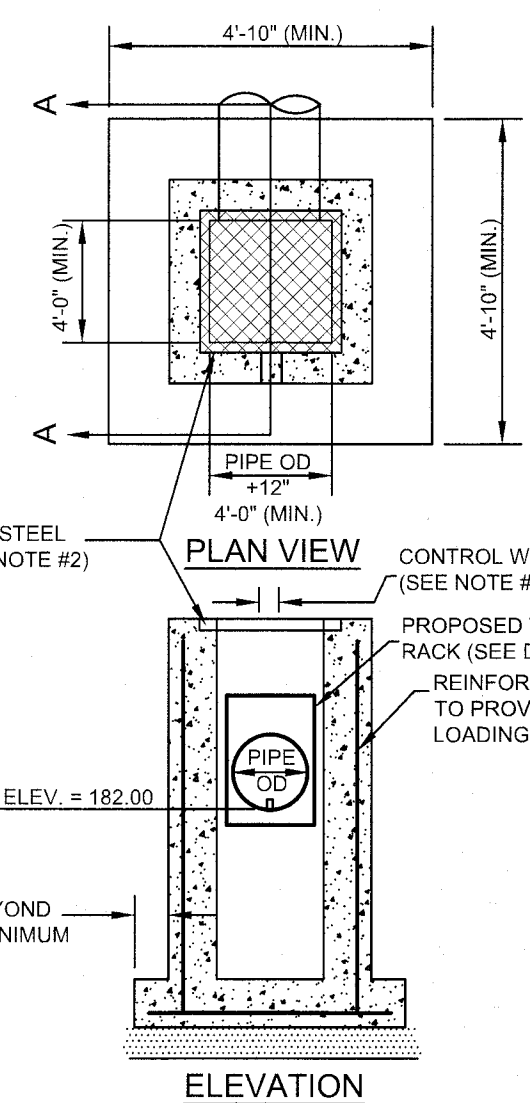
**ZONE II**

DRAINAGE LAYER. PLACE IN MAX. 12-INCH THICK LIFTS TO 95% OF MAX. DRY DENSITY IN ACCORDANCE WITH ASTM D1557.

SIEVE SIZE	PERCENT BY WEIGHT PASSING
1-INCH	100
NO. 4	70 TO 100
NO. 200	0-12 (IN SAND PORTION ONLY)



**OUTLET STRUCTURE #132 AT INFILTRATION POND #4**  
NOT TO SCALE



**OUTLET STRUCTURE #141 AT STORMWATER POND #1**  
NOT TO SCALE

**CONSTRUCTION DETAILS**  
**BLUEBIRD SELF STORAGE**

MAP 176 LOTS 21, 22 & 23  
196-202 CENTRAL STREET  
HUDSON, NEW HAMPSHIRE  
HILLSBOROUGH COUNTY

**OWNER OF RECORD:**  
RONALD CRAVEN TRUST  
c/o NANCY CRAVEN TRUST  
88 SPEARE ROAD  
HUDSON, NH 03051  
H.C.R.D. BK. 6079 PG. 1294

**APPLICANT:**  
BLUEBIRD SELF STORAGE LLC.  
125 OCEAN ROAD  
GREENLAND, NH 03840

**KM 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	01-21-2022	REVISED GRADING/DRAINAGE PER CLIENT	BES
2	02-14-2022	REVISED PER REVIEW COMMENTS	BES
3	02-21-2022	REVISED PER TOWN COMMENTS	BES
4	02-28-2022	REVISED PER TOWN COMMENTS	BES

DATE: DECEMBER 20, 2021

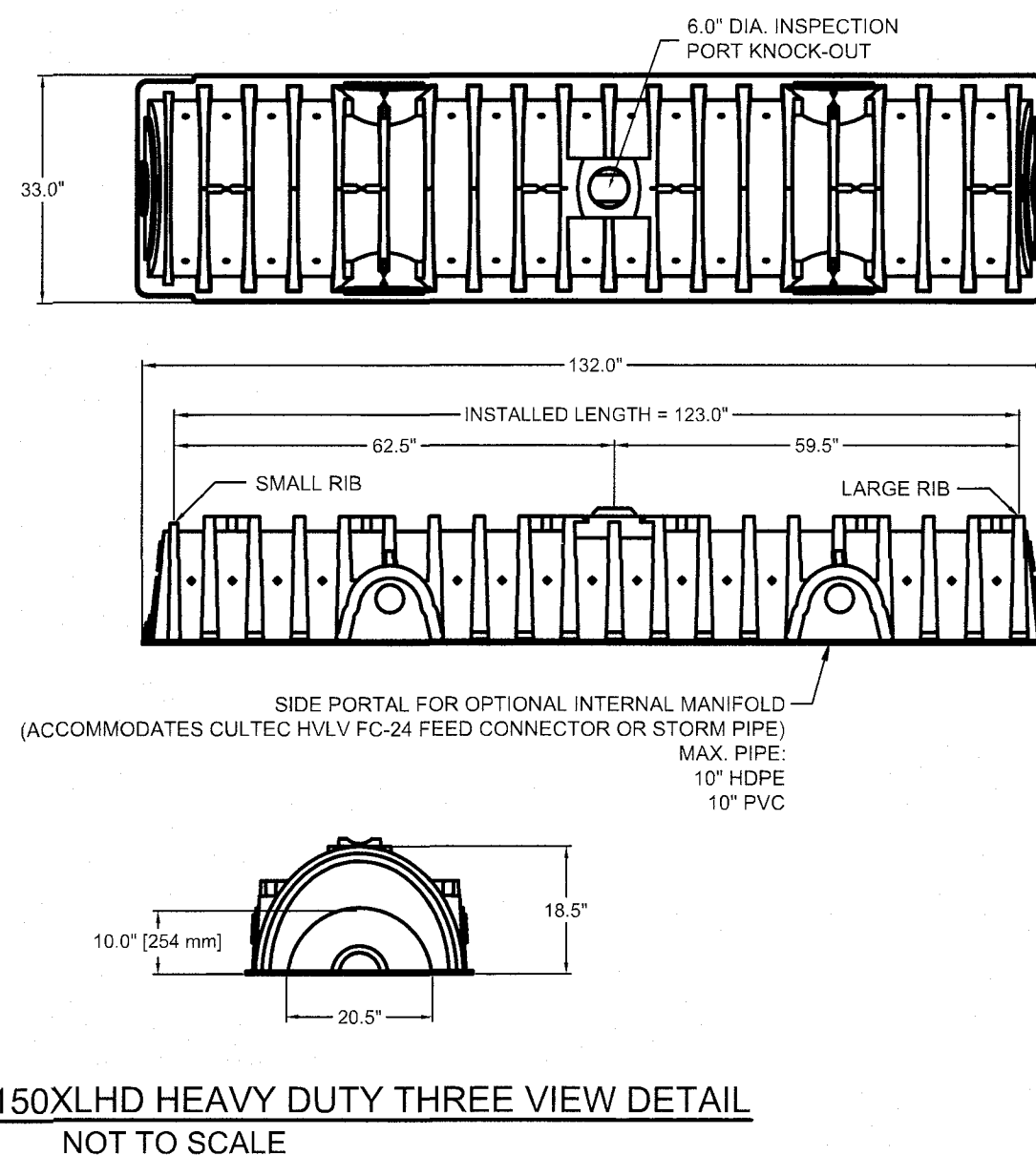
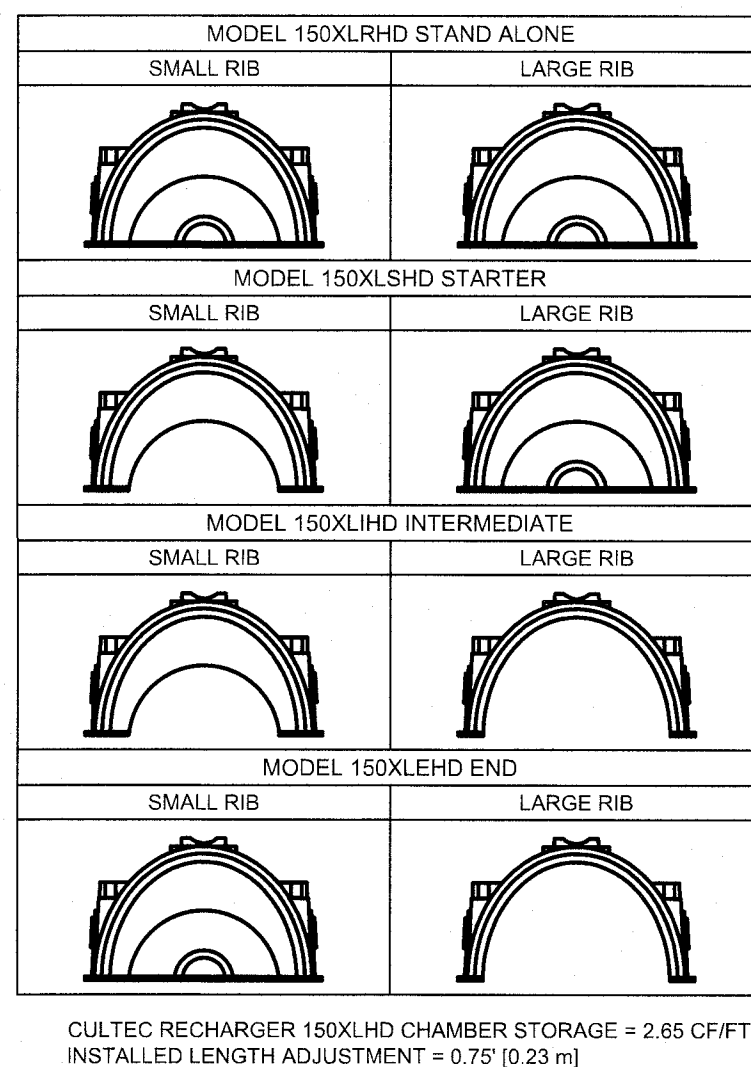
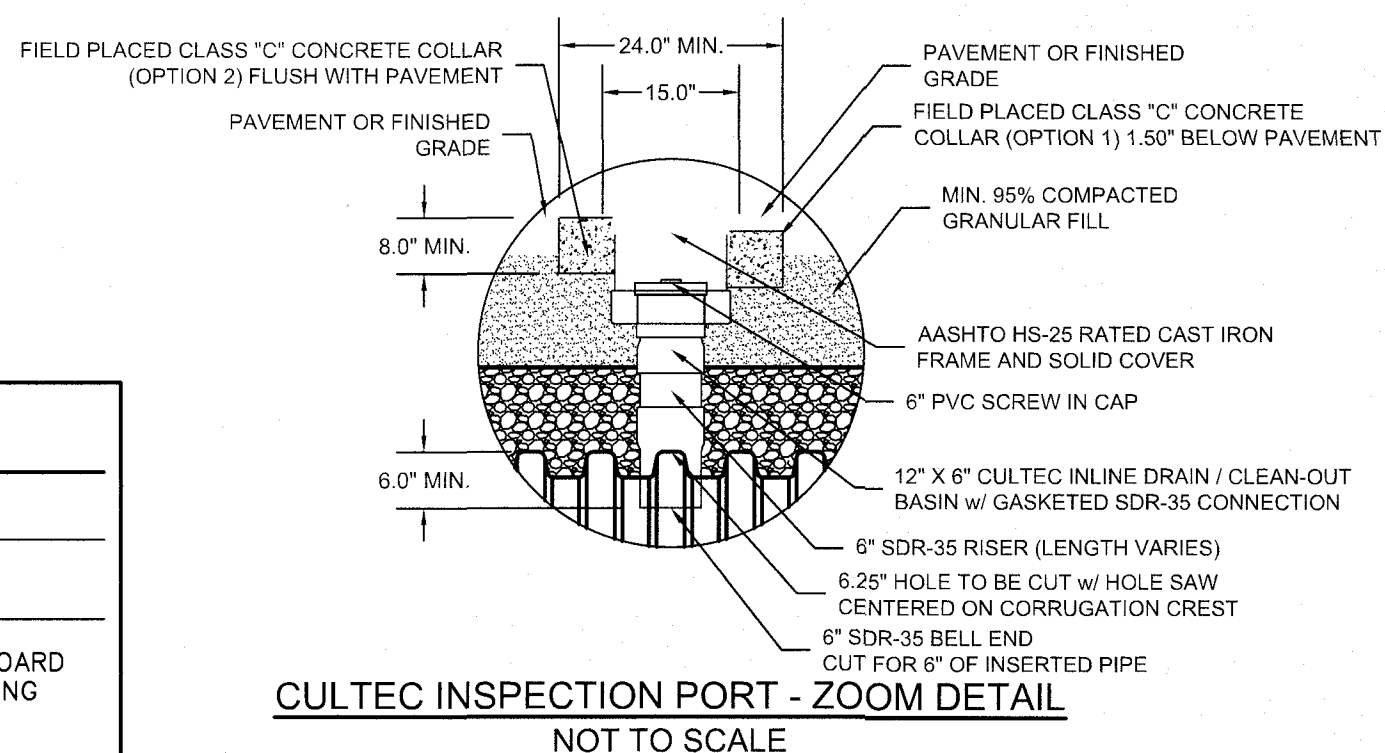
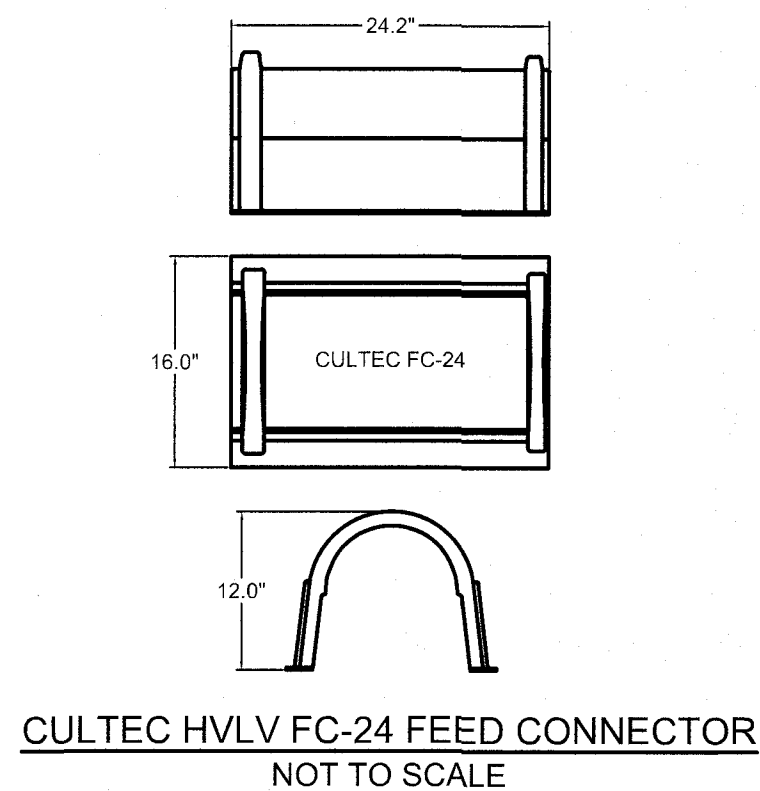
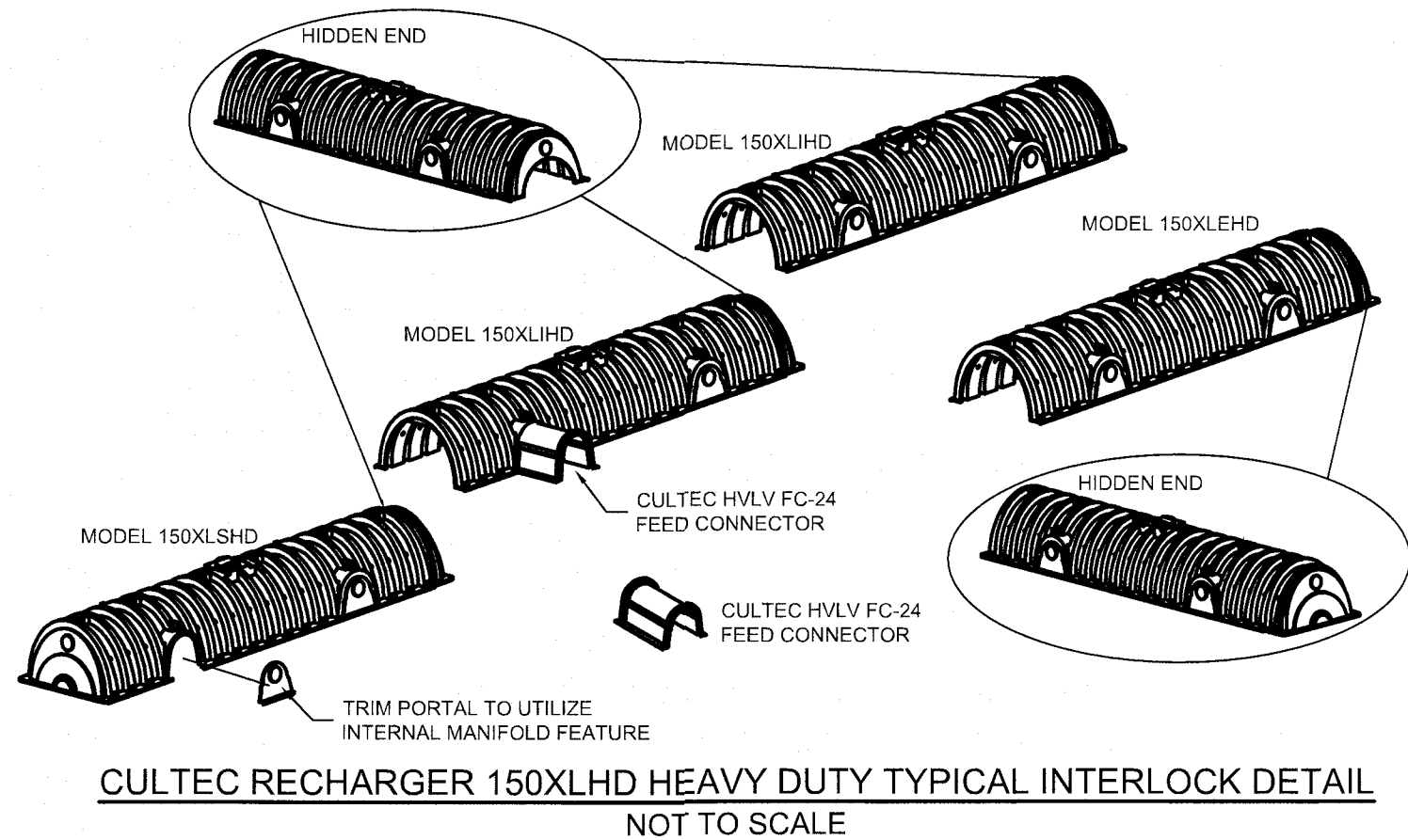
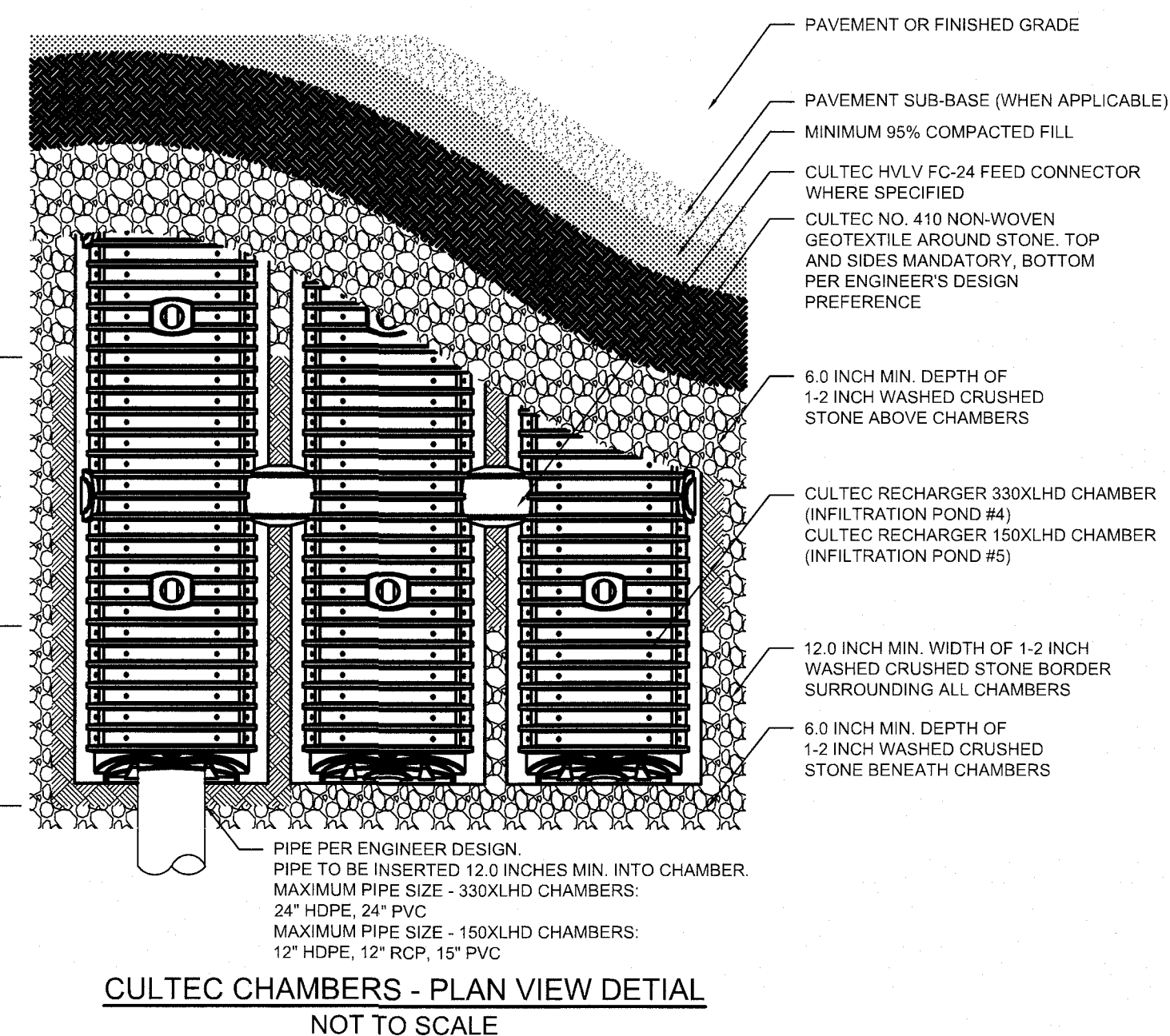
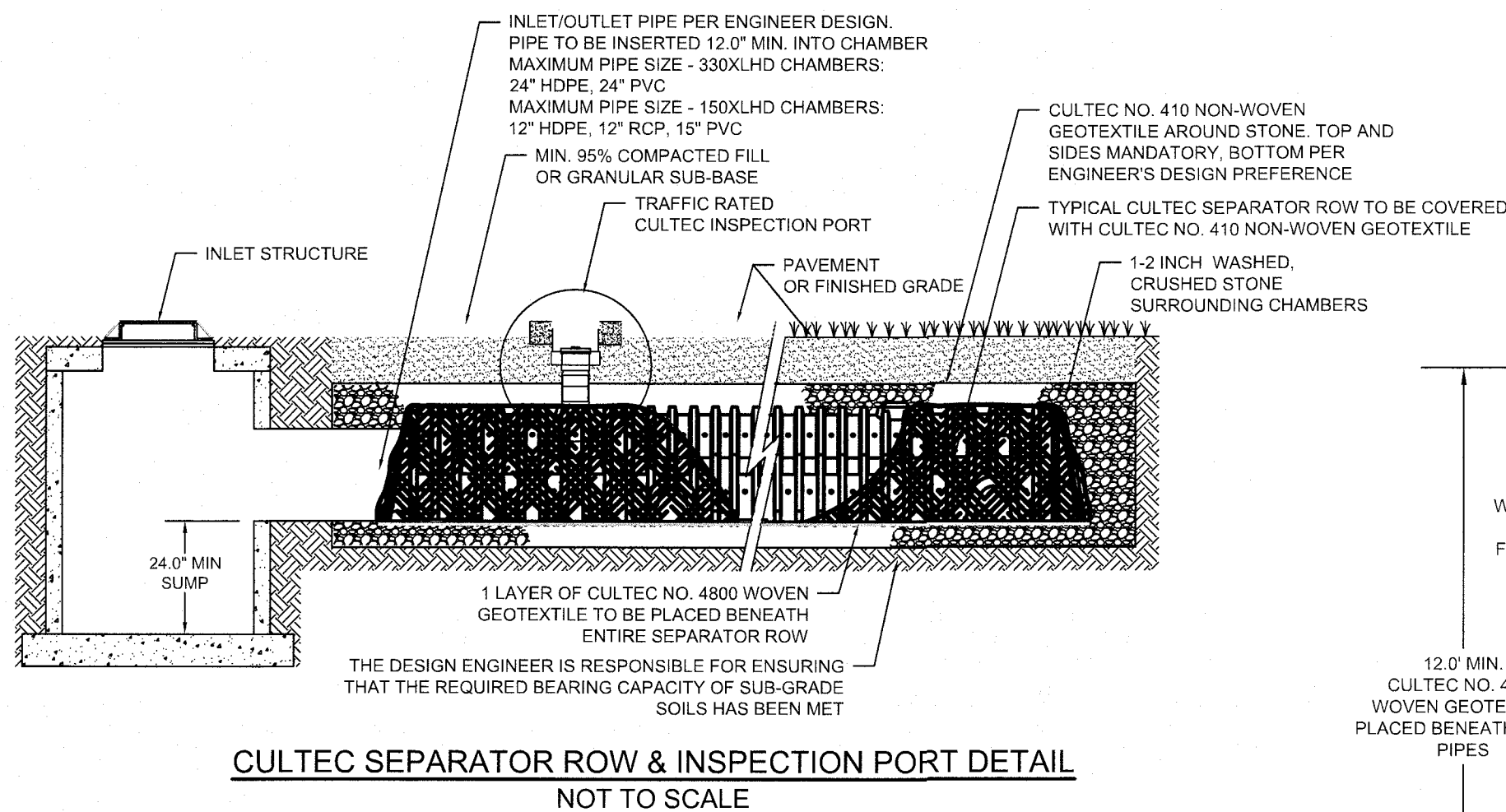
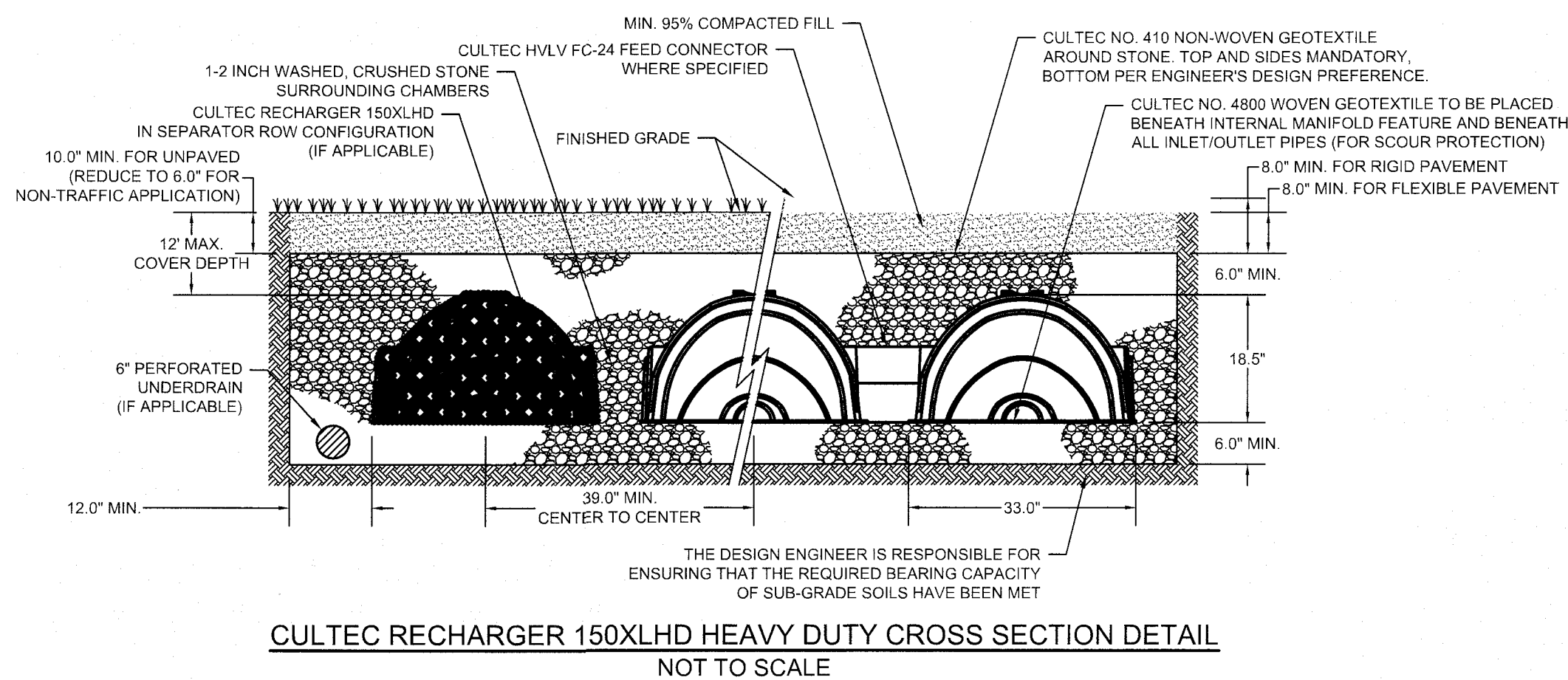
PROJECT NO: 21-0709-3

