

**CITY OF FRANKLIN
SITE PLAN REVIEW APPLICATION**

Location of Proposed Development: Commerce/Industrial Park Drive New Map #: _____
Parcel ID (Map/Lot #): 82/408-1 Zoning of Parcel: Industrial

Applicant

Name: Gilman Carpentry
Address: 35 Oak St
City/State/Zip: Franklin, NH 03235
Phone: 207-266-1982
Email: gilmancarpentry@gmail.com

Owner of Record

Name: Henry Dow Properties, LLC
Address: PO Box 247
City/State/Zip: Concord, NH 03302
Phone: 603-333-2931
Email: henrydow@gmail.com

Applicant's Agent/Engineer

Name: Bedford Design Consultants, Inc.
Address: 592 Harvey Road
City/State/Zip: Manchester, NH 03103
Phone: 603-622-5533
Email: Katiew@bedforddesign.com

Other (if Applicable)

Name: _____
Address: _____
City/State/Zip: _____
Phone: _____
Email: _____

Development Proposal, Please explain: We are proposing a 2,000 s.f. storage garage with gravel storage area and associated drainage.

Information:

Number of Proposed Buildings/Units: 1
Frontage on What Road(s): Commerce and Industrial Park Drive

Services Available: **Sewer** Municipal ☒ Septic ☐ **Water** Municipal ☒ Well ☐
Non-Municipal Services Proposed/Available, Explain: electric only

Site in Acres 3.6 acres Developable Acres 3.36 acres

Are waiver's requested, and if so, please fill out attached Waiver Request sheet: ☒ Yes ☐ No

Zoning Board Approvals Granted: ☐ Variance ☐ Special Exception ☐ Other ☒ None

Please Explain: _____
Dates Granted: _____

Does this submission represent an amended plan: ☐ Yes ☒ No

Date approval Granted: _____
Conditions of Approval: _____

Was a conceptual plan submitted to the Planning Board: ☐ Yes ☒ No

Date approval Granted: _____
Conditions of Approval: _____

Signature of Applicant: 

Date: 1-2-24

Application Fee: \$250.00

Abutters Notices: \$7.00 per abutter

10.00

For Office Use Only

Deadline Date: 2/7/2004 Actual Date Submitted: 2/7/2004

Meeting Date: 2/28/2004

Amount Due Application: \$ 584.28 (industrial, 2k building, 28,428 sf impervious)

Amount Due Abutters: \$ ~~77.00~~ 110.00 Total Number of Abutters: 11 abutters @ \$ 10.00

Total Due: \$ 694.28

Amount Paid: \$ _____ How Paid: ☐ Cash ☒ Check # 1639

Date Paid 2/7/04

Is the following information attached to this application:

- ☐ Abutter's List, complete with Name, Address, City, State, Zip and Map/Lot #;
- ☐ 16 Paper Prints of the Plan (4 Department Review Sheets/12 Member Sheets);
- ☐ Letter of Authorization from the Owner of Record; and,
- ☐ Waiver's List and explanation.

What Supportive Documentation was submitted: _____

Hearing Dates:	Outcome:

Authorization

I give permission for employees and subcontractors of **Bedford Design Consultants, Inc.** to:

- 1 A D
Initial Here Enter on the property as their work requires. I understand that said employees and subcontractors will disturb the site as little as possible.
- 2 A D.
Initial Here Act on my behalf in the preparation and submission of plans to state, municipal and federal agencies as required
- 3 A.D
Initial Here Represent me at any meeting or hearing outlined in the contract with BDC
- 4 A.D.
Initial Here Sign Municipal and State applications on my behalf.

Owner Name: Henry Dow Properties, LLC

Owner Signature: Henry n Dow

Property Location: Map 82 Lot 408-1

Industrial Park Drive/Commerce Drive Franklin, NH

Date: 1-2-24

Bedford Design Consultants Inc.
ENGINEERS AND SURVEYORS

592 Harvey Road Manchester, NH 03103
Telephone: (603) 622-5533 • www.bedforddesign.com

February 7, 2024

Franklin Planning Board
316 Central St
Franklin, NH 03235

RE: Garage and Storage Site Plan
Commerce/Industrial Park Drive
Map 82 Lot 408-1

Members of the Board,

Bedford Design is pleased to submit this application for a storage garage and outdoor gravel storage area at the corner of Commerce and Industrial Park Drives. The site is 3.6 acres and slopes up to a knob in the middle of the site. There are wetland pockets located along the edges of the property which are shown on the plans.

We are proposing a 2,000 s.f. storage garage building. The entrance will be located on Industrial Park Drive across from the existing driveway. The first section of the driveway will be paved and then transition to gravel up to the 150' by 150' gravel storage platform.

The site will have underground electric and while water and sewer are available, the building will not be serviced by either. We are requesting several waivers for the project, including sight distance, gravel parking surface in lieu of pavement, and an increase in peak runoff to the southern and western abutters. Attached are our reasonings for the requests. Drainage will consist of overland sheet flow from the driveway to a woodland buffer and a drainage pond to the west.

If you have any questions, please feel free to contact us at 603-622-5533.

Sincerely,

Bedford Design Consultants, Inc.



Katherine A. Weiss, PLA, ASLA
Project Manager

Bedford Design Consultants Inc.

ENGINEERS AND SURVEYORS

592 Harvey Road Manchester, NH 03103
Telephone: (603) 622-5533 • www.bedforddesign.com

January 15, 2024

Seth Creighton, Planning & Zoning Director
City of Franklin
316 Central St
Franklin, NH 03235

RE: Warehouse & Storage Site Plan – TRAFFIC LETTER
Commerce Drive & Industrial Park Drive
Map 82 Lot 408-1

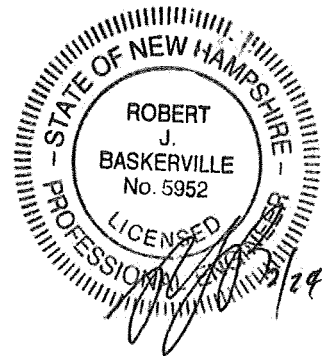
Mr. Creighton:

Bedford Design has supplied this traffic letter to show the estimated traffic volumes for the proposed Site Plan. For this letter we have chosen Land Use Code 150 for Warehousing using the number of employees for the proposed use. Attached are the ITE pages for trips for the weekday totals, as well as morning and evening peak hours. A total of 10 trips per day is proposed with 1 trip in the morning and 1 trip in the evening peak hours.