SCALE: N.T.S.

SHEET 18 OF 23



<p><b>TP #1</b> LOGGED BY GPC PERC TEST @ 20" DATE: 10-1-2021 PERC RATE: 2 MIN./INCH IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE</p>	<p><b>TP #2</b> LOGGED BY GPC PERC TEST @ 20" DATE: 10-1-2021 PERC RATE: 2 MIN./INCH IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE</p>	<p><b>TP #3</b> LOGGED BY GPC PERC TEST @ 20" DATE: 10-1-2021 PERC RATE: 2 MIN./INCH IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: 13'</p>	<p><b>TP #4</b> LOGGED BY GPC PERC TEST @ 20" DATE: 10-1-2021 PERC RATE: 2 MIN./INCH IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: 12'</p>	<p><b>TP #5</b> LOGGED BY GPC PERC TEST @ 20" DATE: 10-1-2021 PERC RATE: 2 MIN./INCH IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE</p>	<p><b>TP #6</b> LOGGED BY GPC PERC TEST @ 20" DATE: 10-1-2021 PERC RATE: 2 MIN./INCH IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE</p>	<p><b>TP #7</b> LOGGED BY GPC PERC TEST @ 20" DATE: 10-1-2021 PERC RATE: 2 MIN./INCH IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE</p>	<p><b>TP #8</b> LOGGED BY GPC PERC TEST @ 20" DATE: 10-1-2021 PERC RATE: 2 MIN./INCH IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE</p>	<p><b>TP #9</b> LOGGED BY GPC PERC TEST @ 20" DATE: 1-3-2022 PERC RATE: 2 MIN./INCH IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE</p>
<p>0" TOPSOIL</p> <p>12" 10YR 5/8, GRANULAR, FRIABLE SAND, ROOTS</p> <p>24" 10YR 6/2, GRANULAR, FRIABLE SAND, FEW ROOTS</p> <p>48" E.S.H.W.T.</p> <p>72" BOTTOM OF HOLE</p>	<p>0" TOPSOIL</p> <p>12" 10YR 5/8, GRANULAR, FRIABLE SAND, ROOTS</p> <p>24" 10YR 7/2, GRANULAR, FRIABLE SAND, FEW ROOTS</p> <p>10' BOTTOM OF HOLE</p>	<p>0" TOPSOIL</p> <p>8" 10YR 5/8, GRANULAR, FRIABLE LOAMY SAND, ROOTS</p> <p>14" 10YR 6/2, GRANULAR, FRIABLE SAND, ROOTS</p> <p>26" BURIED "A"</p> <p>30" 10YR 4/6, GRANULAR, FRIABLE SAND, FEW ROOTS</p> <p>48" 10YR 7/4, SAND,</p> <p>10' SHWT</p> <p>14' BOTTOM OF HOLE</p>	<p>0" TOPSOIL</p> <p>12" 10YR 5/8, GRANULAR, FRIABLE SAND, ROOTS</p> <p>20" 10YR 7/6, GRANULAR, FRIABLE SAND, FEW ROOTS TO 40"</p> <p>10' SHWT</p> <p>13' BOTTOM OF HOLE</p>	<p>0" TOPSOIL</p> <p>24" 10YR 5/8, GRANULAR, FRIABLE SAND, ROOTS</p> <p>32" 10YR 7/6, GRANULAR, FRIABLE SAND, FEW ROOTS TO 40"</p> <p>66" BOTTOM OF HOLE</p>	<p>0" TOPSOIL</p> <p>18" 10YR 5/8, GRANULAR, FRIABLE SAND, ROOTS</p> <p>36" 10YR 7/2, GRANULAR, FRIABLE SAND</p> <p>15' BOTTOM OF HOLE</p>	<p>0" TOPSOIL</p> <p>12" 10YR 5/8, GRANULAR, FRIABLE SAND, ROOTS</p> <p>24" 10YR 8/3, GRANULAR, FRIABLE SAND, FEW ROOTS</p> <p>60" BOTTOM OF HOLE</p>	<p>0" TOPSOIL</p> <p>12" 10YR 5/6, GRANULAR, FRIABLE SAND, ROOTS</p> <p>24" 10YR 8/3, GRANULAR, FRIABLE SAND, FEW ROOTS</p> <p>48" E.S.H.W.T.</p> <p>15' BOTTOM OF HOLE</p>	<p>0" TOPSOIL</p> <p>12" 10YR 5/8, GRANULAR, FRIABLE SAND, ROOTS</p> <p>24" 10YR 7/2, GRANULAR, FRIABLE SAND, FEW ROOTS</p> <p>16' BOTTOM OF HOLE</p>



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 TWO YEARS 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.

**CONSTRUCTION DETAILS**  
**BLUEBIRD SELF STORAGE**  
MAP 176 LOTS 21, 22 & 23  
196-202 CENTRAL STREET  
HUDSON, NEW HAMPSHIRE  
HILLSBOROUGH COUNTY

**OWNER OF RECORD:**  
RONALD CRAVEN TRUST  
c/o NANCY CRAVEN TRUST  
88 SPEARE ROAD  
HUDSON, NH 03051  
H.C.R.D. BK. 6079 PG. 1294

**APPLICANT:**  
BLUEBIRD SELF STORAGE LLC.  
125 OCEAN ROAD  
GREENLAND, NH 03840

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

No.	DATE	DESCRIPTION	BY
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DATE: DECEMBER 20, 2021			
PROJECT NO: 21-0709-3			
SCALE: N.T.S.			
SHEET 19 OF 23			



CULTEC RECHARGER® 150XLHD SPECIFICATIONS

GENERAL

CULTEC RECHARGER® 150XLHD CHAMBERS ARE DESIGNED FOR UNDERGROUND STORMWATER MANAGEMENT. THE CHAMBERS MAY BE USED FOR RETENTION, RECHARGING, DETENTION OR CONTROLLING THE FLOW OF ON-SITE STORMWATER RUNOFF.

CHAMBER PARAMETERS

1. THE CHAMBERS SHALL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE CHAMBER SHALL BE VACUUM THERMOFORMED OF HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE (HMWHDPE) WITH A BLACK INTERIOR AND BLUE EXTERIOR
3. THE CHAMBER SHALL BE ARCHED IN SHAPE.
4. THE CHAMBER SHALL BE OPEN-BOTTOMED.
5. THE CHAMBER SHALL BE JOINED USING AN INTERLOCKING OVERLAPPING RIB METHOD. CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS, HAVING NO SEPARATE COUPLINGS OR SEPARATE END WALLS.
6. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC RECHARGER 150XLHD SHALL BE 18.5 INCHES (470 mm) TALL, 33 INCHES (838 mm) WIDE AND 11 FEET (3.35 m) LONG. THE INSTALLED LENGTH OF A JOINED RECHARGER 150XLHD SHALL BE 10.25 FEET (3.12 m).
7. MAXIMUM INLET OPENING ON THE CHAMBER ENDWALL IS 12 INCHES (300 mm) HDPE OR 15" (375 mm) SMOOTH-WALL PVC.
8. THE CHAMBER SHALL HAVE TWO SIDE PORTALS TO ACCEPT CULTEC HVLV® FC-24 FEED CONNECTORS TO CREATE AN INTERNAL MANIFOLD. THE NOMINAL INSIDE DIMENSIONS OF EACH SIDE PORTAL SHALL BE 8.5 INCHES (216 mm) HIGH BY 12 INCHES (304 mm) WIDE. MAXIMUM ALLOWABLE OUTER DIAMETER (O.D.) PIPE SIZE IN THE SIDE PORTAL IS 10.25 INCHES (260 mm).
9. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV® FC-24 FEED CONNECTOR SHALL BE 12 INCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 24.2 INCHES (615 mm) LONG.
10. THE NOMINAL STORAGE VOLUME OF THE RECHARGER 150XLHD CHAMBER SHALL BE 2.650 FT³ / FT (0.246 m³ / m) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF A JOINED RECHARGER 150XLHD SHALL BE 27.16 FT³ / UNIT (0.77 m³ / UNIT) - WITHOUT STONE.
11. THE NOMINAL STORAGE VOLUME OF THE HVLV FC-24 FEED CONNECTOR SHALL BE 0.913 FT³ / FT (0.085 m³ / m) - WITHOUT STONE.
12. THE RECHARGER 150XLHD CHAMBER SHALL HAVE THIRTY DISCHARGE HOLES BORED INTO THE SIDEWALLS OF THE UNIT'S CORE TO PROMOTE LATERAL CONVEYANCE OF WATER.
13. THE RECHARGER 150XLHD CHAMBER SHALL HAVE 20 CORRUGATIONS.
14. THE ENDWALL OF THE CHAMBER, WHEN PRESENT, SHALL BE AN INTEGRAL PART OF THE CONTINUOUSLY FORMED UNIT. SEPARATE END PLATES CANNOT BE USED WITH THIS UNIT.
15. THE RECHARGER 150XLHD STAND ALONE UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING TWO FULLY FORMED INTEGRAL ENDWALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE ENDWALLS.
16. THE RECHARGER 150XLHD STARTER UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING ONE FULLY FORMED INTEGRAL ENDWALL AND ONE PARTIALLY FORMED INTEGRAL ENDWALL WITH A LOWER TRANSFER OPENING OF 10 INCHES (254 mm) HIGH X 20.5 INCHES (521 mm) WIDE.
17. THE RECHARGER 150XLHD INTERMEDIATE UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING ONE FULLY OPEN ENDWALL AND ONE PARTIALLY FORMED INTEGRAL ENDWALL WITH A LOWER TRANSFER OPENING OF 10 INCHES (254 mm) HIGH X 20.5 INCHES (521 mm) WIDE.
18. THE RECHARGER 150XLHD END UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING ONE FULLY FORMED INTEGRAL ENDWALL AND ONE FULLY OPEN END WALL AND HAVING NO SEPARATE END PLATES OR END WALLS.
19. THE HVLV® FC-24 FEED CONNECTOR MUST BE FORMED AS A WHOLE CHAMBER HAVING TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT SHALL FIT INTO THE SIDE PORTALS OF THE RECHARGER 150XLHD AND ACT AS CROSS FEED CONNECTIONS.
20. CHAMBERS MUST HAVE HORIZONTAL STIFFENING FLEX REDUCTION STEPS BETWEEN THE RIBS.
21. THE CHAMBER SHALL HAVE A RAISED INTEGRAL CAP AT THE TOP OF THE ARCH IN THE CENTER OF EACH UNIT TO BE USED AS AN OPTIONAL INSPECTION PORT OR CLEAN-OUT.
22. THE UNITS MAY BE TRIMMED TO CUSTOM LENGTHS BY CUTTING BACK TO ANY CORRUGATION.
23. THE CHAMBER SHALL BE MANUFACTURED IN AN ISO 9001:2008 CERTIFIED FACILITY.
24. THE CHAMBER SHALL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.
25. THE CHAMBER SHALL BE DESIGNED AND MANUFACTURED TO MEET THE MATERIAL AND STRUCTURAL REQUIREMENTS OF IAPMO PS 63-2019, INCLUDING RESISTANCE TO AASHTO H-10 AND H-20 HIGHWAY LIVE LOADS, WHEN INSTALLED IN ACCORDANCE WITH CULTEC'S INSTALLATION INSTRUCTIONS.
26. THE CHAMBER SHALL BE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH THE SPECIFICATION OF NSAI IRISH AGREEMENT BOARD CERTIFICATE FOR CULTEC ATTENUATION AND INFILTRATION.
27. MAXIMUM ALLOWED COVER OVER TOP OF UNIT SHALL BE 12 FEET (3.65 m).

CULTEC RECHARGER® 330XLHD PRODUCT SPECIFICATIONS

GENERAL

CULTEC RECHARGER 330XLHD CHAMBERS ARE DESIGNED FOR UNDERGROUND STORMWATER MANAGEMENT. THE CHAMBERS MAY BE USED FOR RETENTION, RECHARGING, DETENTION OR CONTROLLING THE FLOW OF ON-SITE STORMWATER RUNOFF.