If you have any questions, please don't hesitate to call us at 603-622-5533.

Sincerely,
Bedford Design Consultants, Inc.


Robert J. Baskerville, PE
President



2 Employees - Warehousing - (Land Use 150)

	<u>Rate/Employee</u>	<u>Total Trips</u>		<u>Entering Site</u>		<u>Exiting Site</u>
<u>Weekday</u>	5.105	10.1	50%	5	50%	5
<u>AM Peak Hour</u>	0.61	1.22	72%	1	28%	0
<u>PM Peak Hour</u>	0.66	1.32	36%	0	64%	1

Warehousing (150)

Vehicle Trip Ends vs: Employees

On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 14

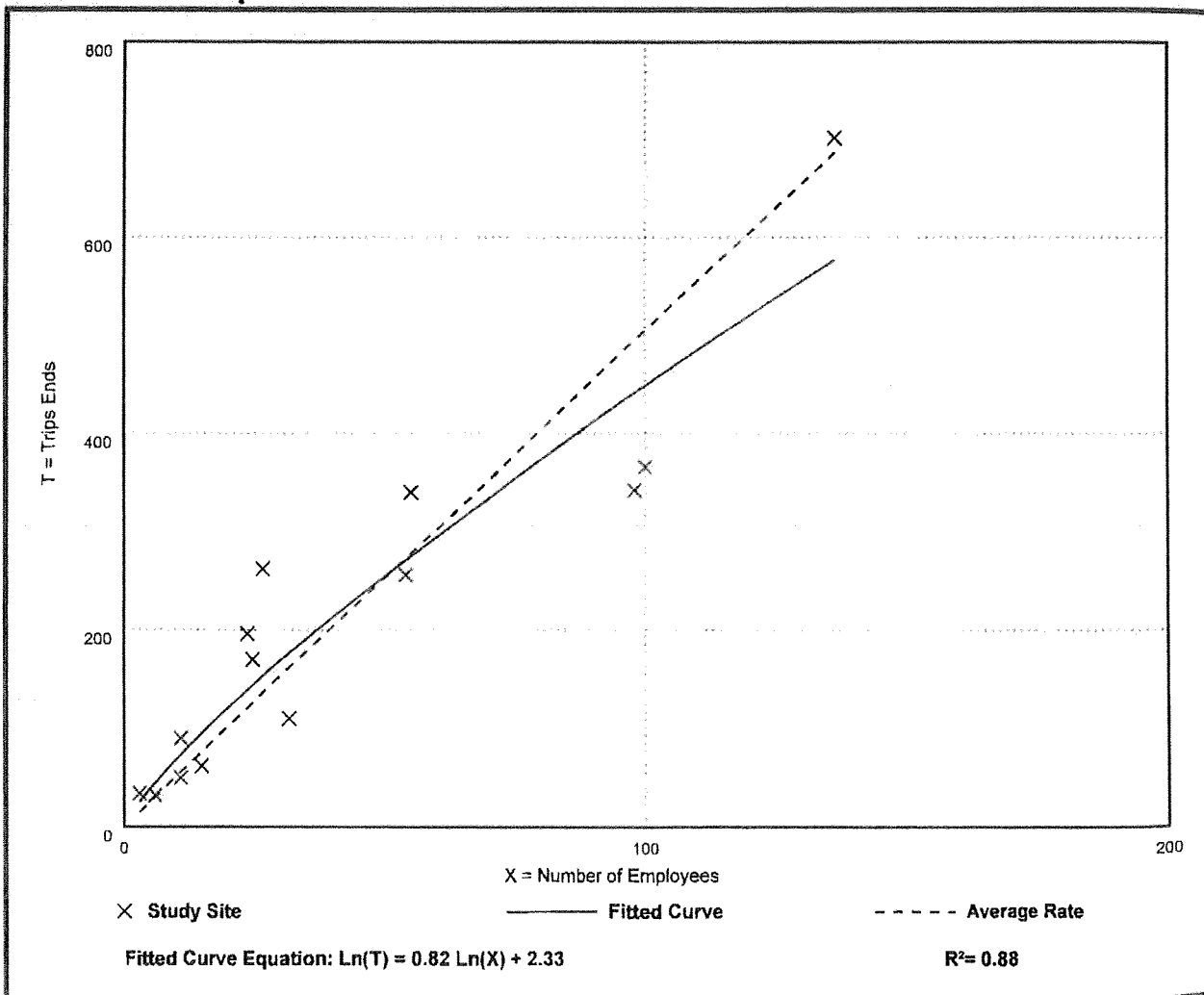
Avg. Num. of Employees: 43

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
5.05	3.44 - 11.33	1.77

Data Plot and Equation



Warehousing (150)

Vehicle Trip Ends vs: Employees

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 14

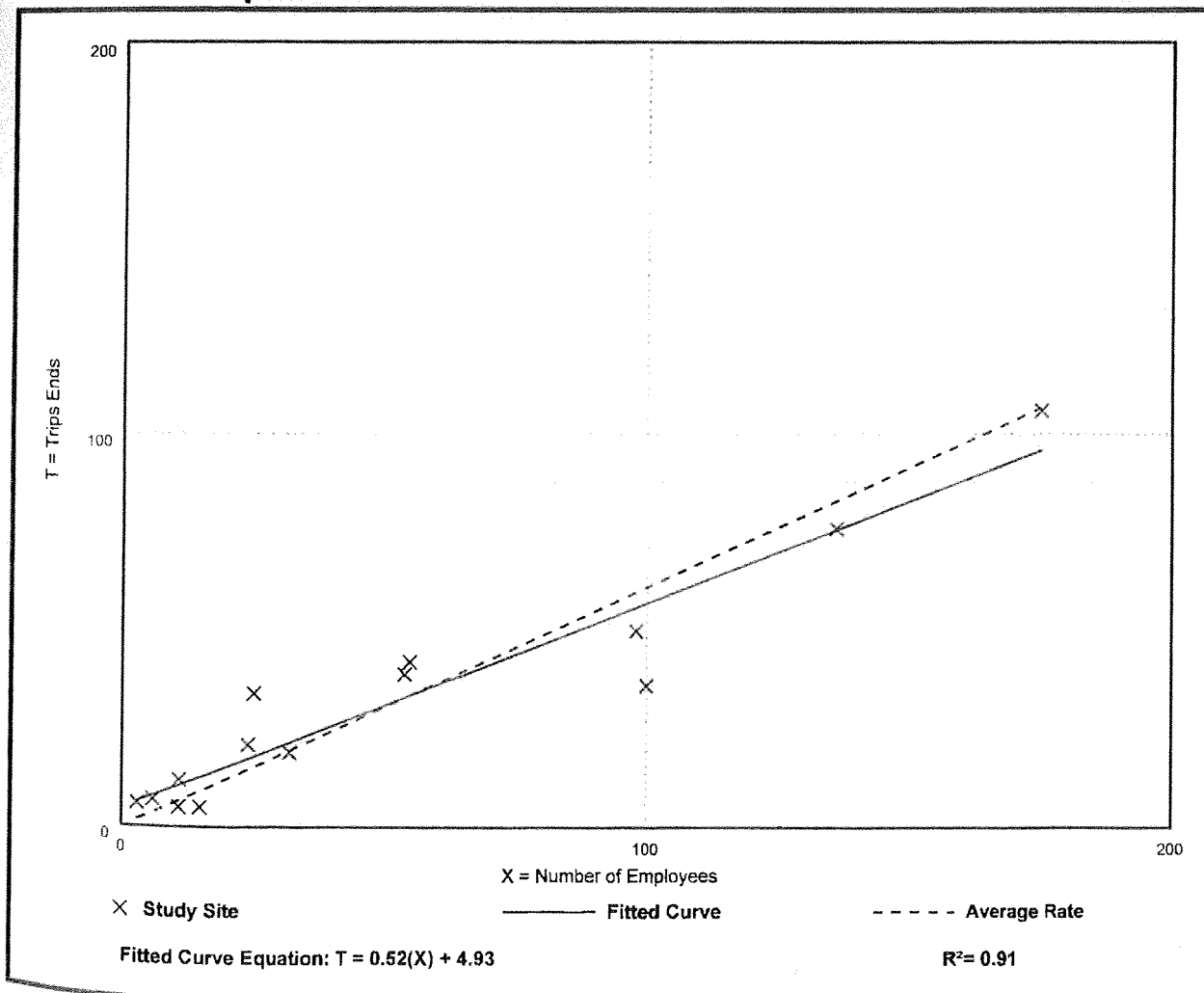
Avg. Num. of Employees: 53

Directional Distribution: 72% entering, 28% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.61	0.33 - 2.00	0.23

Data Plot and Equation



Warehousing (150)

Vehicle Trip Ends vs: Employees

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 15

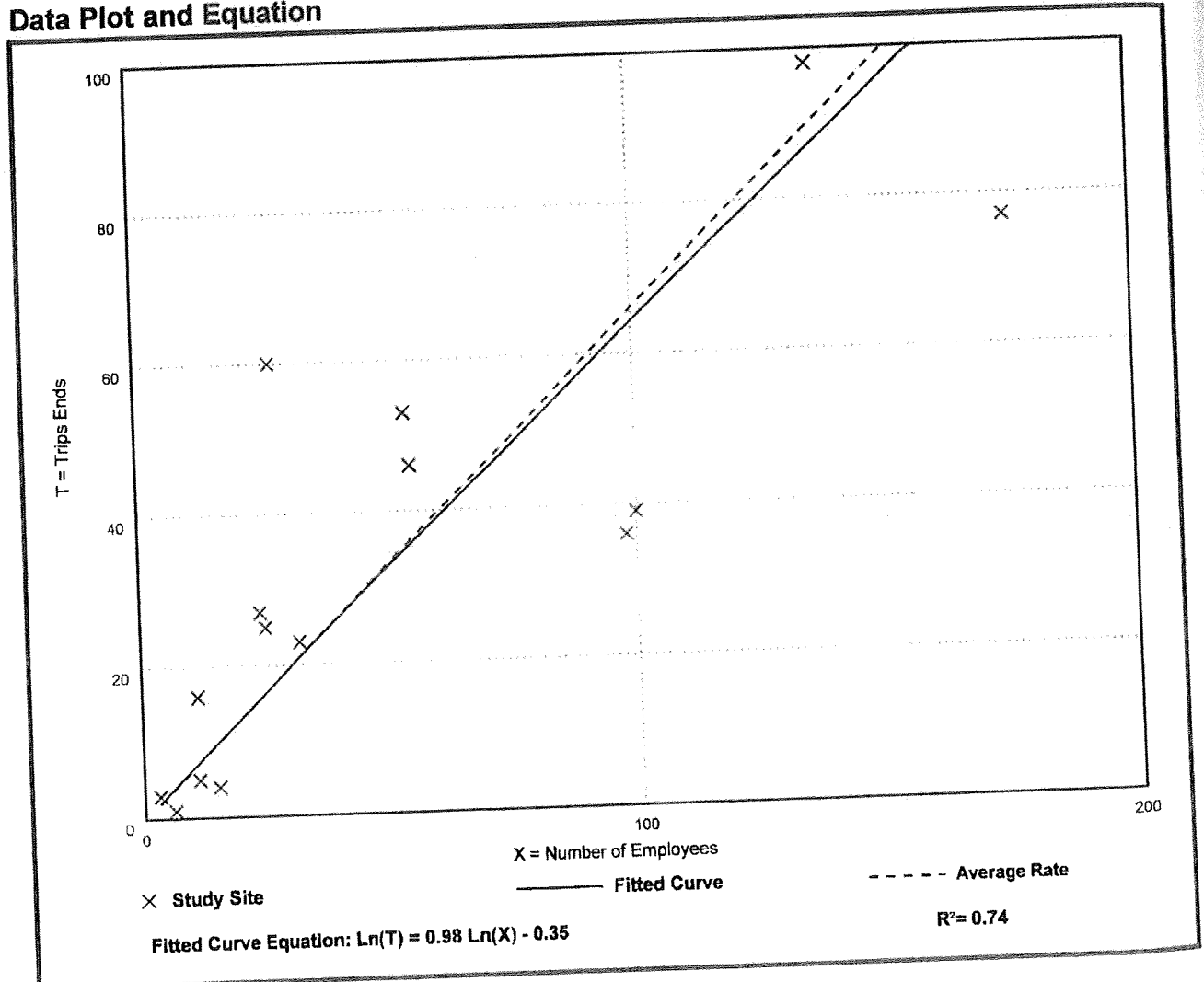
Avg. Num. of Employees: 51

Directional Distribution: 36% entering, 64% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.66	0.17 - 2.22	0.40

Data Plot and Equation



SITE PLAN APPLICATION
REQUEST FOR WAIVER
(Sec. 402-6 C)

WAIVER PROCEDURE

The board may, for good cause, waive requirements as to the site plan and supporting data.