CHAMBER PARAMETERS

1. THE CHAMBERS SHALL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT. USA. (203-775-4416 OR 1-800-428-5832)
2. THE CHAMBER SHALL BE VACUUM THERMOFORMED OF HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE (HMWHDPE) WITH A BLACK INTERIOR AND BLUE EXTERIOR.
3. THE CHAMBER SHALL BE ARCHED IN SHAPE.
4. THE CHAMBER SHALL BE OPEN-BOTTOMED.
5. THE CHAMBER SHALL BE JOINED USING AN INTERLOCKING OVERLAPPING RIB METHOD. CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS, HAVING NO SEPARATE COUPLINGS OR SEPARATE END WALLS.
6. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC RECHARGER 330XLHD SHALL BE 30.5 INCHES (775 mm) TALL, 52 INCHES (1321 mm) WIDE AND 8.5 FEET (2.59 m) LONG. THE INSTALLED LENGTH OF A JOINED RECHARGER 330XLHD SHALL BE 7 FEET (2.13 m).
7. MAXIMUM INLET OPENING ON THE CHAMBER ENDWALL IS 24 INCHES (600 mm) HDPE.
8. THE CHAMBER SHALL HAVE TWO SIDE PORTALS TO ACCEPT CULTEC HVLV® FC-24 FEED CONNECTORS TO CREATE AN INTERNAL MANIFOLD. THE NOMINAL DIMENSIONS OF EACH SIDE PORTAL SHALL BE 10.5 INCHES (267 mm) HIGH BY 11.5 INCHES (292 mm) WIDE. MAXIMUM ALLOWABLE OUTER DIAMETER (O.D.) PIPE SIZE IN THE SIDE PORTAL IS 11.75 INCHES (298 mm).
9. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV FC-24 FEED CONNECTOR SHALL BE 12 INCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 24.2 INCHES (614 mm) LONG.
10. THE NOMINAL STORAGE VOLUME OF THE RECHARGER 330XLHD CHAMBER SHALL BE 7.459 FT³ / FT (0.693 m³ / m) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF A JOINED RECHARGER 330XLHD SHALL BE 52.213 FT³ / UNIT (1.478 m³ / UNIT) - WITHOUT STONE.
11. THE NOMINAL STORAGE VOLUME OF THE HVLV FC-24 FEED CONNECTOR SHALL BE 0.913 FT³ / FT (0.085 m³ / m) - WITHOUT STONE.
12. THE RECHARGER 330XLHD CHAMBER SHALL HAVE FIFTY-SIX DISCHARGE HOLES BORED INTO THE SIDEWALLS OF THE UNIT'S CORE TO PROMOTE LATERAL CONVEYANCE OF WATER.
13. THE RECHARGER 330XLHD CHAMBER SHALL HAVE 16 CORRUGATIONS.
14. THE ENDWALL OF THE CHAMBER, WHEN PRESENT, SHALL BE AN INTEGRAL PART OF THE CONTINUOUSLY FORMED UNIT. SEPARATE END PLATES CANNOT BE USED WITH THIS UNIT.
15. THE RECHARGER 330XLHD STAND ALONE UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING TWO FULLY FORMED INTEGRAL ENDWALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS.
16. THE RECHARGER 330XLHD STARTER UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING ONE FULLY FORMED INTEGRAL ENDWALL AND ONE PARTIALLY FORMED INTEGRAL ENDWALL WITH A LOWER TRANSFER OPENING OF 14 INCHES (356 mm) HIGH X 34.5 INCHES (876 mm) WIDE.
17. THE RECHARGER 330XLHD INTERMEDIATE UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING ONE FULLY OPEN ENDWALL AND ONE PARTIALLY FORMED INTEGRAL ENDWALL WITH A LOWER TRANSFER OPENING OF 14 INCHES (356 mm) HIGH X 34.5 INCHES (876 mm) WIDE.
18. THE RECHARGER 330XLHD END UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING ONE FULLY FORMED INTEGRAL ENDWALL AND ONE FULLY OPEN END WALL AND HAVING NO SEPARATE END PLATES OR END WALLS.
19. THE HVLV FC-24 FEED CONNECTOR MUST BE FORMED AS A WHOLE CHAMBER HAVING TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT SHALL FIT INTO THE SIDE PORTALS OF THE RECHARGER 330XLHD AND ACT AS CROSS FEED CONNECTIONS.
20. CHAMBERS MUST HAVE HORIZONTAL STIFFENING FLEX REDUCTION STEPS BETWEEN THE RIBS.
21. THE CHAMBER SHALL HAVE A 6 INCH (152 mm) DIAMETER RAISED INTEGRAL CAP AT THE TOP OF THE ARCH IN THE CENTER OF EACH UNIT TO BE USED AS AN OPTIONAL INSPECTION PORT OR CLEAN-OUT.
22. THE UNITS MAY BE TRIMMED TO CUSTOM LENGTHS BY CUTTING BACK TO ANY CORRUGATION.
23. THE CHAMBER SHALL BE MANUFACTURED IN AN ISO 9001:2015 CERTIFIED FACILITY.
24. THE CHAMBER SHALL BE DESIGNED AND MANUFACTURED TO MEET THE MATERIAL AND STRUCTURAL REQUIREMENTS OF IAPMO PS 63-2019, INCLUDING RESISTANCE TO AASHTO H-10 AND H-20 HIGHWAY LIVE LOADS, WHEN INSTALLED IN ACCORDANCE WITH CULTEC'S INSTALLATION INSTRUCTIONS.
25. THE CHAMBER SHALL BE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH THE SPECIFICATIONS OF NSAI IRISH AGREEMENT BOARD CERTIFICATE FOR CULTEC ATTENUATION AND INFILTRATION.
26. MAXIMUM ALLOWED COVER OVER TOP OF UNIT SHALL BE 12 FEET (3.66 m).
27. THE CHAMBER SHALL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.

CULTEC HVLV FC-24 FEED CONNECTOR PRODUCT SPECIFICATIONS

GENERAL

CULTEC HVLV FC-24 FEED CONNECTORS ARE DESIGNED TO CREATE AN INTERNAL MANIFOLD FOR CULTEC RECHARGER MODEL 330XLHD STORMWATER CHAMBERS.

CHAMBER PARAMETERS

1. THE CHAMBERS SHALL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE CHAMBER SHALL BE VACUUM THERMOFORMED OF HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE (HMWHDPE) WITH A BLACK INTERIOR AND BLUE EXTERIOR.
3. THE CHAMBER SHALL BE ARCHED IN SHAPE.
4. THE CHAMBER SHALL BE OPEN-BOTTOMED.
5. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV FC-24 FEED CONNECTOR SHALL BE 12 INCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 24.2 INCHES (614 mm) LONG.
6. THE NOMINAL STORAGE VOLUME OF THE HVLV FC-24 FEED CONNECTOR SHALL BE 0.913 FT³ / FT (0.085 m³ / m) - WITHOUT STONE.
7. THE HVLV FC-24 FEED CONNECTOR CHAMBER SHALL HAVE 2 CORRUGATIONS.
8. THE HVLV FC-24 FEED CONNECTOR MUST BE FORMED AS A WHOLE CHAMBER HAVING TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT SHALL FIT INTO THE SIDE PORTALS OF THE CULTEC RECHARGER STORMWATER CHAMBER AND ACT AS CROSS FEED CONNECTIONS CREATING AN INTERNAL MANIFOLD.
9. THE CHAMBER SHALL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.
10. THE CHAMBER SHALL BE MANUFACTURED IN AN ISO 9001:2015 CERTIFIED FACILITY.

CULTEC NO. 410™ NON-WOVEN GEOTEXTILE

CULTEC NO. 410™ NON-WOVEN GEOTEXTILE MAY BE USED WITH CULTEC CONTACTOR® AND RECHARGER® STORMWATER INSTALLATIONS TO PROVIDE A BARRIER THAT PREVENTS SOIL INTRUSION INTO THE STONE.

GEOTEXTILE PARAMETERS

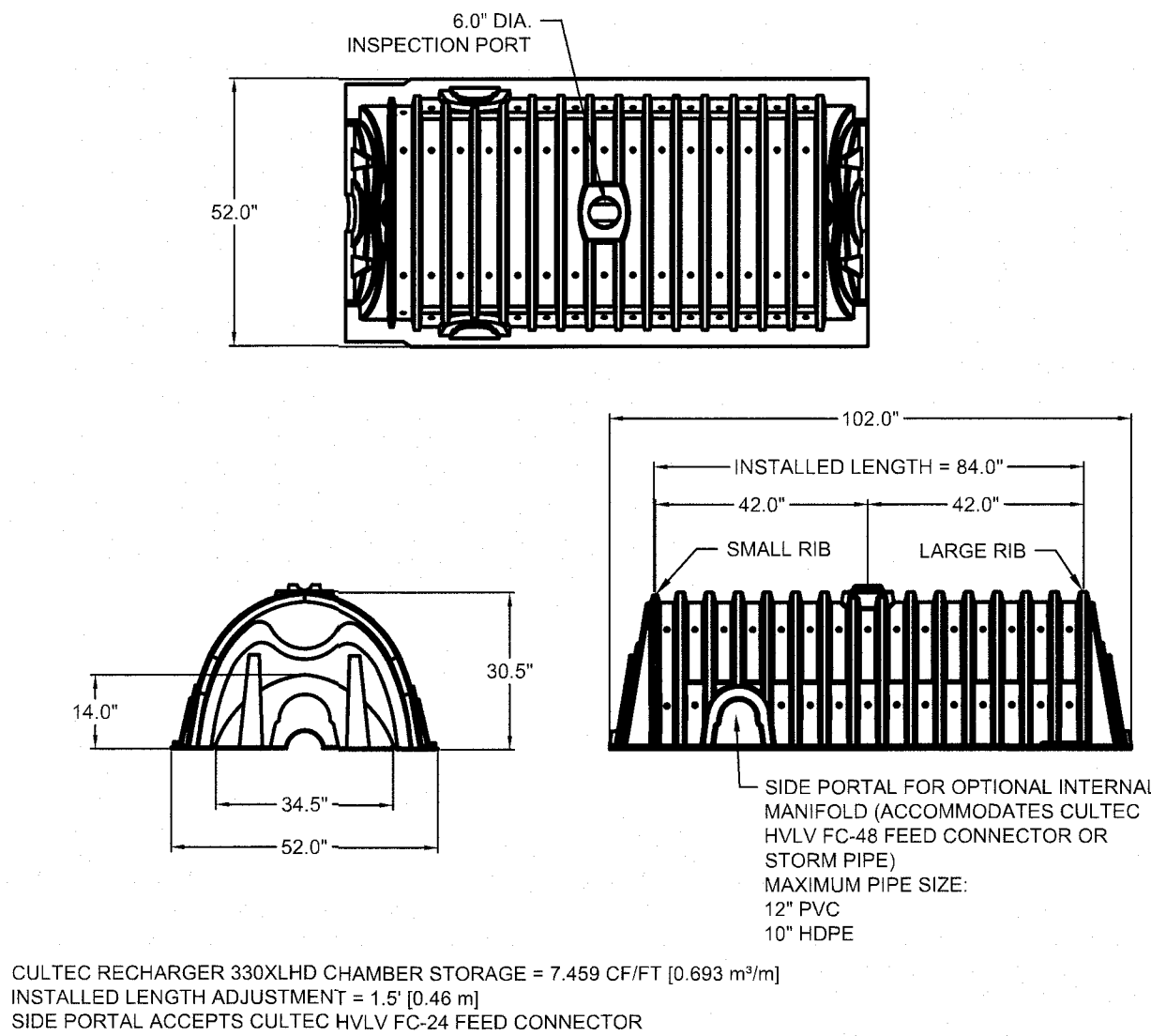
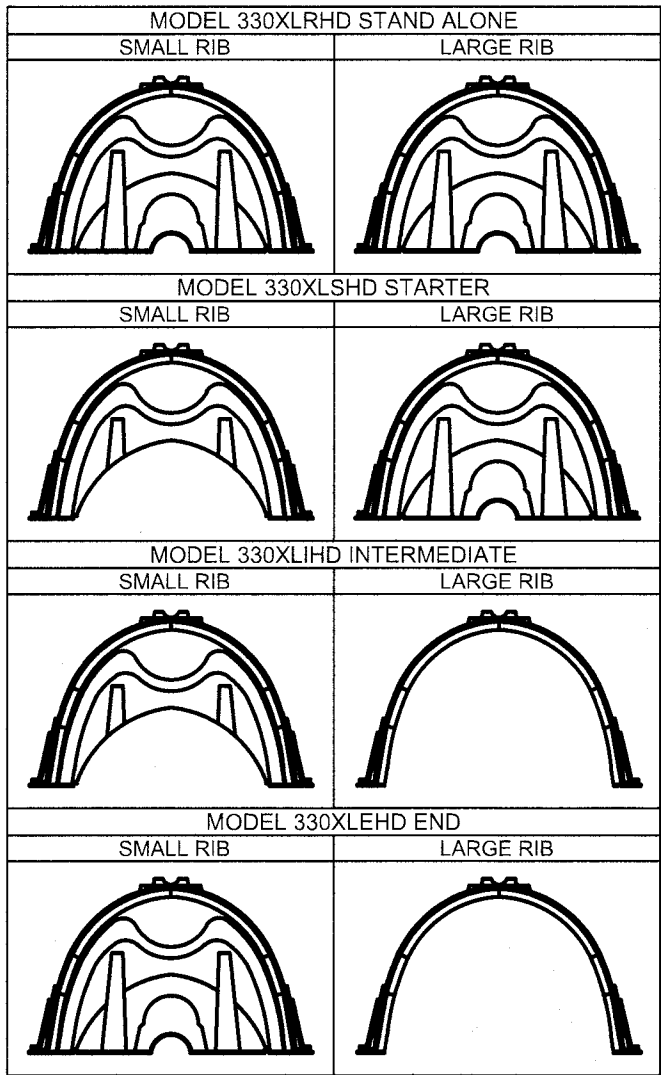
1. THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE.
3. THE GEOTEXTILE SHALL HAVE A TYPICAL WEIGHT OF 4.5 OZ/SY (142 G/M).
4. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH VALUE OF 120 LBS (533 N) PER ASTM D4632 TESTING METHOD.
5. THE GEOTEXTILE SHALL HAVE AN ELONGATION @ BREAK VALUE OF 50% PER ASTM D4632 TESTING METHOD.
6. THE GEOTEXTILE SHALL HAVE A MULLEN BURST VALUE OF 225 PSI (1551 KPA) PER ASTM D3786 TESTING METHOD.
7. THE GEOTEXTILE SHALL HAVE A PUNCTURE STRENGTH VALUE OF 65 LBS (289 N) PER ASTM D4833 TESTING METHOD.
8. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE VALUE OF 340 LBS (1513 N) PER ASTM D6241 TESTING METHOD.
9. THE GEOTEXTILE SHALL HAVE A TRAPEZOID TEAR VALUE OF 50 LBS (222 N) PER ASTM D4533 TESTING METHOD.
10. THE GEOTEXTILE SHALL HAVE A AOS VALUE OF 70 U.S. SIEVE (0.212 MM) PER ASTM D4751 TESTING METHOD.
11. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY VALUE OF 1.7 SEC-1 PER ASTM D4491 TESTING METHOD.
12. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATE VALUE OF 135 GAL/MIN/SF (5500 L/MIN/SM) PER ASTM D4491 TESTING METHOD.
13. THE GEOTEXTILE SHALL HAVE A UV STABILITY @ 500 HOURS VALUE OF 70% PER ASTM D4355 TESTING METHOD.

CULTEC NO. 4800™ WOVEN GEOTEXTILE

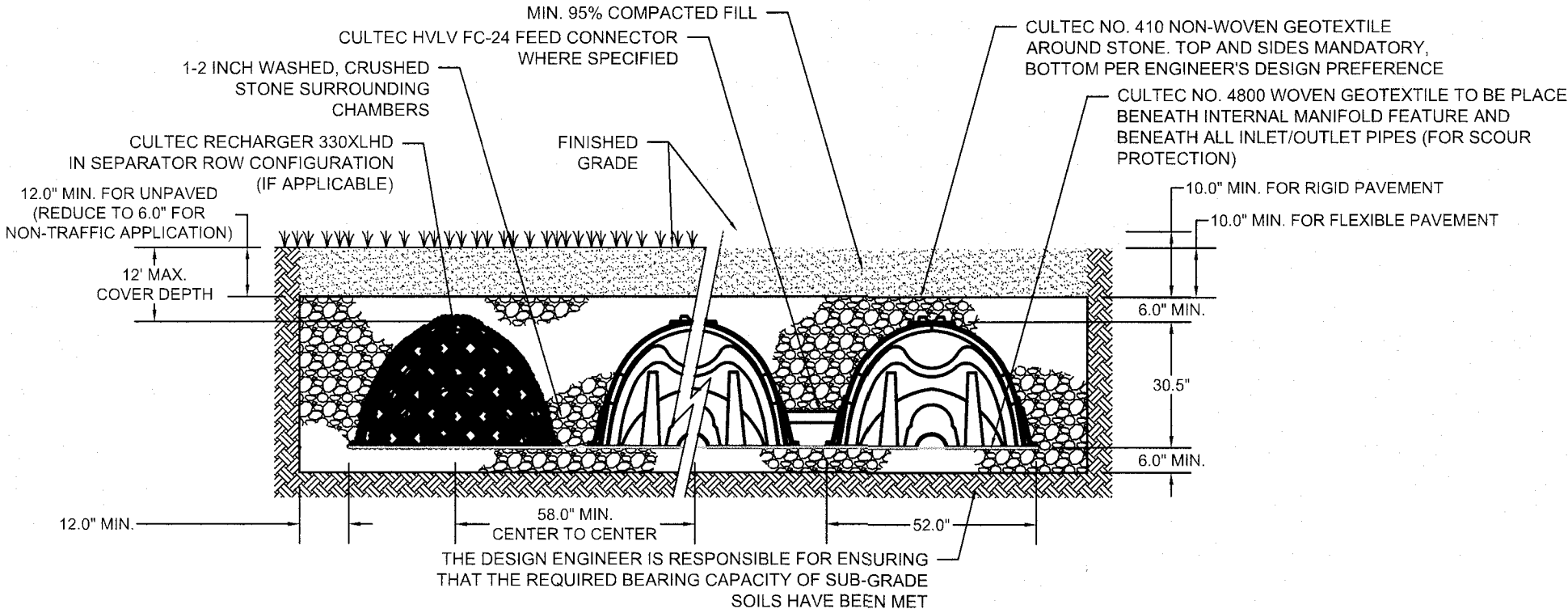
CULTEC NO. 4800 WOVEN GEOTEXTILE IS DESIGNED AS A UNDERLAYMENT TO PREVENT SCOURING CAUSED BY WATER MOVEMENT WITHIN THE CULTEC CHAMBERS AND FEED CONNECTORS UTILIZING THE CULTEC MANIFOLD FEATURE. IT MAY ALSO BE USED AS A COMPONENT OF THE CULTEC SEPARATOR ROW TO ACT AS A BARRIER TO PREVENT SOIL/CONTAMINANT INTRUSION INTO THE STONE WHILE ALLOWING FOR MAINTENANCE.