DATE: 2/7/24

Planning Board
City of Franklin
316 Central Street
Franklin, New Hampshire 03235

RE: Request for Waiver/Site Plan
Tax Map/Lot # 82/408-1

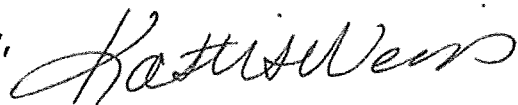
Dear Board Members:

As applicant for the above, a waiver is requested of the following site plan review requirements:

ITEM	SECTION	REASON FOR WAIVER
Sight Distance	149-6.B	dead end roadway
Peak Runoff Rates	402-5(G)3(b)	type A soils
Gravel in lieu of Pavement	402-5(E)	sparse usage of property

Thank you for your consideration.

Sincerely,



Applicant's Name

Katherine Weiss of
Bedford Design Consultants, Inc.
(See Authorization Sheet)

***Bedford Design Consultants* Inc.**
ENGINEERS AND SURVEYORS

592 Harvey Road Manchester, NH 03103
Telephone: (603) 622-5533 • www.bedforddesign.com

February 7, 2024

Franklin Planning Board
316 Central St
Franklin, NH 03235

RE: Waiver Request to Allow Gravel in Lieu of Pavement -Section 402-5(E)
Garage and Storage Site Plan
Commerce and Industrial Park Drive
Map 82 Lot 408-1

Members of the Board,

Bedford Design is submitting a waiver to the Driveway and Parking Lot Design and Construction Standards to allow a gravel storage area and driveway on the lot. The city normally requires areas to be paved. However, this development will be used by only a few people and the areas which will be gravel will be used for outdoor storage. The gravel area will be built to a standard that will allow it to be paved in the future, if needed. The entrance drive apron will be paved to keep the street clean. All the gravel areas will have sediment control devices in place. The main outdoor storage area has a deep sump catchbasin, and the entrance drive has a woodland buffer strip. Any runoff sediment will not affect the abutting lots or wetlands on site.

If you have any questions, please feel free to contact us at 603-622-5533.

Sincerely,

Bedford Design Consultants, Inc.



Katherine A. Weiss, PLA, ASLA
Project Manager

***Bedford Design Consultants* Inc.**
ENGINEERS AND SURVEYORS

592 Harvey Road Manchester, NH 03103
Telephone: (603) 622-5533 • www.bedforddesign.com

February 7, 2024

Franklin Planning Board
316 Central St
Franklin, NH 03235

RE: Waiver Request for Sight Distance Section 149-6.B
Warehouse & Storage Site Plan
Commerce Drive and Industrial Park Drive
Map 82 Lot 408-1

Members of the Board,

Bedford Design is submitting a waiver to the sight distance requirements. We have located the entrance drive directly across from an existing driveway on Industrial Park Drive. This arrangement is preferred by most traffic engineers, it also allows for the best access to the back of the site. The sight distance to the East meets city requirements, but the sight distance to the West does not. This is due to the road terminating at 191' to the left. The road ends at a gate. Traffic from this direction (west) is sparse with only the solar farm and a vacant parcel. This waiver should not affect public safety.

If you have any questions, please feel free to contact us at 603-622-5533.

Sincerely,

Bedford Design Consultants, Inc.



Katherine A. Weiss, PLA, ASLA
Project Manager

Bedford Design Consultants Inc.
ENGINEERS AND SURVEYORS

592 Harvey Road Manchester, NH 03103
Telephone: (603) 622-5533 • www.bedforddesign.com

February 7, 2024

Franklin Planning Board
316 Central St
Franklin, NH 03235

RE: Waiver Request for Post Development Peak Runoff Rates, Section 402-5(G)3(b)
Garage and Storage Site Plan
Commerce and Industrial Park Drive
Map 82 Lot 408-1

Members of the Board,

Bedford Design is submitting a waiver from the Stormwater requirements to allow a very small increase in runoff to the west and south abutters for the 10 and 25 year. Essentially, the HydroCAD drainage program, using Type A soils and the existing groundcover, is saying there is an increase runoff to the southern abutter, when there is not. Also, the increase is runoff to the western abutter is unavoidable, there must be an emergency outlet in the pond weir. Below is an explanation of the increase to each abutter.

Type A Soils

There are several factors which determine the flow leaving a site, these include type of soil; type of groundcover; and the steepness of the slope. Our site has Type A soils. These soils are sandy and water infiltrates into the ground very fast. Add to this the fact that the lot is currently forested, creates a very long 'time of concentration' (this is how long the water takes to flow through the drainage area). Because of this, all of our calculations show that there is no water leaving the site during the 2, 10, and 25 year storm events. This occurrence means that we cannot have any runoff for the post events, however, that is not possible, water must leave the site. You will see two different examples below of how Type A soils affect the site, and the ways in which we have described our solution to the dilemmas.

Southern Abutter

S30 (Subcatchment 30) flows towards the southern abutter. In Pre-Development, the area is 0.32 acres. In Post-Development the Subcatchment is split into two smaller areas that drain to the southern abutter for a smaller are of 0.17 acres. In both the pre and post development, the area is wooded, and the slopes remain the same. However, because of the smaller areas, the

'time of concentration' is less. Even though we have not touched these areas HydroCAD shows an increase in runoff. However, there will be no increase in runoff. The runoff area has been left in its natural state. This type of calculation error often happens when HydroCAD is used for smaller sites and the a Type A soil is on site. The existing runoff is 0 CFS and the proposed runoff is 0.01 CFS in a 10 year storm and 0.04 CFS in a 25 year storm event. To put this increase into perspective a $\frac{3}{4}$ " garden hose produces 0.02 CFS (9 gallons per minute).

Western Abutter

Similar to above, S40 (Subcatchment 40) has an increase in flow. However, this is due to a 1" weephole added into the outlet structure to allow the pond to drain in larger storms. We have designed the pond so that it holds the 50 year storm event. There is no outlet other than the 1" weephole and the grate at the top of the structure for storms greater than the 50 year event. As mentioned, a 1" weephole has been added to the weir in the structure, a weephole is standard, and allows the pond to drain if there were to ever be an issue with other parts of the outlet structure. This 1" hole accounts for the increase to the western abutter. The existing runoff is 0 CFS and the proposed runoff is 0.02 CFS for a 10 year storm and 0.02 CFS for a 25 year storm. As an example, picture a 1" garden hose on the ground and turned on. This is what will be flowing to the abutter during these events.

If you have any questions, please feel free to contact us at 603-622-5533.

Sincerely,

Bedford Design Consultants, Inc.



Katherine A. Weiss, PLA, ASLA
Project Manager

<u>PLAN INDEX</u>	<u>SHEET NO</u>
COVER SHEET	1
EXISTING CONDITIONS PLAN	2
SITE & LIGHTING PLAN	3
GRADING & UTILITY PLAN	4
SIGHT DISTANCE PLAN	5
ARCHITECTURAL PLAN	6
CONSTRUCTION DETAILS	7-9

GARAGE & SITE

COMMERCE & INDU

FRANKLIN, NE

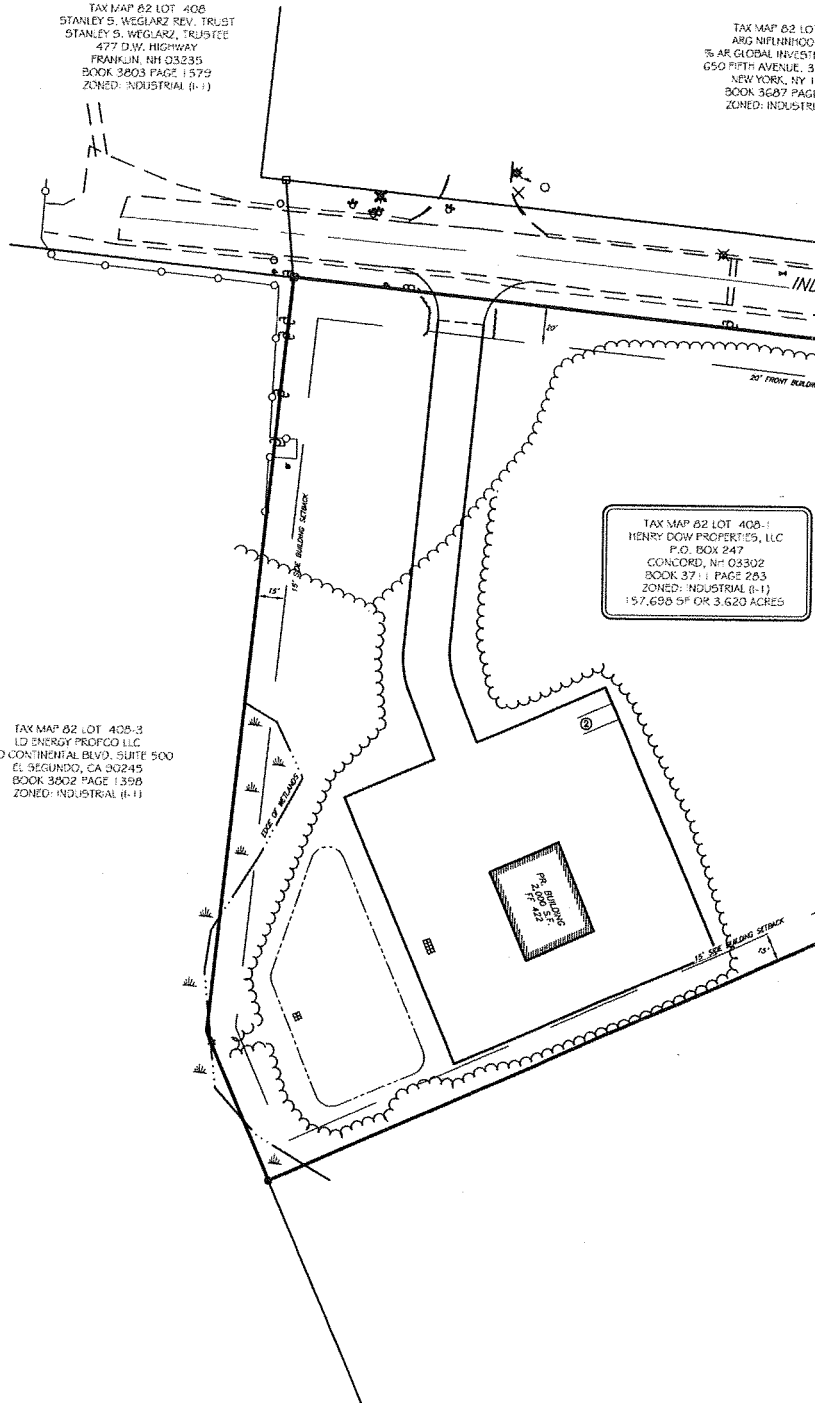


TAX MAP 62 LOT 406
STANLEY S. WEGLARZ REV. TRUST
STANLEY S. WEGLARZ, TRUSTEE
477 D.W. HIGHWAY
FRANKLIN, NH 03235
BOOK 3803 PAGE 1579
ZONED: INDUSTRIAL (I-1)

TAX MAP 62 LOT 407
ARG INFUND
% AR GLOBAL INVEST
650 FIFTH AVENUE, 3
NEW YORK, NY 1
BOOK 3807 PAGE
ZONED: INDUSTRIAL

TAX MAP 62 LOT 408-1
HENRY DOW PROPERTIES, LLC
P.O. BOX 247
CONCORD, NH 03302
BOOK 37-1 PAGE 283
ZONED: INDUSTRIAL (I-1)
157,690 SF OR 3.620 ACRES

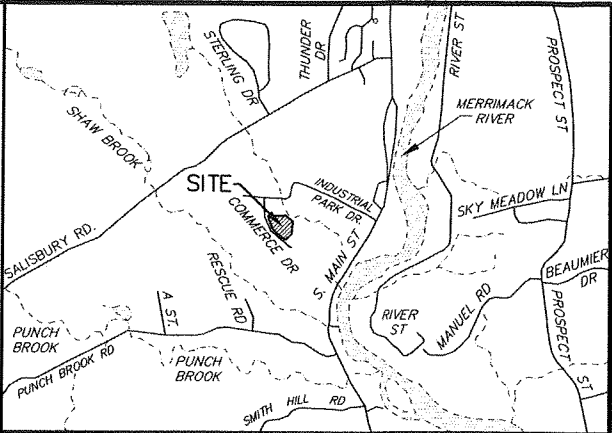
TAX MAP 62 LOT 408-3
LD ENERGY PROFCO LLC
400 CONTINENTAL BLVD, SUITE 500
EL SEGUNDO, CA 90245
BOOK 3802 PAGE 1390
ZONED: INDUSTRIAL (I-1)