GEOTEXTILE PARAMETERS

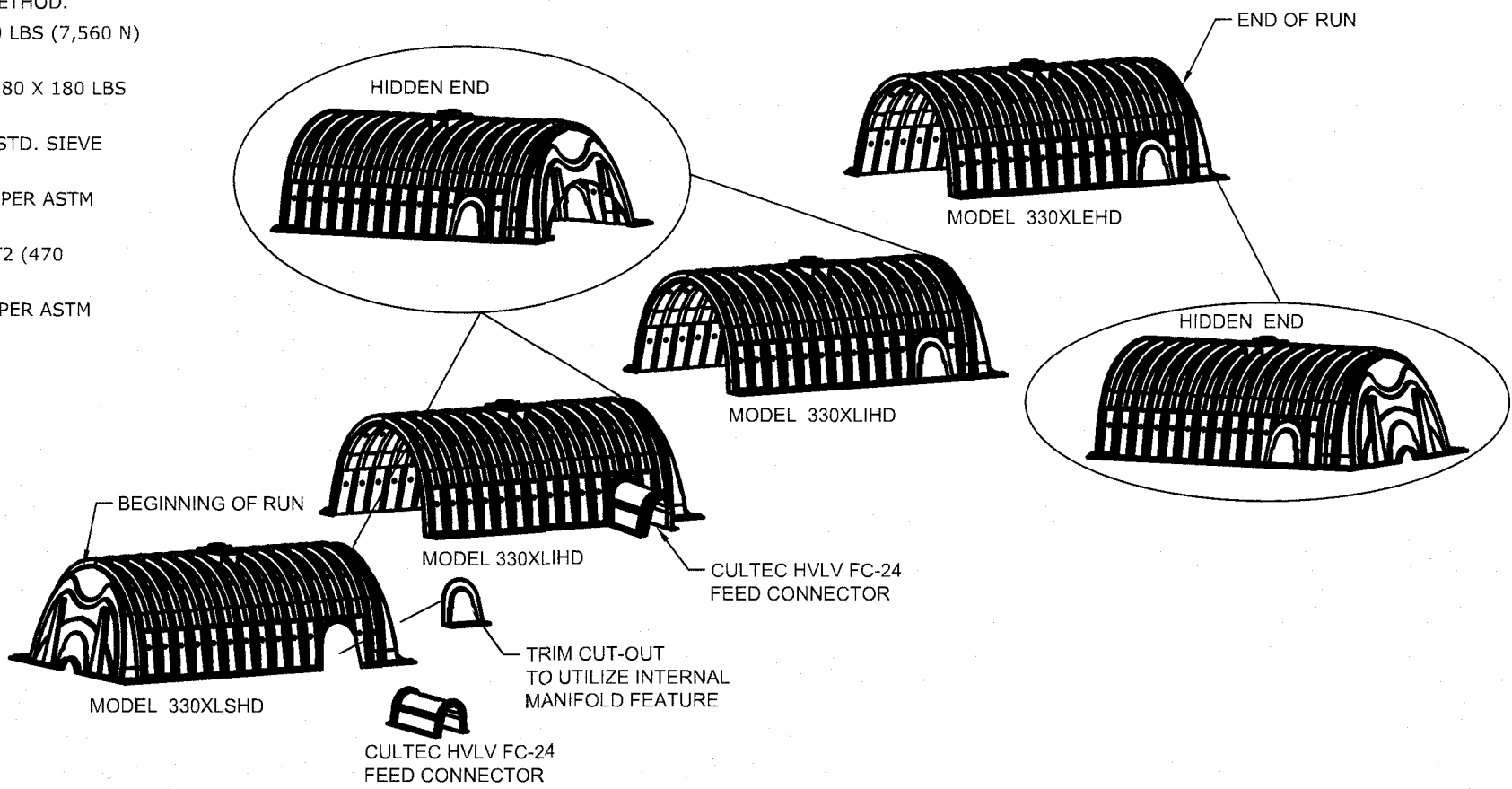
1. THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE.
3. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH OF 550 X 550 LBS (2,448 X 2,448 N) PER ASTM D4632 TESTING METHOD.
4. THE GEOTEXTILE SHALL HAVE A ELONGATION @ BREAK RESISTANCE OF 20 X 20% PER ASTM D4632 TESTING METHOD.
5. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE OF 5,070 X 5,070 LBS/FT (74 X 74 KN/M) PER ASTM D4595 TESTING METHOD.
6. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 2% STRAIN OF 960 X 1,096 LBS/FT (14 X 16 KN/M) PER ASTM D4595 TESTING METHOD.
7. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 5% STRAIN OF 2,740 X 2,740 LBS/FT (40 X 40 KN/M) PER ASTM D4595 TESTING METHOD.
8. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 10% STRAIN OF 4,800 X 4,800 LBS/FT (70 X 70 KN/M) PER ASTM D4595 TESTING METHOD.
9. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE RESISTANCE OF 1,700 LBS (7,560 N) PER ASTM D6241 TESTING METHOD.
10. THE GEOTEXTILE SHALL HAVE A TRAPEZOIDAL TEAR RESISTANCE OF 180 X 180 LBS (801 X 801 N) PER ASTM D4533 TESTING METHOD.
11. THE GEOTEXTILE SHALL HAVE AN APPARENT OPENING SIZE OF 40 US STD. SIEVE (0.425 MM) PER ASTM D4751 TESTING METHOD.
12. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY RATING OF 0.15 SEC-1 PER ASTM D4491 TESTING METHOD.
13. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATING OF 11.5 GPM/FT² (470 LPM/M²) PER ASTM D4491 TESTING METHOD.
14. THE GEOTEXTILE SHALL HAVE A UV RESISTANCE OF 80% @ 500 HRS. PER ASTM D4355 TESTING METHOD.



CULTEC RECHARGER 330XLHD HEAVY DUTY THREE VIEW DETAIL  
NOT TO SCALE



CULTEC RECHARGER 330XLHD HEAVY DUTY CROSS SECTION DETAIL  
NOT TO SCALE



CULTEC RECHARGER 330XLHD HEAVY DUTY TYPICAL INTERLOCK DETAIL  
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: \_\_\_\_\_

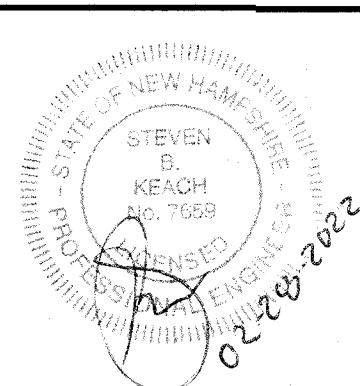
SITE PLANS ARE VALID FOR TWO YEARS FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

CONSTRUCTION DETAILS  
**BLUEBIRD SELF STORAGE**  
MAP 176 LOTS 21, 22 & 23  
196-202 CENTRAL STREET  
HUDSON, NEW HAMPSHIRE  
HILLSBOROUGH COUNTY

**OWNER OF RECORD:**  
RONALD CRAVEN TRUST  
c/o NANCY CRAVEN TRUST  
88 SPEARE ROAD  
HUDSON, NH 03051  
H.C.R.D. BK. 6079 PG. 1294

**APPLICANT:**  
BLUEBIRD SELF STORAGE LLC.  
125 OCEAN ROAD  
GREENLAND, NH 03840

**KM 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	01-21-2022	REVISED GRADING/DRAINAGE PER CLIENT	BES
2	02-14-2022	REVISED PER REVIEW COMMENTS	BES
3	02-21-2022	REVISED PER TOWN COMMENTS	BES
4	02-28-2022	REVISED PER TOWN COMMENTS	BES
DATE: DECEMBER 20, 2021			SCALE: N.T.S.
PROJECT NO: 21-0709-3			SHEET 20 OF 23



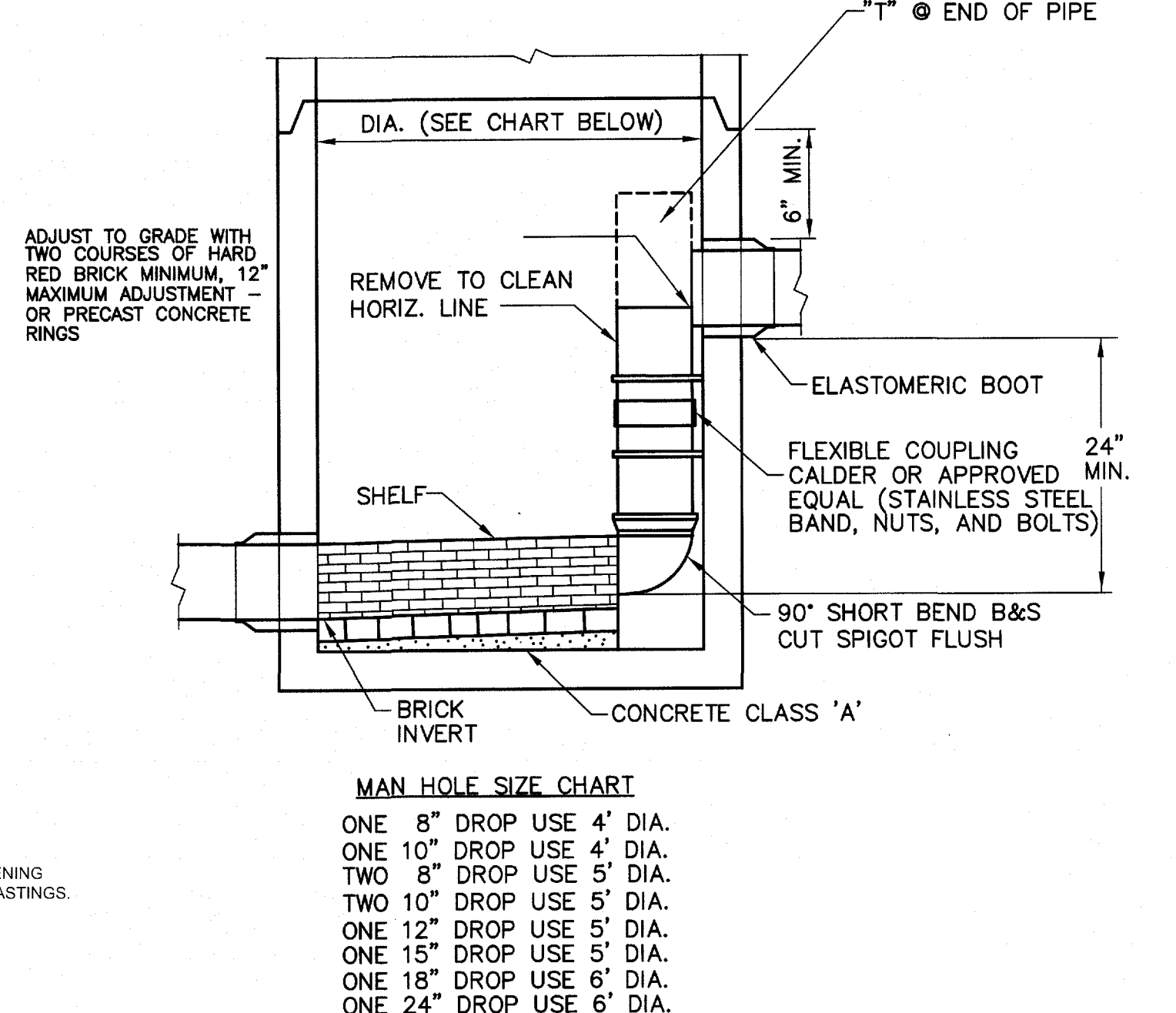
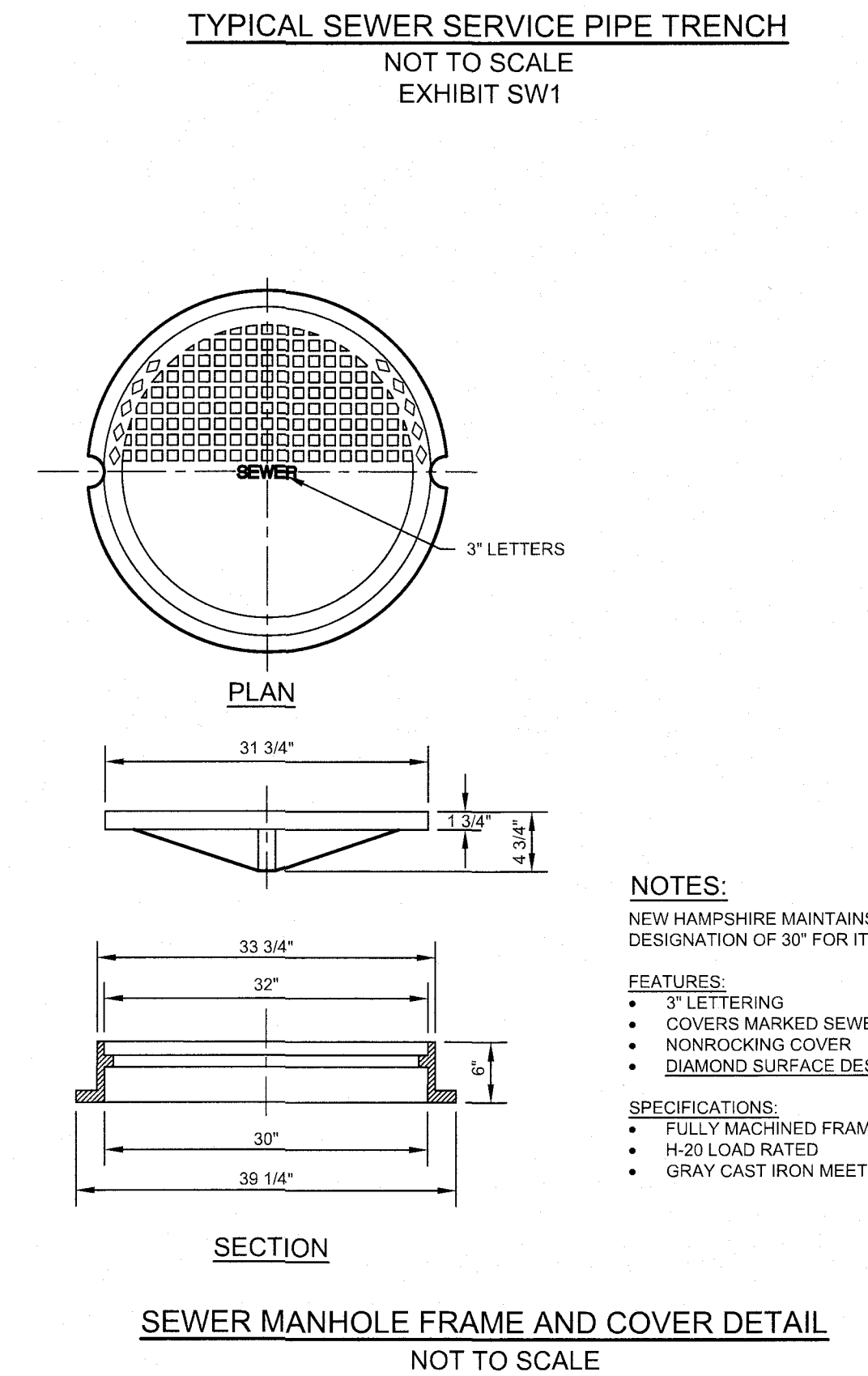
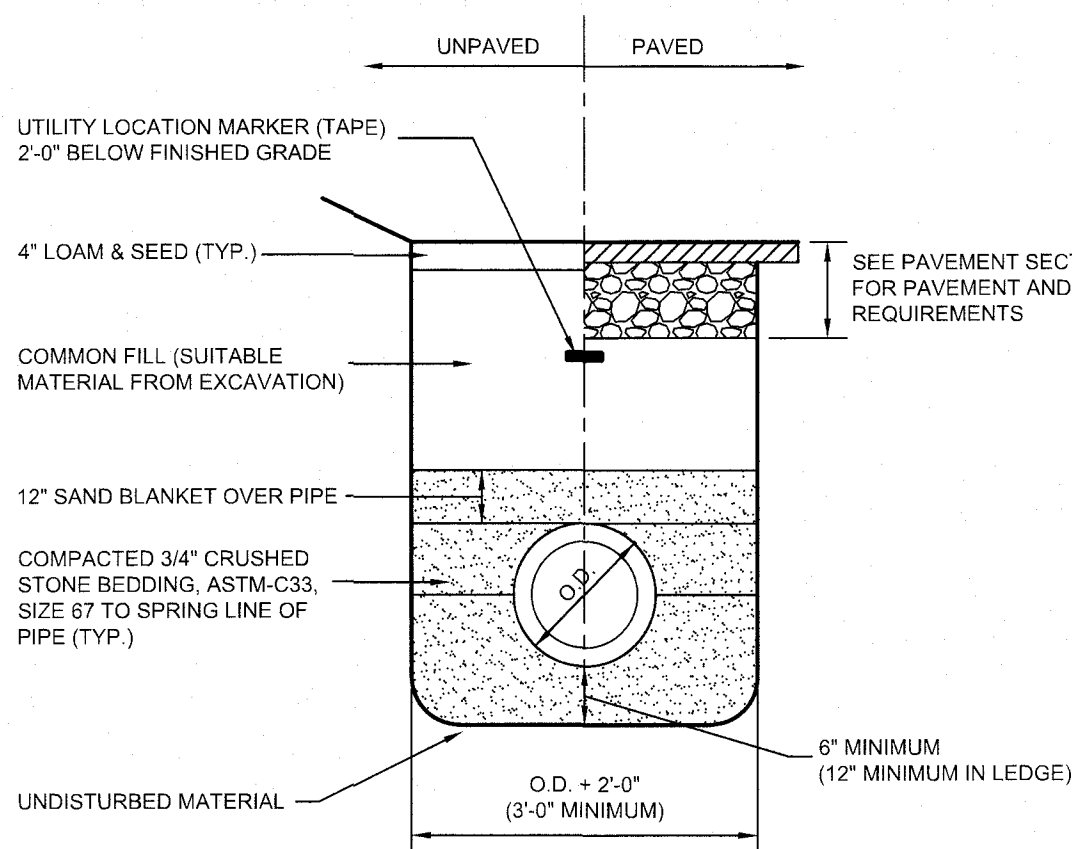
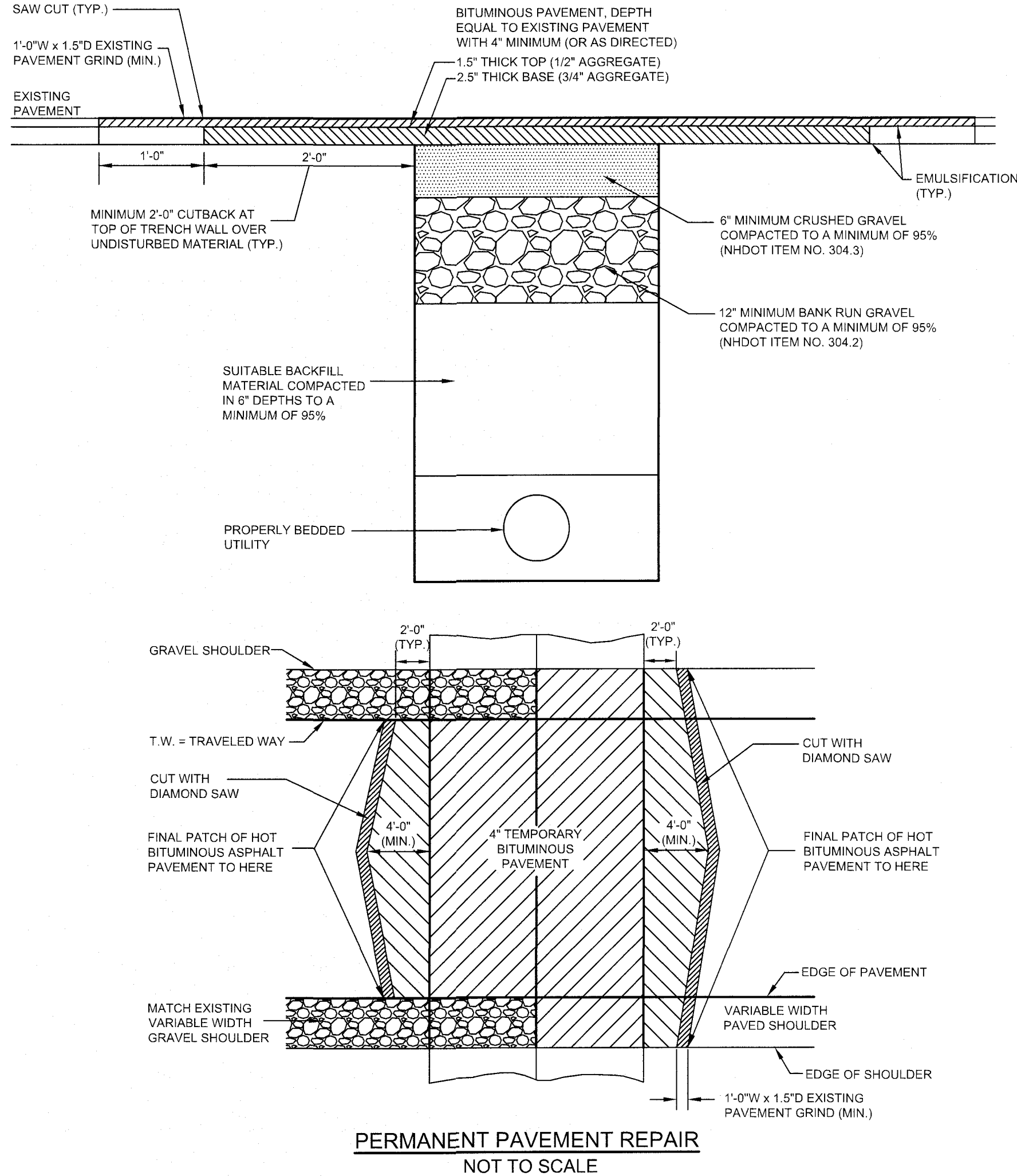
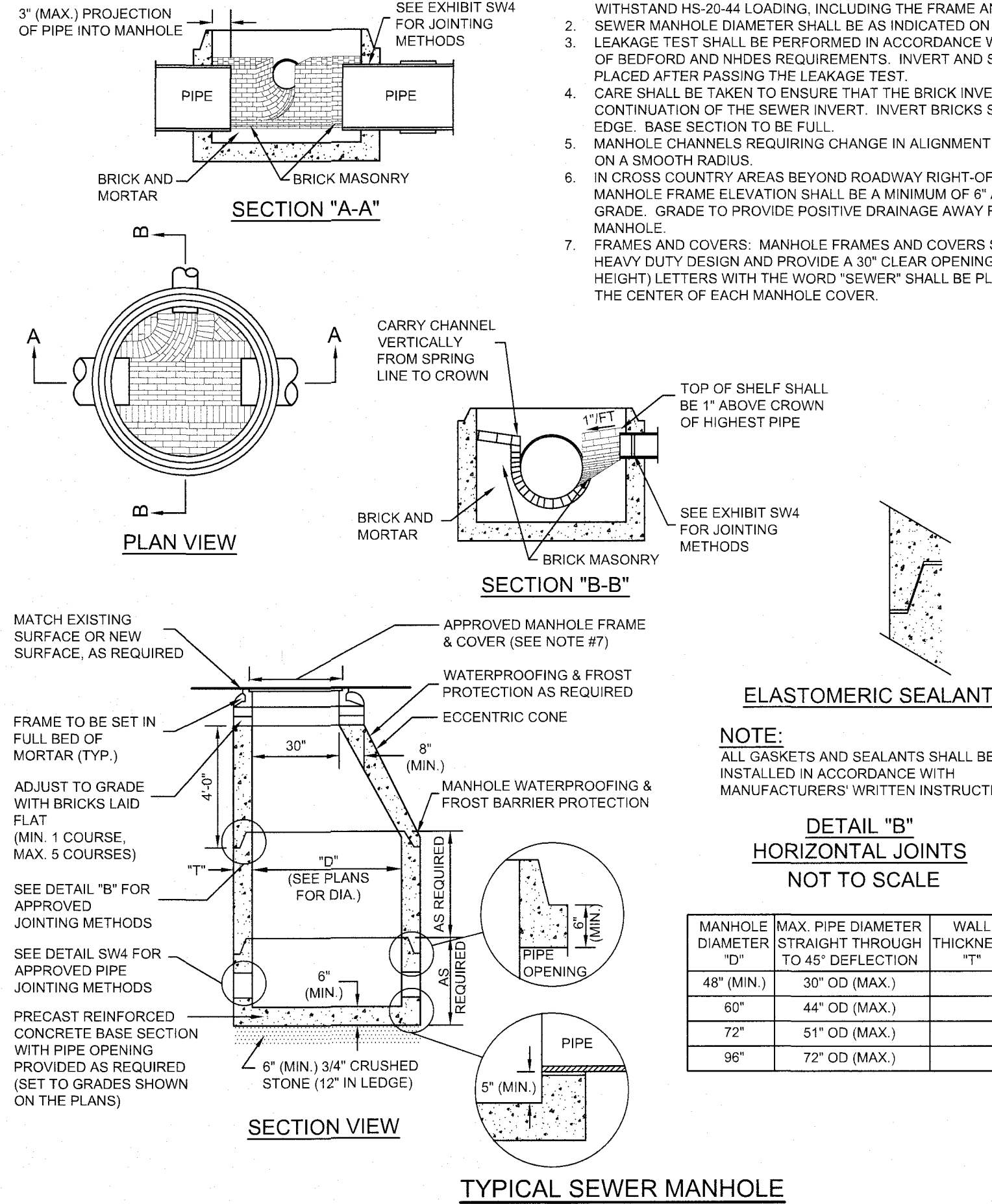
NOTES:

1. MINIMUM SIZE PIPE FOR HOUSE SERVICE SHALL BE 4 INCHES. MINIMUM SIZE FOR STREET SEWER LINES SHALL BE 8 INCHES.
2. PIPE AND JOINT MATERIALS:
  - A. DUCTILE IRON PIPE AND FITTINGS SHALL CONFORM TO THE FOLLOWING STANDARDS OF THE AMERICAN WATER WORKS ASSOCIATION (AWWA):
    1. AWWA C151/A21.51-02 - FOR DUCTILE IRON PIPE, CENTRIFUGALLY CAST IN METAL OR SAND LINED MOLDS, FOR WATER OR OTHER LIQUIDS.
    2. AWWA C150/A21.50-02 - FOR THICKNESS DESIGN OF DUCTILE IRON PIPE AND WITH ASTM A536-84 (2004) DUCTILE IRON CASTINGS.
    3. JOINTS SHALL BE MECHANICAL, PUSH-ON OR BALL-AND-SOCKET TYPE.
  - B. PLASTIC GRAVITY SEWER PIPE AND FITTINGS SHALL COMPLY WITH THE FOLLOWING STANDARDS:
    1. ASTM D3034-04A - PVC, SOLID WALL.
    2. AT LEAST 48 PSI AT 5% PIPE DIAMETER DEFLECTION, AS MEASURED IN ACCORDANCE WITH ASTM D2414-02 DURING MANUFACTURING, AND
    3. JOINT SEALS FOR PVC PIPE SHALL BE OIL RESISTANT COMPRESSION RINGS OF ELASTOMERIC MATERIAL CONFORMING TO ASTM D3212-96A(2003)E1 AND SHALL BE PUSH-ON OR BELL-AND-SPIGOT TYPE.
3. DAMAGED PIPE SHALL BE REJECTED AND REMOVED FROM THE JOB SITE.
4. JOINTS SHALL BE DEPENDENT UPON PROPER MATERIALS (SEE NOTE #2) FOR WATER TIGHTNESS, AND ALL JOINTS SHALL BE PROPERLY MATCHED WITH THE PIPE MATERIALS USED. WHERE DIFFERING MATERIALS ARE TO BE CONNECTED, AS AT THE STREET SEWER WYE OR AT THE FOUNDATION WALL, APPROPRIATE MANUFACTURED ADAPTERS SHALL BE USED.
5. SERVICE CONNECTIONS SHALL USE SANITARY TEE OR WYE FITTINGS FOR ALL NEW CONSTRUCTION. THE CENTERLINE OF ALL BUILDING CONNECTIONS SHALL ENTER THE TOP HALF OF THE SEWER. ANY SERVICE CONNECTION WITH A VERTICAL RISE UP TO 4 FEET MAY HAVE THE SEWER FITTING SET VERTICALLY. ANY SERVICE CONNECTION WITH A VERTICAL RISE UP TO 12 FEET SHALL EMPLOY NON-ENGAGED RISERS THAT PROTECT AGAINST PIPE PENETRATION OR FAILURE AT THE FITTING BY THE USE OF BELL-ON-BELL CONNECTIONS. FOR EXISTING SEWER WHERE FITTINGS CANNOT BE INSTALLED, SADDLE CONNECTIONS SHALL BE USED. PRESSURE SEWERAGE SHALL HAVE AN ISOLATION VALVE OR CURB STOP VALVE INSTALLED AT THE PROPERTY LINE. IF A CHECK VALVE IS USED AT THE PROPERTY LINE, THE VALVE SHALL BE INSTALLED WITHIN A VAULT TO FACILITATE MAINTENANCE. ROOF DOWNSPOUTS, EXTERIOR OR INTERIOR FOUNDATION DRAINS, SUMP PUMPS OR OTHER SOURCE OF SURFACE WATER RUN-OFF OR GROUND WATER SHALL NOT BE DIRECTLY OR INDIRECTLY CONNECTED TO A PUBLIC SEWER.
6. PIPE INSTALLATION:
  - A. THE PIPE SHALL BE HANDLED, PLACED AND JOINTED IN ACCORDANCE WITH INSTALLATION GUIDES OF THE APPROPRIATE MANUFACTURER.
  - B. PIPES SHALL BE CAREFULLY BEDDED ON A 4 INCH LAYER OF CRUSHED STONE AND/OR GRAVEL.
  - C. BEDDING AND RE-FILL, FOR A DEPTH OF 12 INCHES ABOVE THE TOP OF THE PIPE, SHALL BE CAREFULLY AND THOROUGHLY TAMPED BY HAND OR WITH THE APPROPRIATE MECHANICAL DEVICES.
  - D. THE PIPE SHALL BE LAID AT A CONTINUOUS AND CONSTANT GRADE FROM THE STREET SEWER CONNECTION TO THE HOUSE FOUNDATION AT A GRADE OF NOT LESS THAN 1/8 INCH PER FOOT.
  - E. PIPE JOINTS MUST BE MADE UNDER DRY CONDITIONS. IF WATER IS PRESENT, ALL NECESSARY STEPS SHALL BE TAKEN TO DEWATER THE TRENCH.

7. TESTING: THE COMPLETED HOUSE SEWER SHALL BE SUBJECTED TO A LEAKAGE TEST IN ANY OF THE FOLLOWING MANNERS: (PRIOR TO BACKFILLING)
  - A. AN OBSERVATION TEE SHALL BE INSTALLED AS SHOWN AND WHEN READY FOR TESTING, AN INFLATABLE BLADDER OR PLUG SHALL BE INSERTED JUST UPSTREAM FROM THE OPENING IN THE TEE. AFTER INFLATION, WATER SHALL BE INTRODUCED INTO THE SYSTEM ABOVE THE PLUG TO A HEIGHT OF 5 FEET ABOVE THE LEVEL OF THE PLUG.
  - B. THE PIPE SHALL BE LEFT EXPOSED AND LIBERALLY HOSED WITH WATER TO SIMULATE, AS NEARLY AS POSSIBLE, WET TRENCH CONDITIONS OR, IF THE TRENCH IS WET, THE GROUND WATER SHALL BE PERMITTED TO RISE IN THE TRENCH OVER THE PIPE. OBSERVATION FOR LEAKS SHALL BE MADE THROUGH THE CLEAN OUT WITH A FLASHLIGHT.
  - C. DRY FLUORESCENCE DYE SHALL BE SPRINKLED INTO THE TRENCH OVER THE PIPE. IF THE TRENCH IS DRY, THE PIPE SHALL BE LIBERALLY HOSED WITH WATER, OR IF THE TRENCH IS WET, GROUND WATER SHALL BE PERMITTED TO RISE IN THE TRENCH OVER THE PIPE. OBSERVATION FOR LEAKS SHALL BE MADE IN THE FIRST DOWNSTREAM MANHOLE.
  - D. LEAKAGE OBSERVED IN ANY OF THE ABOVE TESTS SHALL BE CAUSE FOR NON-ACCEPTANCE AND THE PIPE SHALL BE DUG-UP, IF NECESSARY, AND RE-LAID SO AS TO ASSURE WATER TIGHTNESS.
8. ILLEGAL CONNECTIONS: NOTHING BUT SANITARY WASTE FLOW FROM TOILETS, SINKS, LAUNDRY, ETC. SHALL BE PERMITTED. ROOF LEADERS, FOOTING DRAINS, SUMP PUMPS OR ANY OTHER SIMILAR CONNECTION CARRYING RAIN WATER, DRAINAGE OR GROUND WATER, SHALL NOT BE PERMITTED.
9. WATER SERVICE SHALL NOT BE LAID IN THE SAME TRENCH AS THE SEWER SERVICE, UNLESS NECESSARY AND APPROVED BY THE A.H.J. WHEN NECESSARY, THE WATER SERVICE SHALL BE PLACED ABOVE AND TO ONE SIDE OF THE SEWER SERVICE, AS SHOWN.
10. LOCATION: THE LOCATION OF THE WYE SHALL BE RECORDED AND FILED IN THE MUNICIPAL RECORDS. IN ADDITION, A FERROUS MATERIAL, ROD OR PIPE SHALL BE PLACED OVER THE WYE TO AID IN LOCATING THE BURIED PIPE WITH A DIP NEEDLE OR PIPE FINDER.
11. CHIMNEY CONNECTIONS ARE ONLY PERMITTED IF ALLOWED BY THE A.H.J. ANY VERTICAL RISE GREATER THAN 4 FEET SHALL BE PROVIDED WITH ADDED SUPPORT BY ENCASING THE FITTING AND RISER IN A PRECAST CONCRETE CHIMNEY. UP TO 12 FEET OF VERTICAL RISE CAN ALSO BE SECURED BY PROPER MEANS AS LONG AS IT CONSISTS OF A BELL-ON-BELL CONNECTION PROPERLY PROTECTED AGAINST PIPE PENETRATION AND IF IT IS ALLOWED BY THE A.H.J.
12. UNLESS OTHERWISE NOTED, ALL GRANULAR MATERIAL SHALL BE PLACED IN 12" MAXIMUM LIFTS AND COMPACTED TO 95% OF THE MODIFIED PROCTOR TEST DENSITY.

NOTES:

1. IT IS THE INTENTION THAT THE MANHOLE, INCLUDING ALL COMPONENT PARTS, HAVE ADEQUATE SPACE, STRENGTH AND LEAKPROOF QUALITIES CONSIDERED NECESSARY FOR THE INTENDED SERVICE. SPACE REQUIREMENTS AND CONFIGURATIONS SHALL BE AS SHOWN ON THE DRAWING. MANHOLES SHALL BE AN ASSEMBLY OF PRECAST SECTIONS, WITH STEEL REINFORCEMENT AND ADEQUATE JOINTING. THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND HS-20-44 LOADING, INCLUDING THE FRAME AND COVER.
2. SEWER MANHOLE DIAMETER SHALL BE AS INDICATED ON THE PLANS.
3. LEAKAGE TEST SHALL BE PERFORMED IN ACCORDANCE WITH THE TOWN OF BEDFORD AND WHDES REQUIREMENTS. INVERT AND SHELF TO BE PLACED AFTER PASSING THE LEAKAGE TEST.
4. CARE SHALL BE TAKEN TO ENSURE THAT THE BRICK INVERT IS A SMOOTH CONTINUATION OF THE SEWER INVERT. INVERT BRICKS SHALL BE LAID ON EDGE. BASE SECTION TO BE FULL.
5. MANHOLE CHANNELS REQUIRING CHANGE IN ALIGNMENT ARE TO BE BUILT ON A SMOOTH RADIUS.
6. IN CROSS COUNTRY AREAS BEYOND ROADWAY RIGHT-OF-WAYS, THE MANHOLE FRAME ELEVATION SHALL BE A MINIMUM OF 6" ABOVE FINISHED GRADE. GRADE TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE MANHOLE.
7. FRAMES AND COVERS: MANHOLE FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30" CLEAR OPENING. 3" (MINIMUM HEIGHT) LETTERS WITH THE WORD "SEWER" SHALL BE PLAINLY CAST INTO THE CENTER OF EACH MANHOLE COVER.



1. ALL COMPONENT PARTS OF MANHOLE STRUCTURES SHALL HAVE THE STRENGTH, LEAK RESISTANCE AND SPACE NECESSARY FOR THE INTENDED SERVICE.
2. MANHOLE STRUCTURES SHALL HAVE A LIFE EXPECTANCY IN EXCESS OF 25 YEARS.
3. MANHOLE STRUCTURES SHALL BE DESIGNED TO WITHSTAND H-20 LOADING AND SHALL NOT LEAK IN EXCESS OF ONE GPD PER VERTICAL FOOT OF MANHOLE FOR THE LIFE OF THE STRUCTURE.
4. BARRELS, CONCRETE GRADE RINGS AND CONE SECTIONS SHALL BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE AND SHALL CONFORM TO ASTM C478.
5. BEDDING: CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33 100% PASSING 1 INCH SCREEN 90% PASSING 3/4 INCH SCREEN 55% PASSING 3/8 INCH SCREEN 0-10% PASSING #8 SIEVE 0-5% PASSING #10 SIEVE WHERE ORDERED BY THE ENGINEER TO STABILIZE THE BASE, CRUSHED STONE 1/2 INCH TO 1-1/2 INCH SHALL BE USED.
6. BASE SECTIONS SHALL BE OF MONOLITHIC CONSTRUCTION TO A POINT AT LEAST 6 INCHES ABOVE THE CROWN OF THE INCOMING PIPE.
7. HORIZONTAL JOINTS BETWEEN SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE OF AN OVERLAPPING TYPE, SEALED FOR WATER-TIGHTNESS USING A DOUBLE ROW OF AN ELASTOMERIC OR MASTIC SEALANT.
8. PIPE TO MANHOLE JOINTS SHALL BE AS FOLLOWS:
  - A. ELASTOMERIC, RUBBER SLEEVE WITH WATERTIGHT JOINTS AT THE MANHOLE OPENING AND PIPE SURFACES.
  - B. CAST INTO THE WALL OR SECURED WITH STAINLESS STEEL CLAMPS.
  - C. ELASTOMERIC SEALING RING CAST IN THE MANHOLE OPENING WITH SEAL FORMED ON THE SURFACE OF THE PIPE BY COMPRESSION OF THE RING; AND
  - D. NON-SHRINK GROUTED JOINTS WHERE WATERTIGHT BONDING TO THE MANHOLE AND PIPE CAN BE OBTAINED.
9. MANHOLE CONE SECTIONS SHALL BE ECCENTRIC IN SHAPE.
10. ALL PRECAST SECTIONS AND BASES SHALL HAVE THE DATE OF MANUFACTURE AND THE NAME OR TRADEMARK OF THE MANUFACTURER IMPRESSED OR INDELIBLY MARKED ON THE INSIDE WALL.
11. ALL PRECAST SECTIONS AND BASES SHALL BE COATED ON THE EXTERIOR WITH A BITUMINOUS DAMP-PROOFING COATING.
12. MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW. AT CHANGES IN DIRECTION, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPED TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY. INVERTS AND SHELVES SHALL BE PLACED AFTER TESTING.
13. MATERIALS OF CONSTRUCTION FOR MANHOLES SHALL BE AS FOLLOWS:
  - A. CONCRETE FOR PRECAST BASES OR GRADE RINGS SHALL CONFORM TO THE REQUIREMENTS FOR CLASS AA CONCRETE IN THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".
  - B. REINFORCING FOR PRECAST CONCRETE SHALL BE STEEL OR STRUCTURAL FIBERS THAT CONFORM TO THE REQUIREMENTS OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".
  - C. PRECAST CONCRETE BARREL SECTIONS, CONES AND BASES SHALL BE CERTIFIED BY THEIR MANUFACTURE(S) AS CONFORMING TO ASTM C478.
  - D. THE MANHOLE FRAME AND COVER SHALL PROVIDE A 30-INCH DIAMETER CLEAR OPENING.
  - E. THE MANHOLE COVER SHALL HAVE THE WORD "SEWER" IN 3-INCH LETTERS CAST INTO THE TOP SURFACE.
  - F. THE CASTINGS SHALL BE OF EVEN-GRAINED CAST IRON, SMOOTH AND FREE FROM SCALE, LUMPS, BUSTERS, SAND HOLES AND DEFECTS.
  - G. CONTACT SURFACES OF COVERS AND FRAMES SHALL BE MACHINED AT THE FOUNDRY TO PREVENT ROCKING OF COVERS IN ANY ORIENTATION.
  - H. CASTINGS SHALL BE EQUAL TO CLASS 30, BE CERTIFIED BY THEIR MANUFACTURE(S) AS CONFORMING TO ASTM A48/48M.
  - I. BRICK MASONRY FOR SHELF, INVERT AND GRADE ADJUSTMENT SHALL BE CERTIFIED BY THEIR MANUFACTURE(S) AS CONFORMING TO ASTM C32, CLAY OR SHALE, FOR GRADE SS HARD BRICK.
  - J. MORTAR SHALL BE COMPOSED OF TYPE II PORTLAND CEMENT AND SAND WITH OR WITHOUT HYDRATED LIME ADDITION.
  - K. PROPORTIONS IN MORTAR OF PARTS BY VOLUMES SHALL BE:
    1. 4.5 PARTS SAND AND 1.5 PARTS CEMENT; OR
    2. 4.5 PARTS SAND, ONE PART CEMENT AND 10.5 PARTS HYDRATED LIME.
  - L. CEMENT SHALL BE TYPE II PORTLAND CEMENT CONFORMING TO ASTM C150/C150M.
  - M. HYDRATED LIME SHALL BE TYPE S CONFORMING TO THE ASTM C207 "STANDARD SPECIFICATIONS FOR HYDRATED LIME FOR MASONRY PURPOSES".
  - N. SAND SHALL CONSIST OF INERT NATURAL SAND CONFORMING TO THE ASTM C33 "STANDARD SPECIFICATIONS FOR CONCRETE FILL AND AGGREGATES".
  - O. CONCRETE FOR DROP SUPPORTS SHALL CONFORM TO THE REQUIREMENT FOR CLASS AAA CONCRETE OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".
  - P. SUBJECT TO (Q) BELOW, A FLEXIBLE PIPE JOINT SHALL BE PROVIDED WITHIN THE FOLLOWING DISTANCES FROM ANY MANHOLE CONNECTION:
    1. WITHIN 48-INCHES FOR REINFORCED CONCRETE (RC) PIPE; AND
    2. WITHIN 60-INCHES FOR PVC PIPE LARGER THAN 15-INCH DIAMETER; 15-INCH DIAMETER, AND
  - Q. NO FLEXIBLE JOINT SHALL BE REQUIRED FOR D.I. PIPE OR FOR PVC PIPE UP THROUGH 15-INCH DIAMETER, AND
  - R. WHEN MANHOLE DEPTH IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER MAY BE USED IN LIEU OF A CONE SECTION, PROVIDED THE SLAB HAS AN ECCENTRIC ENTRANCE OPENING AND IS CAPABLE OF SUPPORTING H-20 LOADS.
14. MANHOLE TESTING:
  - A. MANHOLES SHALL BE TESTED FOR LEAKAGE USING A VACUUM TEST.
  - B. THE MANHOLE VACUUM TEST SHALL CONFORM TO THE FOLLOWING:
    1. THE INITIAL VACUUM GAUGE TEST PRESSURE SHALL BE 10 INCHES Hg; AND
    2. THE MINIMUM ACCEPTABLE TEST HOLD TIME FOR A 1-INCH Hg PRESSURE DROP TO 9 INCH Hg SHALL BE:
      - a. NOT LESS THAN 2 MINUTES FOR MANHOLES LESS THAN 10 FEET DEEP IN DEPTH;
      - b. NOT LESS THAN 2.5 MINUTES FOR MANHOLES 10 TO 15 FEET DEEP; AND
      - c. NOT LESS THAN 3 MINUTES FOR MANHOLES MORE THAN 15 FEET DEEP.
  - C. THE MANHOLE SHALL BE REPAIRED AND RETESTED IF THE TEST HOLD TIMES FAIL TO ACHIEVE THE ACCEPTANCE LIMITS SPECIFIED IN (B) ABOVE.
  - D. INVERTS AND SHELVES SHALL NOT BE INSTALLED UNTIL AFTER SUCCESSFUL TESTING IS COMPLETED.
  - E. FOLLOWING COMPLETION OF THE LEAKAGE TEST, THE FRAME AND COVER SHALL BE PLACED ON THE TOP OF THE MANHOLE OR SOME OTHER MEANS USED TO PREVENT ACCIDENTAL ENTRY BY UNAUTHORIZED PERSONS, CHILDREN OR ANIMALS UNTIL THE CONTRACTOR IS READY TO MAKE FINAL ADJUSTMENTS TO GRADE.

CONSTRUCTION DETAILS  
BLUEBIRD SELF STORAGE  
MAP 176 LOTS 21, 22 & 23  
196-202 CENTRAL STREET  
HUDSON, NEW HAMPSHIRE  
HILLSBOROUGH COUNTY

OWNER OF RECORD:  
RONALD CRAVEN TRUST  
c/o NANCY CRAVEN TRUST  
88 SPEARE ROAD  
HUDSON, NH 03051  
H.C.R.D. BK. 6079 PG. 1294

APPLICANT:  
BLUEBIRD SELF STORAGE LLC.  
125 OCEAN ROAD  
GREENLAND, NH 03840

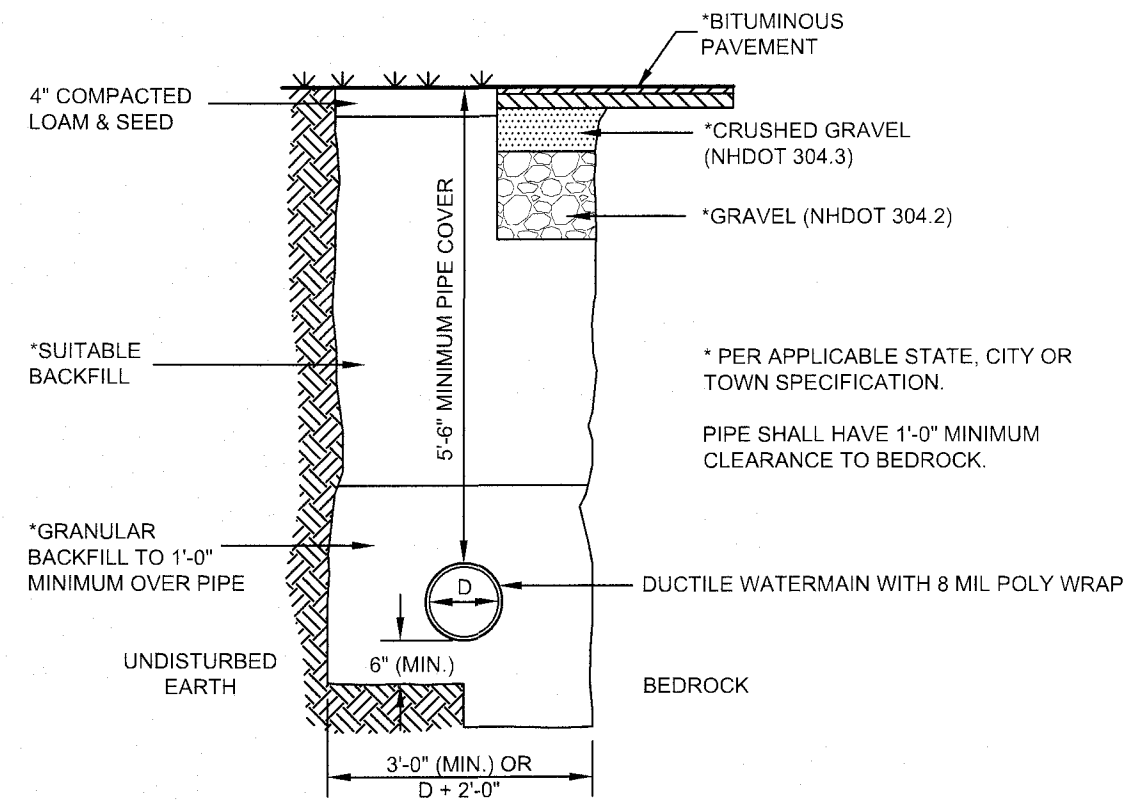
**KMA** KEACH-NORDSTROM ASSOCIATES, INC.  
Civil Engineering Land Surveying Landscape Architecture  
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 827-2881

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

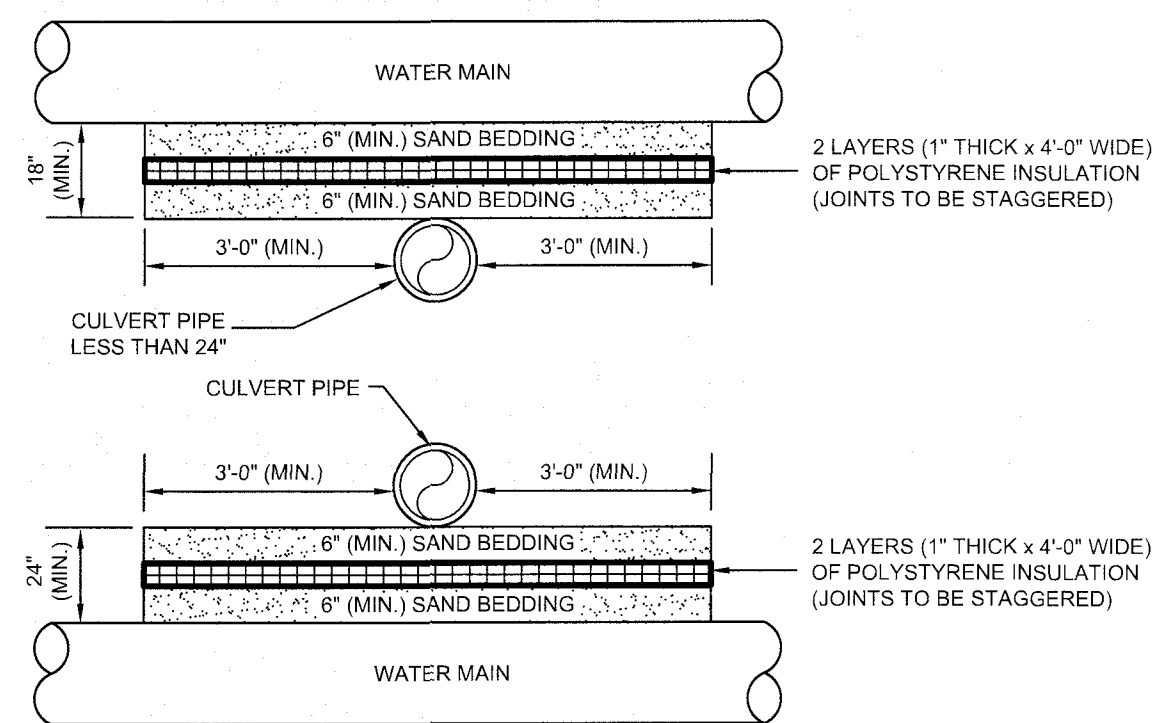
APPROVED BY THE HUDSON, NH PLANNING BOARD  
DATE OF MEETING: \_\_\_\_\_  
\_\_\_\_\_  
SIGNATURE DATE: \_\_\_\_\_  
\_\_\_\_\_  
SIGNATURE DATE: \_\_\_\_\_

SITE PLANS ARE VALID FOR TWO YEARS 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.

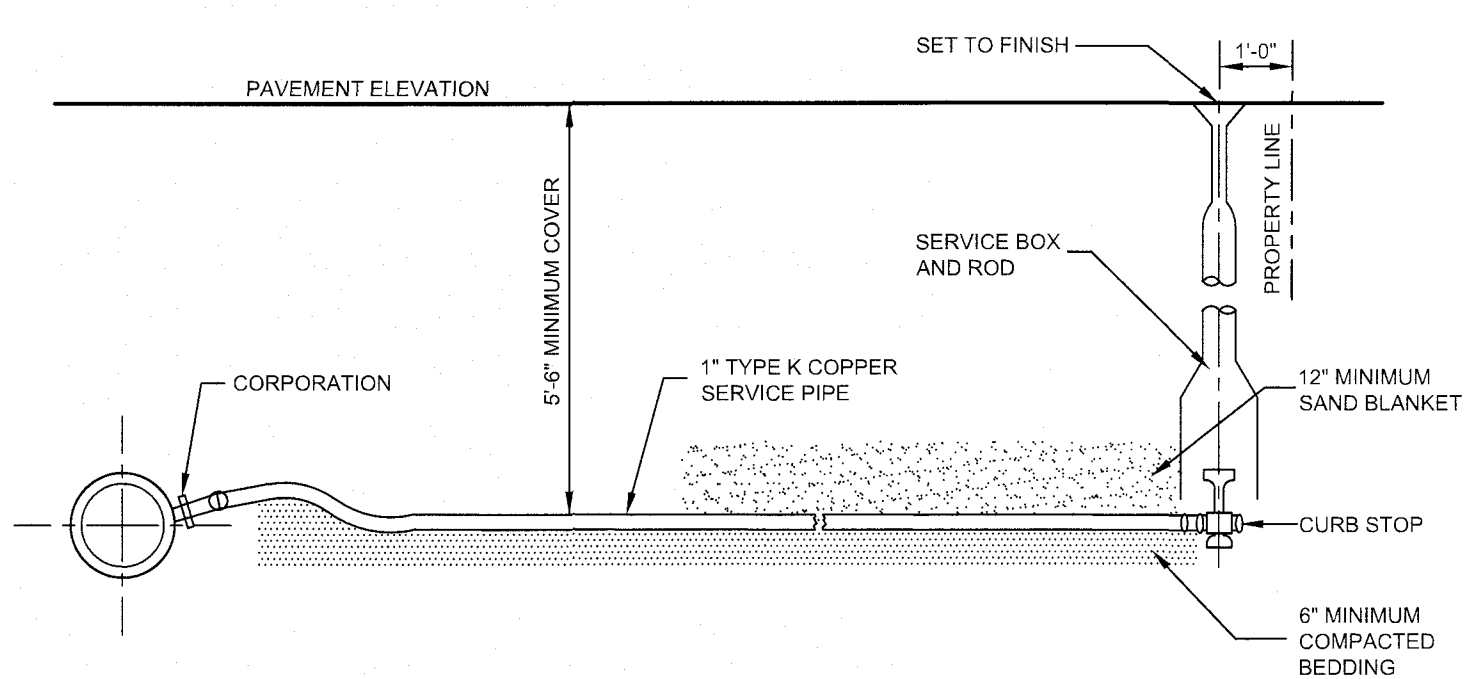
REVISIONS			
No.	DATE	DESCRIPTION	BY
1	01-21-2022	REVISED GRADING/DRAINAGE PER CLIENT	BES
2	02-14-2022	REVISED PER REVIEW COMMENTS	BES
3	02-21-2022	REVISED PER TOWN COMMENTS	BES
4	02-28-2022	REVISED PER TOWN COMMENTS	BES
DATE: DECEMBER 20, 2021		SCALE: N.T.S.	
PROJECT NO: 21-0709-3		SHEET 21 OF 23	



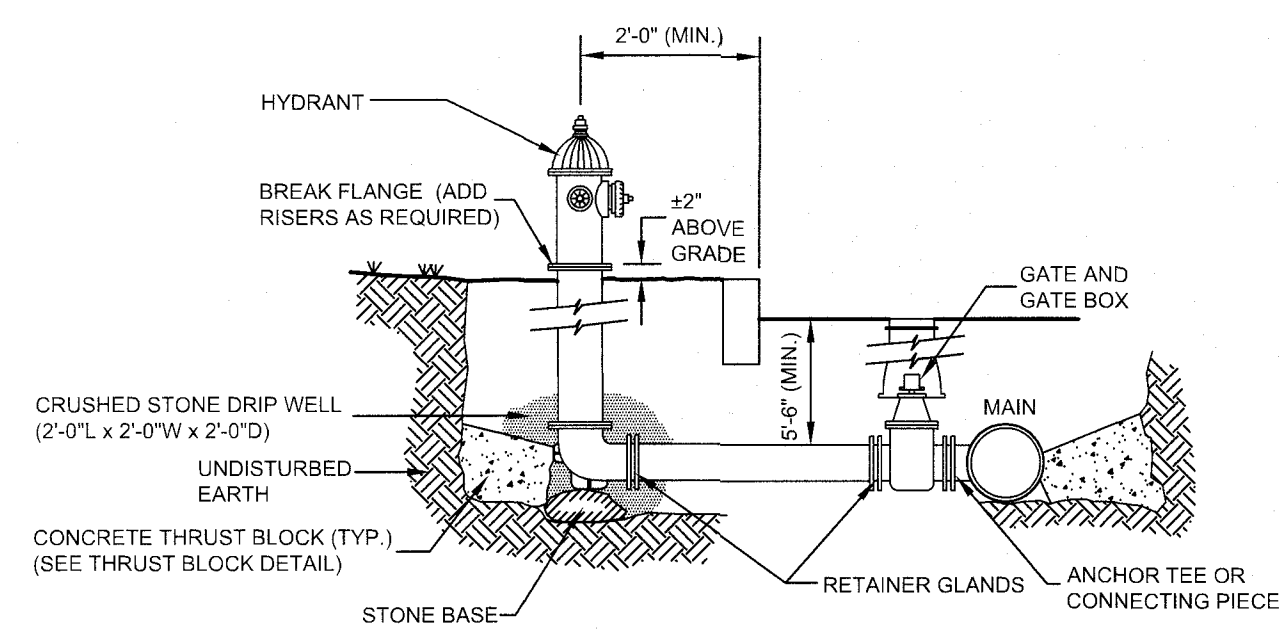
WATER LINE TRENCH DETAIL  
NOT TO SCALE  
(MARCH 2008)



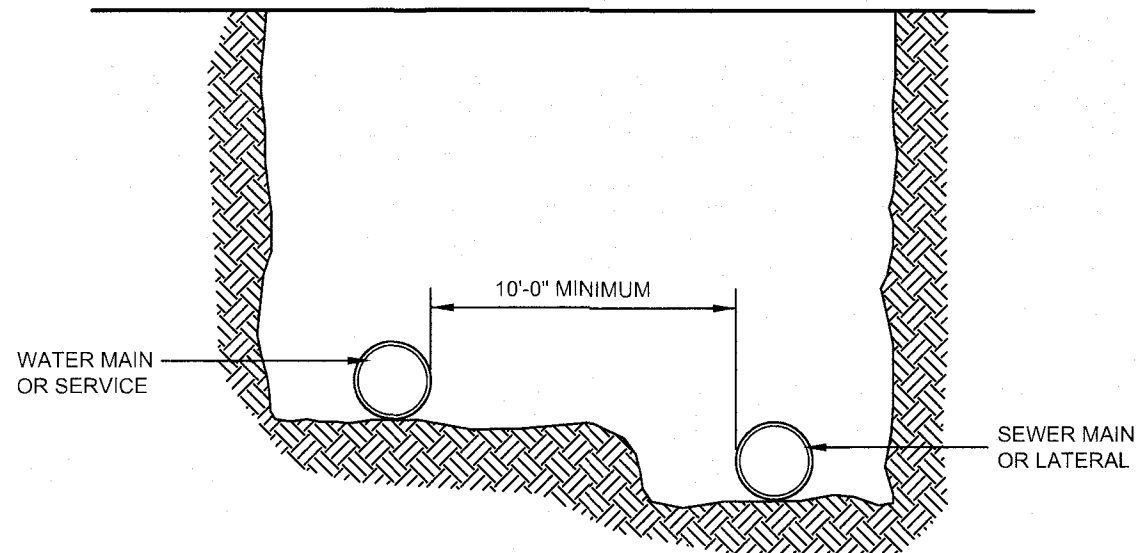
NOTES:  
1. INSULATION TO BE USED WHERE PIPE SEPARATION IS 24\"/>



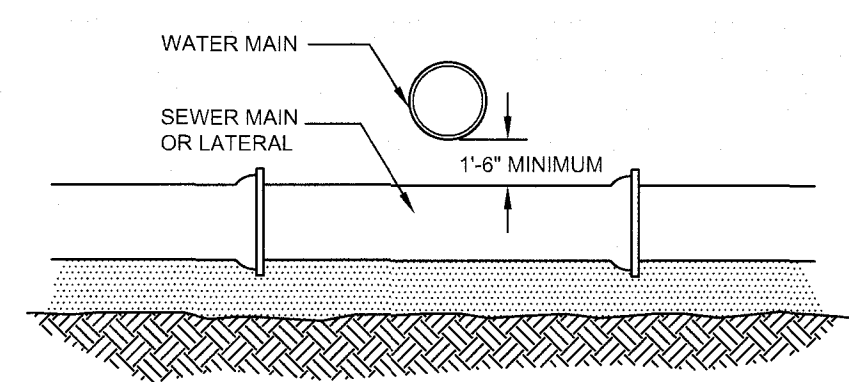
WATER SERVICE CONNECTION  
NOT TO SCALE  
(MARCH 2008)



HYDRANT INSTALLATION  
NOT TO SCALE  
(MARCH 2008)

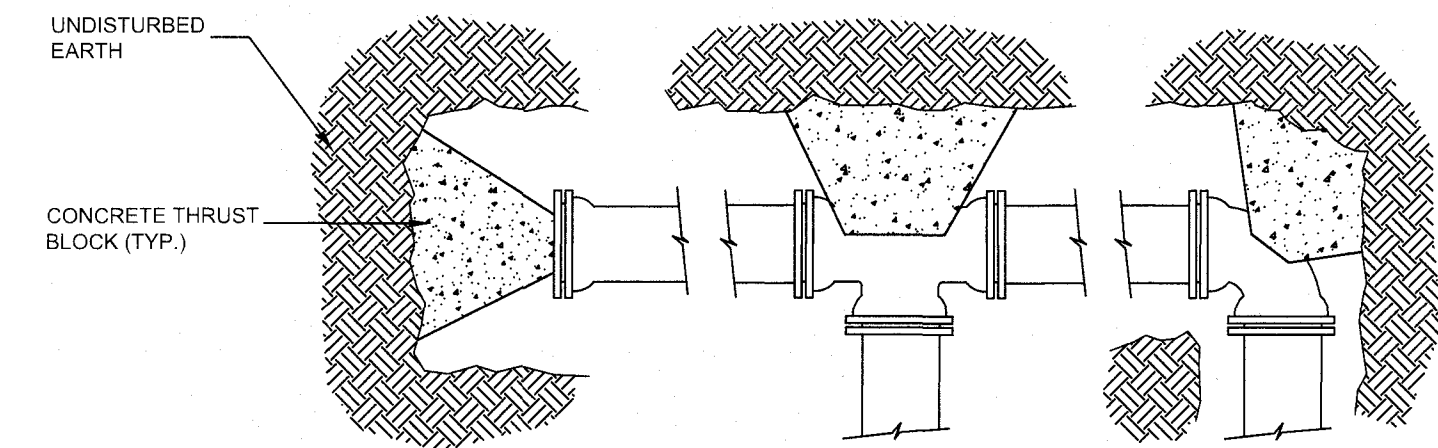


PARALLEL INSTALLATION

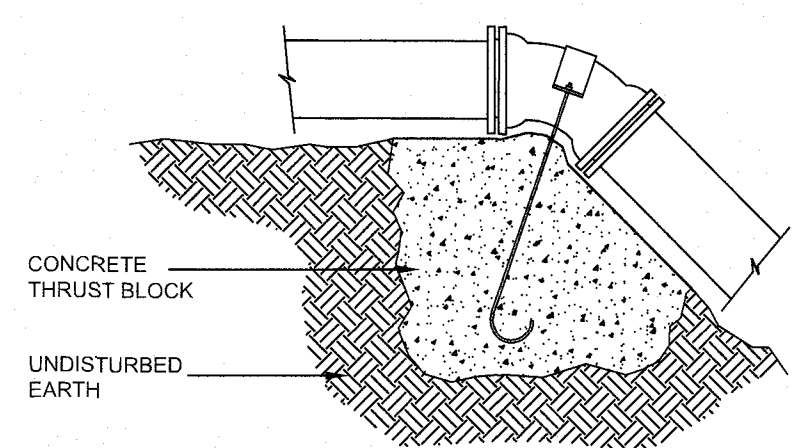


MAIN CROSSINGS

WATER MAIN/SEWER MAIN SEPARATION  
NOT TO SCALE  
(AUGUST 2011)