PLAN INDEX	SHEET NO
COVER SHEET	1
EXISTING CONDITIONS PLAN	2
SITE & LIGHTING PLAN	3
GRADING & UTILITY PLAN	4
SIGHT DISTANCE PLAN	5
ARCHITECTURAL PLAN	6
CONSTRUCTION DETAILS	7-9

GARAGE & STORAGE SITE PLAN

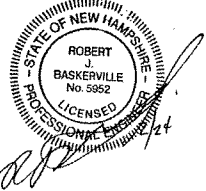
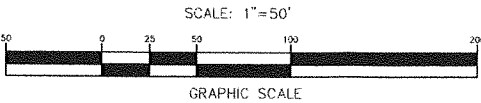
COMMERCE & INDUSTRIAL PARK DRIVE FRANKLIN, NEW HAMPSHIRE



LOCUS MAP
(1" = 2000')

- NOTES:**
- THE PURPOSE OF THIS PLAN IS TO TO SHOW A PROPOSED 2,000 S.F. EQUIPMENT WAREHOUSE FACILITY WITH PARKING, OUTDOOR STORAGE, AND DRAINAGE DESIGN.
 - OWNER OF RECORD:
TAX MAP 82 LOT 408-1
HENRY DOW PROPERTIES, LLC.
P.O. BOX 247
CONCORD, NH 03302
BOOK 3711 PAGE 283
 - TOTAL AREA: 157,698 S.F. AND 3.62 ACRES
 - PARCEL IS ZONED INDUSTRIAL (I-1)
 - DIMENSIONAL REQUIREMENTS**

	IND.
MIN. FRONTAGE	60'
MIN. LOT SIZE	40,000 S.F.
FRONT BUILDING SETBACK	20'
SIDE BUILDING SETBACK	15'
REAR BUILDING SETBACK	20'
WETLAND SETBACK	NONE
MAX. BUILDING HEIGHT	35'
 - THE SITE WILL BE SERVED BY ELECTRICAL, MUNICIPAL SEWER AND WATER AS WELL NATURAL GAS, ARE AVAILABLE, BUT IF POSSIBLE, WILL NOT BE USED AT THIS TIME.
 - PARKING CALCULATIONS:**
INDUSTRIAL (CLOSEST TO MANUFACTURING USE)
2 SPACES PER 3 EMPLOYEES PER SHIFT
 $1 \text{ EMPLOYEES PER SHIFT} / 3 = 0.33 \times 2 \text{ SPACES} = 1 \text{ REQUIRED}$
2 PROPOSED
 - THE SUBJECT PROPERTY IS NOT LOCATED IN THE 100-YR FLOOD PLAN AS PER THE FLOOD INSURANCE RATE MAP, MERRIMACK COUNTY #3301300166, EFFECTIVE DATE APRIL 19, 2010.
 - TOPOGRAPHY WAS GENERATED FROM LIDAR INFORMATION OBTAINED FROM NH GRANIT.
 - WETLANDS WERE DELINEATED BY LUKE HURLEY, C.W.S. OF BSC GROUP, INC. IN AUGUST OF 2023.
 - PLEASE SEE THE EXISTING CONDITIONS PLAN FOR PLAN REFERENCE INFORMATION. BEDFORD DESIGN DID NOT PERFORM A BOUNDARY SURVEY.
 - THE FOLLOWING WAIVERS ARE REQUESTED:
 - DRIVEWAY AND PARKING LOT DESIGN AND CONSTRUCTION STANDARDS SECTION 402-5(E)
 - LOCATION OF ESTIMATED SEASONAL HIGH WATER TABLE (TEST PIT) SECTION 402-5(9)(3)n.
 - A WAIVER FROM SIGHT DISTANCE
 - A WAIVER FOR INCREASED RUNOFF TO THE WESTERN AND SOUTHERN ABUTTER
 - ALL LANDSCAPING SHOWN ON THE PLANS SHALL BE MAINTAINED AND ANY DEAD OR DYEING VEGETATION SHALL BE REPLACED IN A TIMELY MANNER AS LONG AS THIS SITE PLAN REMAINS VALID.
 - SNOW SHALL BE REMOVED AND STORED SUCH THAT THE DRAINAGE STRUCTURES CAN FUNCTION PROPERLY AND THE REQUIRED PARKING SPACES CAN BE UTILIZED.
 - NO SIGN IS PROPOSED AT THIS TIME. A SIGN PERMIT WILL BE REQUIRED.



OWNER'S SIGNATURE
NAME Robert J. Baskerville DATE 3/7/24
See Authorization Sheet

APPROVED BY THE TOWN OF FRANKLIN PLANNING BOARD
SIGNATURE _____ DATE _____
SIGNATURE _____ DATE _____

DATE	DESCRIPTION	BY	REV.

TAX MAP 82 LOT 408-1

COVER SHEET

GARAGE & STORAGE SITE PLAN

LOCATED AT:

COMMERCE DRIVE

FRANKLIN, NEW HAMPSHIRE

PREPARED FOR:

GILMAN CARPENTRY

35 OAK ST

FRANKLIN, NH 03235

PROPERTY OWNER:

HENRY DOW PROPERTIES, LLC

P.O. BOX 247

CONCORD, NH 03302

SCALE: 1" = 50'

DECEMBER 12, 2023

SHEET 1 OF 9

DESIGN:

KAW

DRAWN:

KAW

CHECKED:

RJB

FB:

###

PG:

###

1733-01

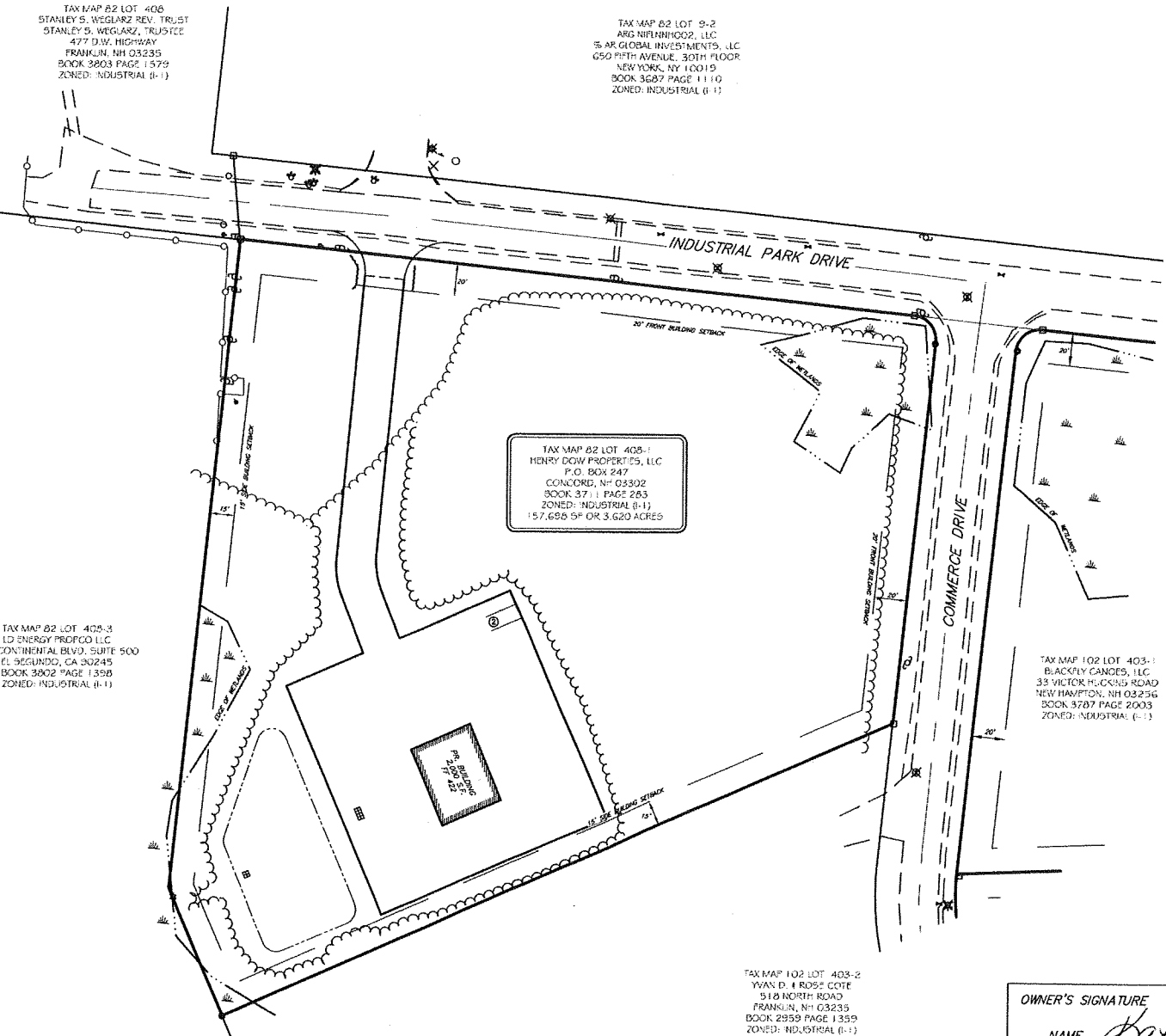
Bedford Design Consultants Inc.

ENGINEERS AND SURVEYORS

592 Harvey Road, Manchester, NH 03103

Telephone: (603) 622-5533

www.bedforddesign.com



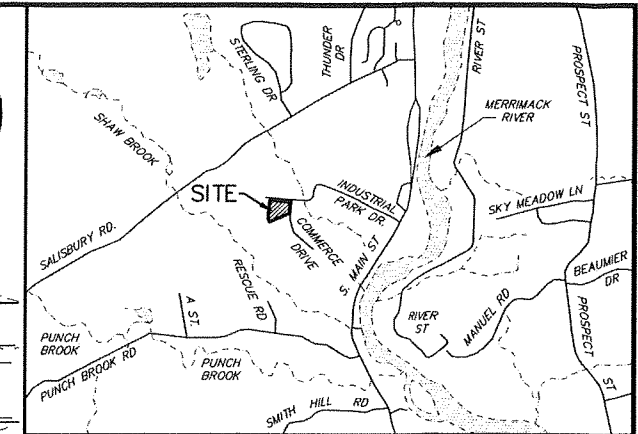
PLAN REFERENCES:

1. "BOUNDARY LINE ADJUSTMENT BETWEEN TAX MAP 082, LOT 408-01 STANLEY S. WEGLARZ AND TAX MAP 102, LOT 403-02 F.I.P. EXPANSION, LLC INDUSTRIAL DRIVE FRANKLIN, NEW HAMPSHIRE MERRIMACK COUNTY" DATED DECEMBER 5, 2006, PREPARED BY BRIAN D. CROCKETT, LLS NO. 760 OF LEPENE ENGINEERING & SURVEYING, M.C.R.D. PLAN # 18293.
2. "BOUNDARY LINE ADJUSTMENT BETWEEN TAX MAP 102 LOT 403-1 F.I.P. EXPANSION, LLC AND TAX MAP 102 LOT 403-3 F.I.P. EXPANSION, LLC COMMERCE DRIVE FRANKLIN, NEW HAMPSHIRE MERRIMACK COUNTY" PREPARED BY DETZEL LAND SERVICES, DATED DECEMBER 2020, M.C.R.D. PLAN #202100005879.
3. "TAX MAP 102, LOT 403 SUBDIVISION PLAN FOR EXPANSION, LLC INDUSTRIAL PARK DRIVE FRANKLIN, NEW HAMPSHIRE MERRIMACK COUNTY" PREPARED BY LEPENE ENGINEERING & SURVEYING, DATED JUNE 2006 REVISED AUGUST 2006, M.C.R.D. PLAN #18134.
4. "CORRECTIVE PLAN ORIGINAL PLAN RECORDED AS PLAN #202100005879 TITLED: "BOUNDARY LINE ADJUSTMENT" BETWEEN TAX MAP 102 LOT 403-01 F.I.P. EXPANSION, LLC AND TAX MAP 02 LOT 403-03 F.I.P. EXPANSION, LLC COMMERCE DRIVE FRANKLIN, NEW HAMPSHIRE MERRIMACK COUNTY" PREPARED BY DETZEL LAND SERVICES LAST REVISED JANUARY 2022, M.C.R.D. PLAN #202200002081.