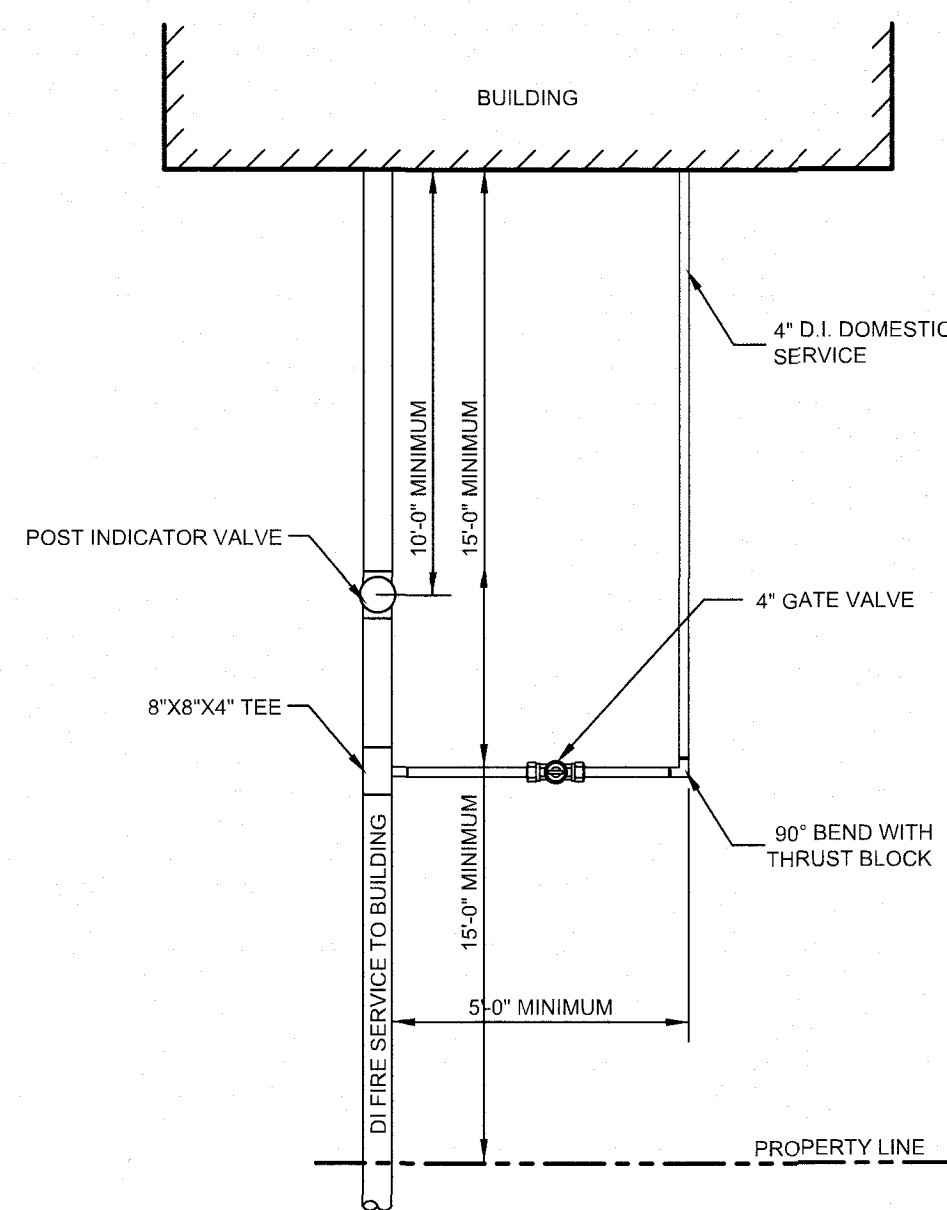
PLAN - HORIZONTAL BENDS, TEES AND PLUGS



ELEVATION - VERTICAL BENDS

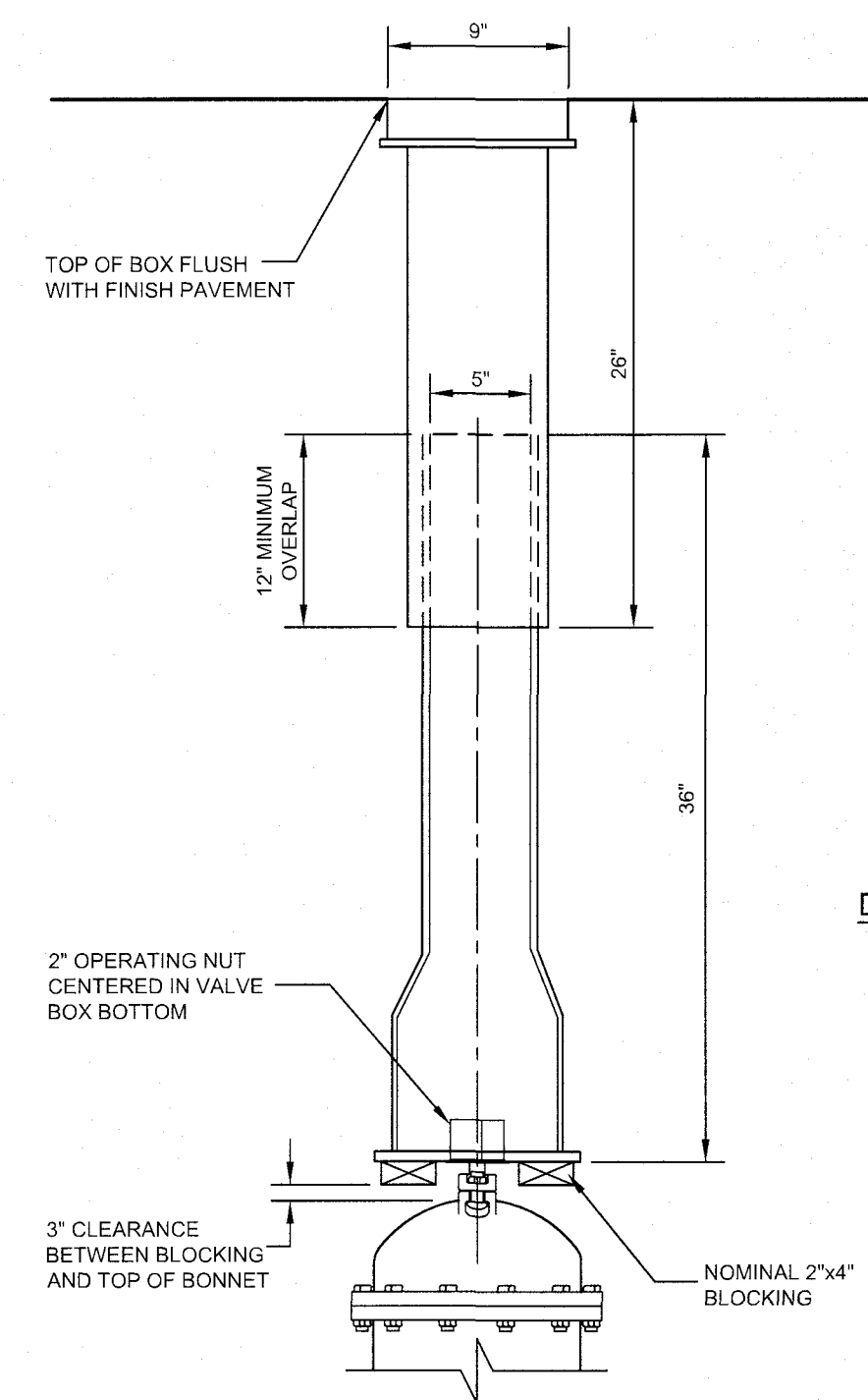
- NOTES
1. THRUST BLOCK DIMENSIONS TO BE DETERMINED IN FIELD BY ENGINEER BASED ON PIPE SIZE, WATER PRESSURE AND SOIL TYPE.
  2. STONE BACKING MAY BE SUBSTITUTED FOR CONCRETE THRUST BLOCKS PROVIDED THE STONE(S) ARE OF EQUAL SIZE AND BEAR ON UNDISTURBED EARTH.
  3. USE OF JOINT RESTRAINT SYSTEMS SHALL NOT ELIMINATE THRUST BLOCK REQUIREMENTS (WHERE POSSIBLE).

THRUST BLOCKS  
NOT TO SCALE  
(MARCH 2008)

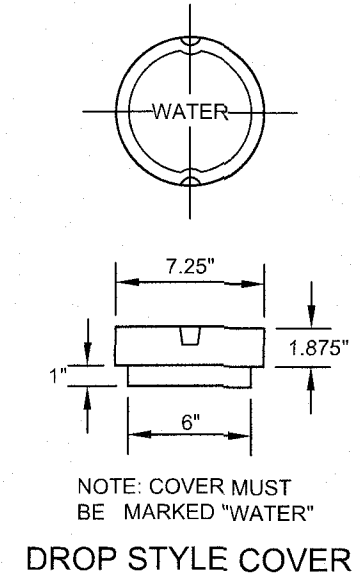


DOMESTIC SERVICE TAPPED OFF FIRE SERVICE  
(A-24)  
NOT TO SCALE  
(MARCH 2008)

- NOTES:
1. ALL MATERIALS AND INSTALLATION PROCEDURES WILL CONFORM TO MANCHESTER WATER WORKS, INC. TECHNICAL SPECIFICATIONS.
  2. ALL PIPE SHOULD HAVE A MINIMUM DEPTH OF 5'-6\"/>
  3. SEE DETAIL FOR SERVICE AND VALVE BOX INSTALLATION DETAIL.
  4. SEE DETAIL A-11 FOR OUTSIDE SERVICE ENTRANCE PLAN VIEW.



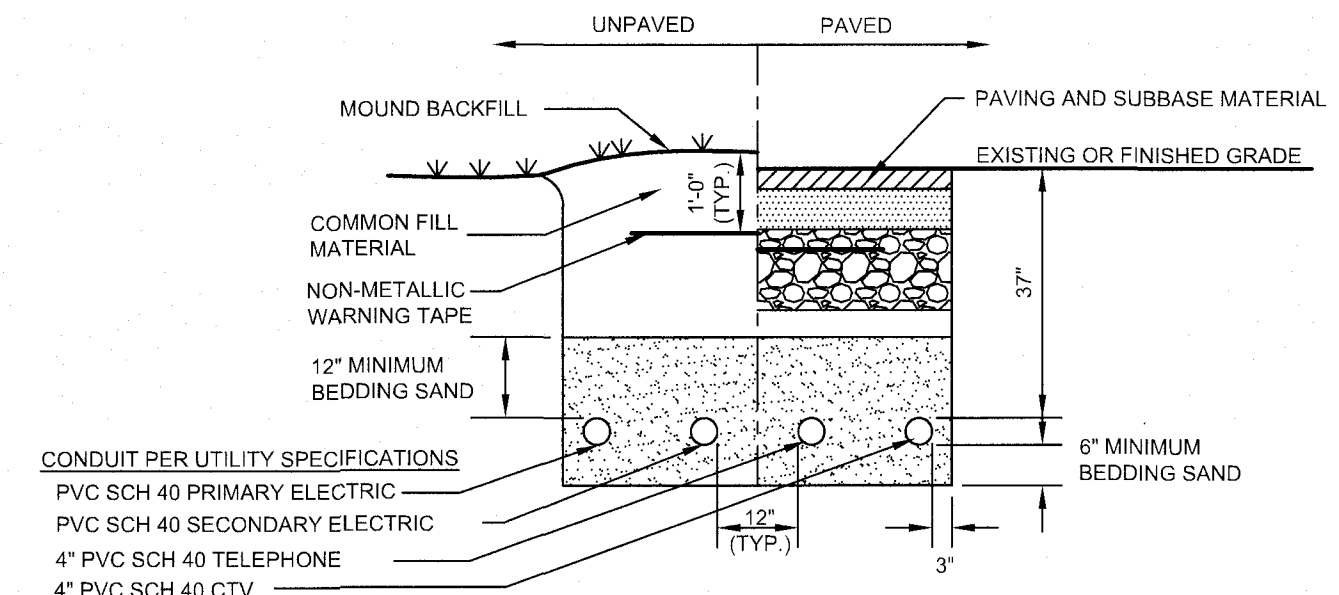
BOTTOM DETAIL



NOTE: COVER MUST BE MARKED "WATER"  
DROP STYLE COVER

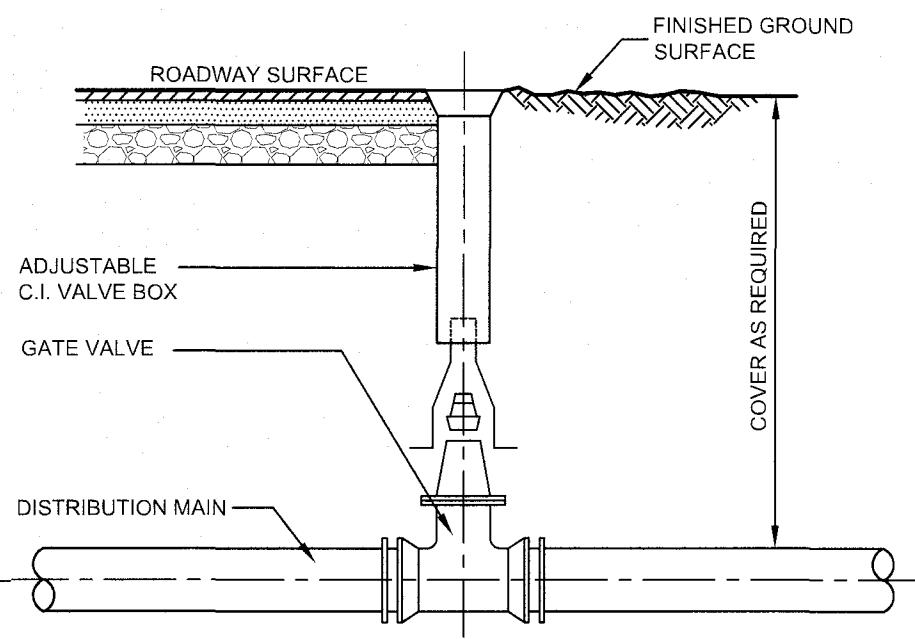
- NOTES:
1. ALL MATERIALS AND INSTALLATION PROCEDURES WILL CONFORM TO PENNICHUCK WATER WORKS, INC. TECHNICAL SPECIFICATIONS.
  2. ALL PIPE SHOULD HAVE A MINIMUM DEPTH OF 5'-0\"/>

VALVE BOX DETAIL  
(A-09)  
NOT TO SCALE  
(MARCH 2008)



- NOTES:
1. INSTALLATION AND MATERIALS OF UNDERGROUND UTILITIES SHALL CONFORM TO LOCAL UTILITY COMPANY SPECIFICATIONS.
  2. COORDINATE WITH UTILITY COMPANIES PRIOR TO THE START OF CONSTRUCTION.

UTILITY TRENCH DETAIL  
NOT TO SCALE



WATER AND GAS GATE VALVE  
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: \_\_\_\_\_

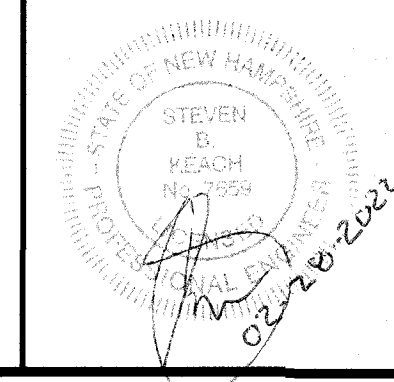
\_\_\_\_\_  
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CONSTRUCTION DETAILS  
**BLUEBIRD SELF STORAGE**  
MAP 176 LOTS 21, 22 & 23  
196-202 CENTRAL STREET  
HUDSON, NEW HAMPSHIRE  
HILLSBOROUGH COUNTY

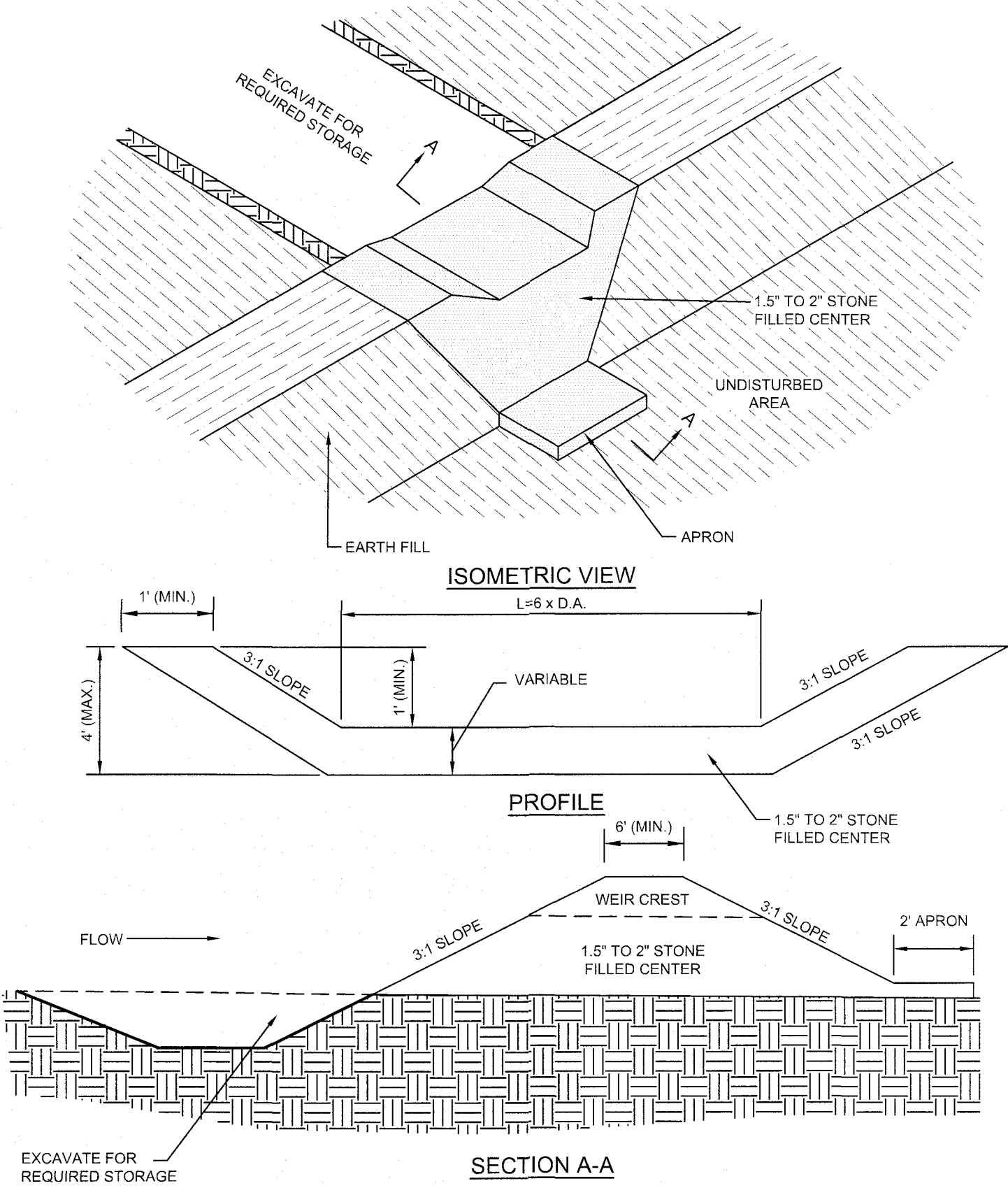
<b>OWNER OF RECORD:</b> RONALD CRAVEN TRUST c/o NANCY CRAVEN TRUST 88 SPEARE ROAD HUDSON, NH 03051 H.C.R.D. BK. 6079 PG. 1294	<b>APPLICANT:</b> BLUEBIRD SELF STORAGE LLC. 125 OCEAN ROAD GREENLAND, NH 03840
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**KM** KEACH-NORDSTROM ASSOCIATES, INC.  
Civil Engineering Land Surveying Landscape Architecture  
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881



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DATE: DECEMBER 20, 2021			
PROJECT NO: 21-0709-3			
SCALE: N.T.S.			
SHEET 22 OF 23			





- NOTES:**
1. THE TRAP SHALL BE INSTALLED AS CLOSE TO THE DISTURBED AREA OR SOURCE OF SEDIMENT AS POSSIBLE.
  2. THE MAXIMUM CONTRIBUTING DRAINAGE AREA TO THE TRAP SHALL BE LESS THAN 5 ACRES.
  3. THE MINIMUM VOLUME OF THE TRAP SHALL BE 3,600 CUBIC FEET OF STORAGE FOR EACH ACRE OF DRAINAGE AREA.
  4. THE SIDE SLOPES OF THE TRAP SHALL BE 3:1 OR FLATTER, AND SHALL BE STABILIZED IMMEDIATELY AFTER THEIR CONSTRUCTION.
  5. THE OUTLET OF THE TRAP SHALL BE A MINIMUM OF ONE FOOT BELOW THE CREST OF THE TRAP AND SHALL DISCHARGE TO A STABILIZED AREA.
  6. THE TRAP SHALL BE CLEANED WHEN 50 PERCENT OF THE ORIGINAL VOLUME IS FILLED.
  7. THE MATERIALS REMOVED FROM THE TRAP SHALL BE PROPERLY DISPOSED OF AND STABILIZED.
  8. SEDIMENT TRAPS AND/OR BASINS SHOULD BE USED AS NECESSARY TO CONTAIN RUNOFF UNTIL BASINS/PONDS ARE STABILIZED.

#### TEMPORARY SEDIMENT TRAP DETAIL NOT TO SCALE

#### 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 NO PHOSPHATE, SLOW RELEASE 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 STRAW. 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 RESEED.
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 SEEDING 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. IT IS RECOMMENDED THAT THE SOIL BE TESTED PRIOR TO APPLYING ANY FERTILIZERS TO DETERMINE WHAT LEVELS AND RATES ARE NECESSARY.
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.

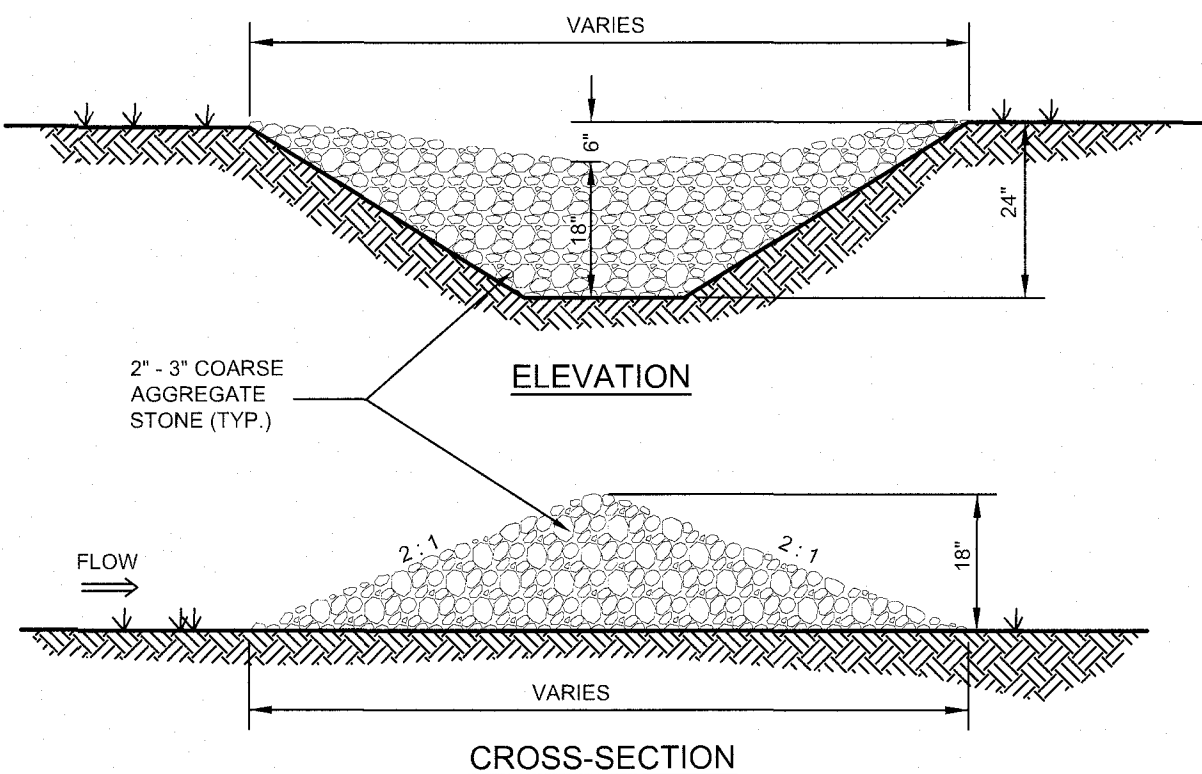
#### EROSION CONTROL MATERIAL NOTE

ALL MANUFACTURED EROSION AND SEDIMENT CONTROL PRODUCTS, EXCEPT FOR SILT FENCE INSTALLED IN ACCORDANCE WITH ENV-WQ 1506.04, UTILIZED FOR, BUT NOT LIMITED TO, SLOPE PROTECTION, RUNOFF DIVERSION, SLOPE INTERRUPTION, PERIMETER CONTROL, INLET PROTECTION, CHECK DAMS, AND SEDIMENT TRAPS SHALL NOT CONTAIN WELDED PLASTIC, PLASTIC, OR MULTI-FILAMENT OR MONOFILAMENT POLYPROPYLENE NETTING OR MESH WITH AN OPENING SIZE OF GREATER THAN 1/8 INCH. TURF REINFORCEMENT MATS SHALL BE COVERED WITH SOIL TO PREVENT EXPOSURE OF THE MATS TO THE SURFACE.

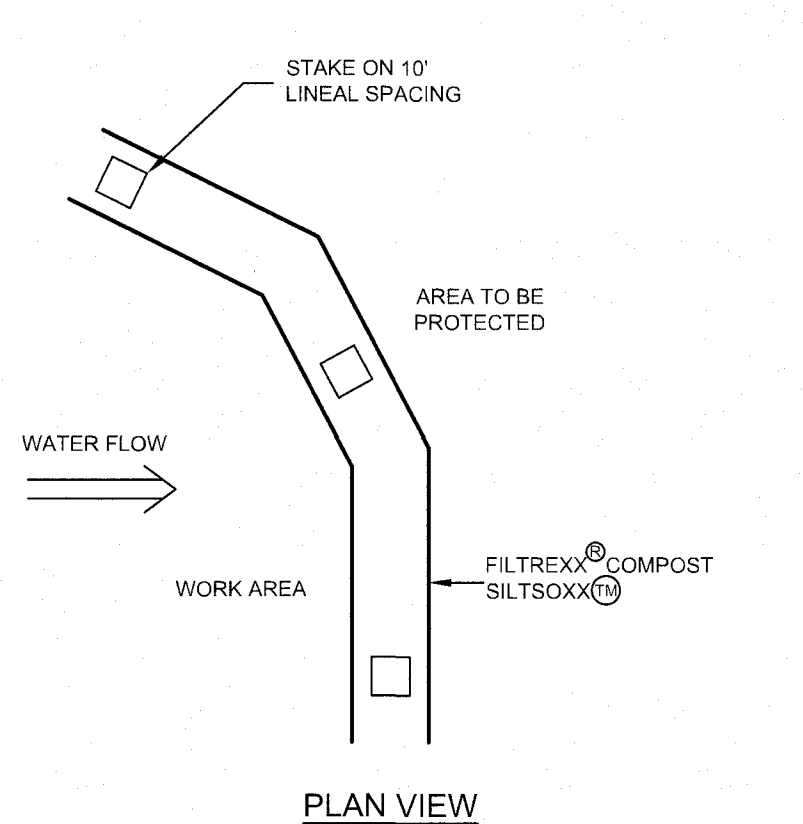
##### MATERIALS:

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 NO PHOSPHORUS, SLOW RELEASE.
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% NIAGARA 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. STRAW 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.
9. NATIVE PLANTINGS SHOULD BE USED FOR ALL NEW GREENSCAPES.
10. ALL WILD/LOWER SEEDING MIXES SHOULD BE FREE OF INVASIVE SPECIES.

#### STONE CHECK DAM SPACING DETAIL NOT TO SCALE



#### STONE CHECK DAM DETAIL NOT TO SCALE

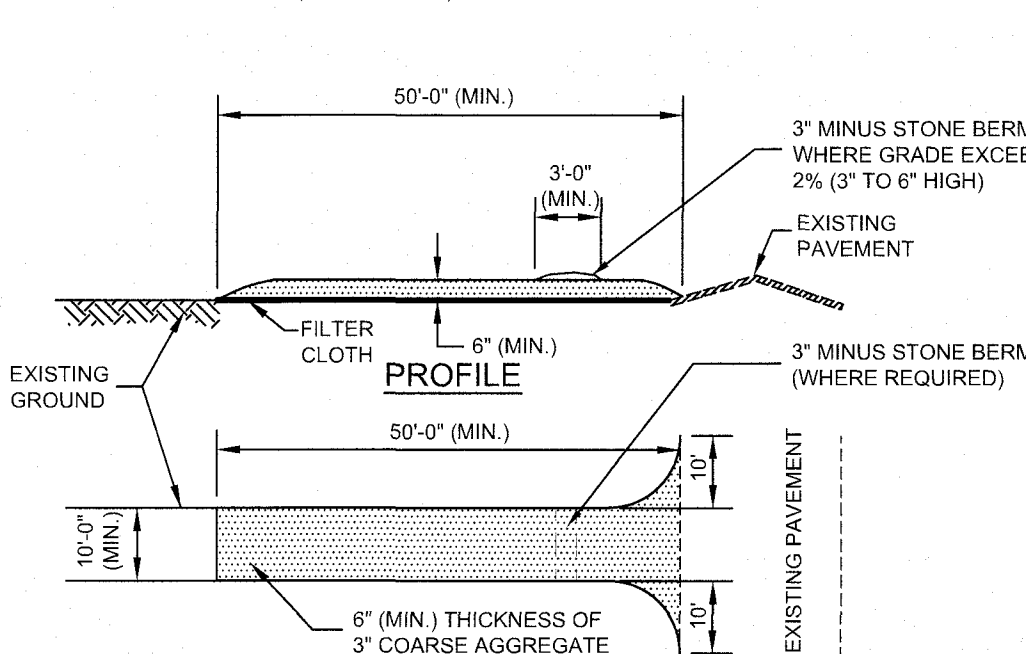


##### NOTES:

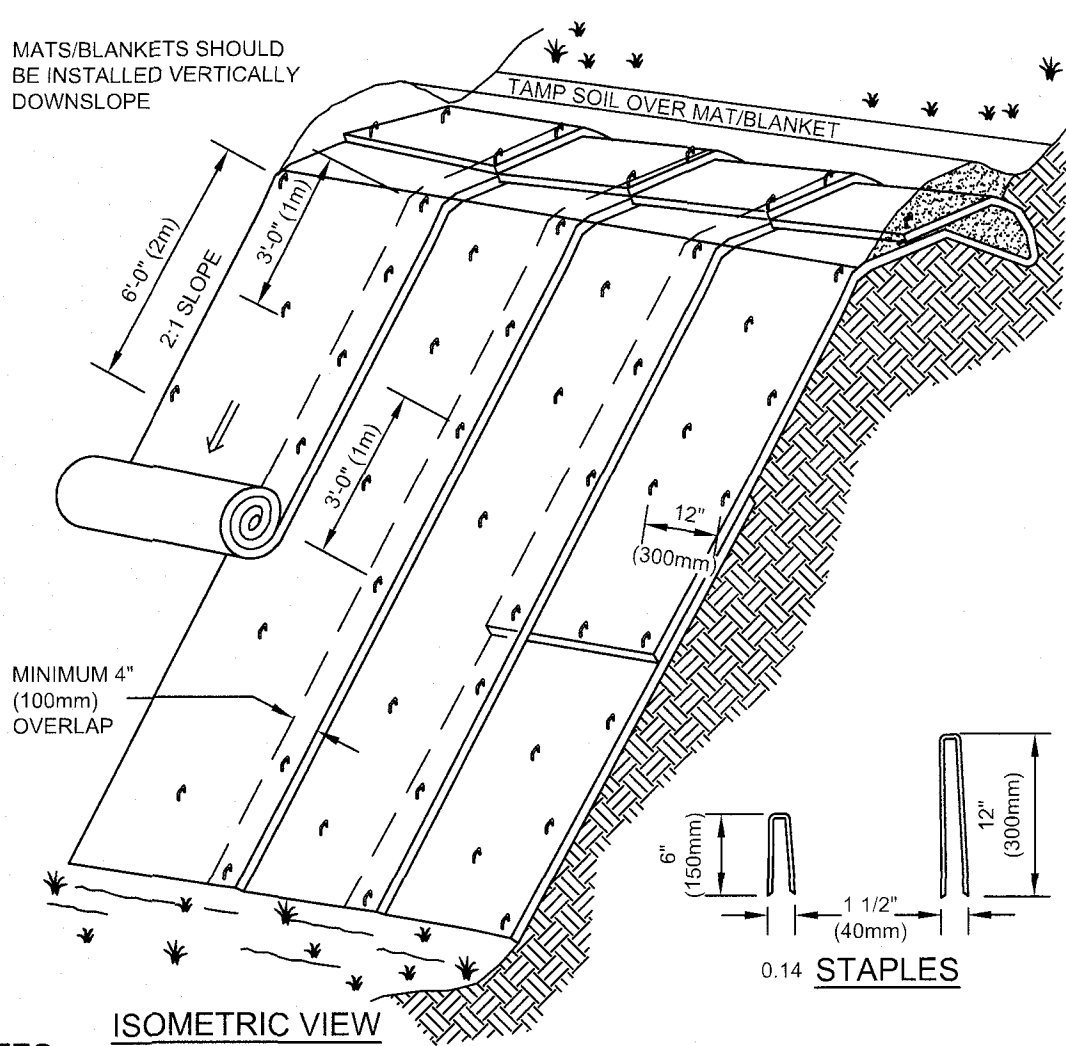
1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. SILTOSOXX® COMPOST/SOIL/ROCK/SEED FILL TO MEET APPLICATION REQUIREMENTS.
3. SILTOSOXX® DEPICTED IS FOR MINIMUM SLOPES. GREAT SLOPES MAY REQUIRE LARGER SOCKS PER THE ENGINEER.
4. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

#### FILTREXX® SILTOSOXX® DETAIL

NOT TO SCALE  
(AUGUST 2011)



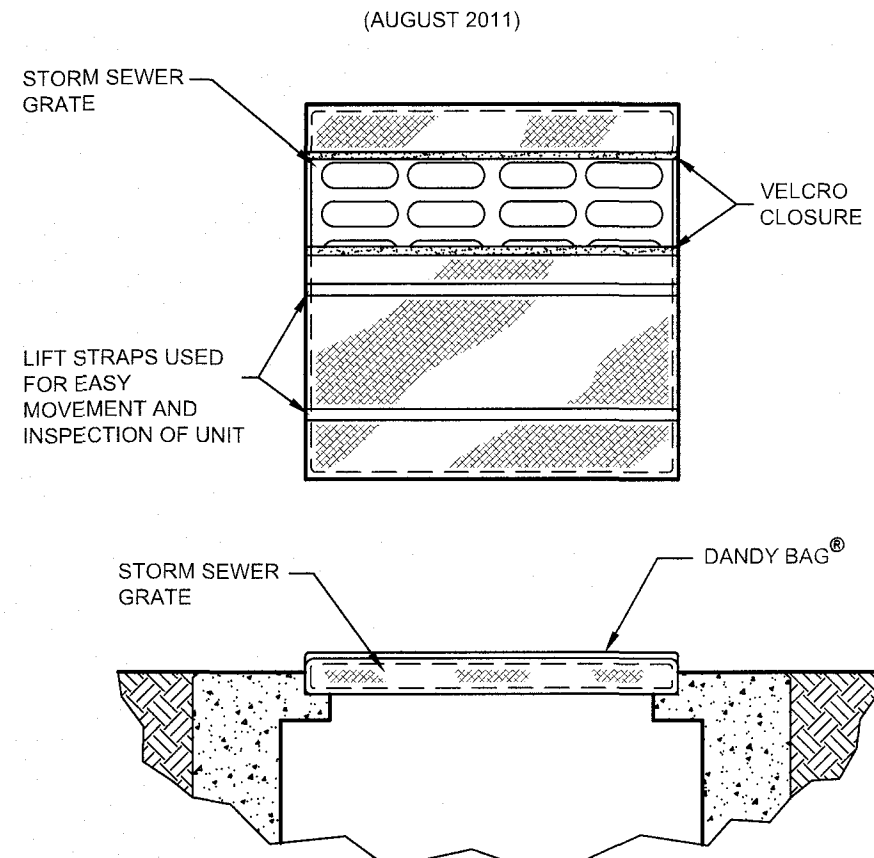
#### STABILIZED CONSTRUCTION EXIT DETAIL NOT TO SCALE



##### 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.
4. EROSION BLANKETS TO BE A BCN150 OR AN APPROVED ALTERNATIVE WHICH MUST CONSIST OF ALL NATURAL FIBERS.

#### EROSION CONTROL BLANKETS - SLOPE INSTALLATION NOT TO SCALE (AUGUST 2011)



#### 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	%	80
APPARENT OPENING SIZE	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
FLOW RATE	ASTM D 4491	1/min/m <sup>2</sup> (gal/min/ft <sup>2</sup> )	5907 (145)
PERMITTIVITY	ASTM D 4491	Sec <sup>-1</sup>	2.1

#### DANDY BAG® NOT TO SCALE

##### MAINTENANCE:

1. 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.
2. 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 3 INCH MINIMUM 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 3 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.
9. THE MOUNTABLE BERM IS REQUIRED FOR 50' LONG EXITS.

#### CONSTRUCTION SEQUENCE

1. THE CONTRACTOR WILL ENSURE THAT NO MORE THAN 5 ACRES IS DISTURBED AT ANY ONE TIME.
2. FIRST CUT AND CLEAR TREES AND BRUSH ONLY WITHIN DESIGNATED LIMITS OF CLEARING AS NECESSARY TO FACILITATE PROPOSED CONSTRUCTION. ALL TREE BRANCHES AND OTHER VEGETATIVE MATERIALS SHALL BE PROPERLY DISPOSED OR 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.
3. 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.
4. 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 CONSTRUCTION ACTIVITIES AND DRAINAGE FLOW. STOCKPILES SHALL BE TEMPORARILY SEEDED WITH WINTER RYE AND BE SURROUNDED WITH STRAW BALES AND/OR FABRIC SILTATION FENCE IN ORDER TO PREVENT LOSS DUE TO EROSION.
5. 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. ONCE BUILDING FOUNDATION WORK IS UNDERWAY, CONTINUE EARTHMOVING OPERATIONS UNTIL DESIGN SUBGRADE IS ACHIEVED.
7. DETENTION BASINS/SWALES SHALL BE INSTALLED BEFORE ROUGH GRADING THE SITE.
8. DITCHES/SWALES/BASINS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
9. TEMPORARY WATER DIVERSION (SWALES, BASINS, ETC.) MUST BE USED AS NECESSARY UNTIL SOILS ARE STABILIZED.
10. 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.
11. DEEPLY TILL THE BASE OF THE INFILTRATION BASIN TO RESTORE INFILTRATION RATES FOLLOWED BY A PASS WITH A LEVELING DRAG. STORMWATER FLOWS ARE NOT TO BE DIRECTED TO THE INFILTRATION AREA UNTIL CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
12. PLACE GRAVEL AND CRUSHED GRAVEL OVER PROPOSED DRIVEWAY, WALKS AND PARKING AREAS AND COMPACT IN SPECIFIED LIFT THICKNESS.
13. 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.
14. 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.
15. INSTALL THE BINDER COURSE OF PAVEMENT OVER ALL DESIGNATED AREAS.
16. 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.
17. INSTALL THE SPECIFIED WEARING COURSE OF PAVEMENT OVER THE BINDER COURSE.
18. 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 UNLESS AN ENVIRONMENTAL MONITOR IS EMPLOYED THROUGHOUT THE DURATION OF CONSTRUCTION. 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, SINCE 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 SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISH GRADE. A MINIMUM APPLICATION OF 4 INCHES OF LOAM (COMPACTED THICKNESS) PRIOR TO FINAL SEEDING AND MULCHING.
4. EROSION CONTROL AND STABILIZATION SHALL BE IN ACCORDANCE WITH HILLSBOROUGH COUNTY CONSERVATION DISTRICT-VEGETATIVE STANDARD AND SPECIFICATIONS FOR SEEDING GRASSES AND LEGUMES FOR LONG-TERM COVER ON EXCAVATED AREAS.
5. 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.
6. 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.
7. 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.
8. DUST SHALL BE CONTROLLED BY THE USE OF WATER AS NECESSARY THROUGHOUT THE CONSTRUCTION PERIOD, IN ACCORDANCE WITH ENVA 1000.
9. 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.
10. THE TOWN RESERVES THE RIGHT TO REQUIRE ADDITIONAL EROSION CONTROL MEASURES DURING CONSTRUCTION.
11. 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."
12. DETENTION BASINS/SWALES SHALL BE INSTALLED BEFORE ROUGH GRADING THE SITE.
13. DITCHES/SWALES/BASINS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
14. TEMPORARY WATER DIVERSION (SWALES, BASINS, ETC.) MUST BE USED AS NECESSARY UNTIL SOILS ARE STABILIZED.
15. ALL ROADWAYS AND PARKING AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
16. ALL CUT AND FILL SLOPES SHALL BE STABILIZED 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 OCTOBER 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.

## CONSTRUCTION DETAILS BLUEBIRD SELF STORAGE

MAP 176 LOTS 21, 22 & 23

196-202 CENTRAL STREET

HUDSON, NEW HAMPSHIRE

HILLSBOROUGH COUNTY

##### OWNER OF RECORD:

RONALD CRAVEN TRUST  
c/o NANCY CRAVEN TRUST  
88 SPEARE ROAD  
HUDSON, NH 03051  
H.C.R.D. BK. 6079 PG. 1294

##### APPLICANT:

BLUEBIRD SELF STORAGE LLC.  
125 OCEAN ROAD  
GREENLAND, NH 03840

**KMA**

KEACH-NORDSTROM ASSOCIATES, INC.

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

No.	DATE	REVISIONS	DESCRIPTION	BY
1	01-21-2022	REVISED	GRADING/DRAINAGE PER CLIENT	BES
2	02-14-2022	REVISED	PER REVIEW COMMENTS	BES
3	02-21-2022	REVISED	PER TOWN COMMENTS	BES
4	02-28-2022	REVISED	PER TOWN COMMENTS	BES

DATE: DECEMBER 20, 2021

SCALE: N.T.S.

PROJECT No: 21-0709-3

SHEET 23 OF 23

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 TWO YEARS 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.