WETLAND CERTIFICATION

WETLANDS WERE DELINEATED BY LUKE D. HURLEY, CWS OF BSC GROUP IN AUGUST 2023, UTILIZING THE FOLLOWING STANDARDS:

1. REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHEASTAL AND NORTHEAST REGION, (VERSION 2.0) JANUARY 2012, U.S. ARMY CORPS OF ENGINEERS.
2. FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, A GUIDE FOR IDENTIFYING AND DELINEATING HYDRIC SOILS, VERSION 8.2, UNITED STATES DEPARTMENT OF AGRICULTURE (2018).
3. NEW ENGLAND HYDRIC SOILS TECHNICAL COMMITTEE, 2019 VERSION 4, FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION, LOWELL, MA.
4. NATIONAL WETLAND PLANT LIST, VERSION 3.2 (2016).



LOCUS MAP

SCALE: 1" = 2000'

NOTES:

1. OWNER OF RECORD:
TAX MAP 82 LOT 408-1
HENRY DOW PROPERTIES, LLC
P.O. BOX 247
CONCORD, NH 03302
BOOK 3711 PAGE 283
2. THE PURPOSE OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS ON TAX MAP 82 LOT 408-1.
3. LOT SIZE: 157,698 SF OR 3.620 ACRES PER PLAN REFERENCE NO. 1.
4. THIS PARCEL IS ZONED INDUSTRIAL (I-1).
5. DIMENSIONAL REQUIREMENTS
MINIMUM LOT SIZE: 40,000 SF
MINIMUM FRONTAGE: 80 FT
FRONT SETBACK: 20 FT
SIDE SETBACK: 15 FT
REAR SETBACK: 20 FT
* THESE REQUIREMENTS ARE FOR LOTS WITH OFF-LOT CITY SEWER AND WATER
** WHEN A PROPOSED BUILDING IN THE I-1 ZONING DISTRICT WOULD ABUT AN INDUSTRIAL ZONED LOT, THE FRONT, REAR & SIDE SETBACKS CAN BE REDUCED TO THE SETBACKS SHOWN ABOVE.
6. THE SITE WILL BE SERVED BY MUNICIPAL SEWER AND WATER.
7. THE BOUNDARY SHOWN WAS COPIED FROM PLAN REFERENCE NO. 1. BEDFORD DESIGN CONSULTANTS, INC. DID NOT PERFORM A BOUNDARY SURVEY.
8. THE SUBJECT PROPERTY IS NOT LOCATED IN THE 100-YEAR FLOOD PLAIN PER THE FLOOD INSURANCE RATE MAP, MERRIMACK COUNTY #33013001066, EFFECTIVE DATE APRIL 19, 2010.
9. TOPOGRAPHY WAS GENERATED FROM LIDAR INFORMATION OBTAINED FROM NH GRANIT.

TEST PIT DATA

ALL TEST PITS PERFORMED BY:
LUKE D. HURLEY, CWS #095 OF BSC GROUP ON 9/28/2023

TEST PIT NO. 1, ELEV. 410.1
0-6, 10YR3/2, FINE SANDY LOAM, GRANULAR, FRIABLE
6-20, 10YR4/4, FINE SANDY LOAM, GRANULAR, FRIABLE
20-26, 2.5Y5/4, FINE SANDY LOAM, GRANULAR, FRIABLE
26-33, 2.5Y4/3, VERY FINE SAND, OM, FIRM IN PLACE
33-39, 10YR4/6, FINE SAND, GRANULAR, FRIABLE, REDOX 25%
39-64, 2.5Y4/4, VERY FINE SAND, OM, FIRM IN PLACE, REDOX 25%
ESHW: 33", OBSERVED WATER: NONE @ 60"
TERMINATION @ 64", REFUSAL: NONE, INFILTRATION RATE: 4.3 MIN/INCH

TEST PIT NO. 2, ELEV. 416.5
0-6, 10YR3/2, FINE SANDY LOAM, GRANULAR, FRIABLE
6-22, 10YR4/4, FINE SANDY LOAM, GRANULAR, FRIABLE
22-48, 2.5Y5/4, FINE SANDY LOAM, GRANULAR, FRIABLE
48-74, 2.5Y5/3, FINE SAND, GRANULAR, LOOSE, REDOX 15%
ESHW: 48", OBSERVED WATER @ 70"
TERMINATION @ 74", REFUSAL: NONE

SCALE: 1" = 30'



LEGEND

- BOUNDARY/PROPERTY LINE
- ABUTTING PROPERTY LINE
- BUILDING SETBACK LINE
- EXISTING ROAD/DRIVEWAY
- 290 - EXISTING CONTOUR
- OHW - EXISTING OVERHEAD WIRES
- W - EXISTING WATER LINES
- S - EXISTING SEWER LINES
- EDGE OF JURISDICTIONAL WETLANDS
- EXISTING CHAINLINK FENCE
- EXISTING TREELINE
- REBAR FOUND
- STONE BOUND FOUND
- TELEPHONE POLE
- GUY WIRE
- TEST PIT LOCATION
- SEWER MANHOLE
- EXISTING HYDRANT
- EXISTING WATER SHUTOFF
- EXISTING WATER GATE
- WETLANDS
- BENCHMARK

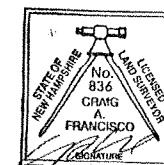


G:\PROJECT\1733001 Gilman Industrial\DWG\1733001.svd01.dwg

SURVEYOR CERTIFICATION

"I HEREBY CERTIFY THAT THIS SURVEY AND PLAT WERE PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION."

"I HEREBY CERTIFY THAT THIS PLAN IS THE RESULT OF AN ACTUAL FIELD SURVEY MADE ON THE GROUND AND HAS AN ERROR OF CLOSURE OF GREATER ACCURACY THAN ONE PART IN TEN THOUSAND (1:10,000)."



2-7-24
DATE

TAX MAP 82 LOT 408-1				
EXISTING CONDITIONS PLAN GARAGE & STORAGE SITE PLAN LOCATED AT: COMMERCE DRIVE FRANKLIN, NEW HAMPSHIRE				
PREPARED FOR:		PROPERTY OWNER:		
GILMAN CARPENTRY 35 OAK ST. FRANKLIN, NH 03235		HENRY DOW PROPERTIES, LLC P.O. BOX 247 CONCORD, NH 03302		
SCALE: 1" = 30'		OCTOBER 10, 2023		SHEET 2 OF 9
DESIGN:	DRAWN:	CHECKED:	FB:	PG:
C.A.F.	M.K.H.	C.A.F.	644	080
1733-01				
Bedford Design Consultants, Inc. ENGINEERS AND SURVEYORS 592 Harvey Road, Manchester, NH 03103 Telephone: (603) 622-5533 www.bedforddesign.com				



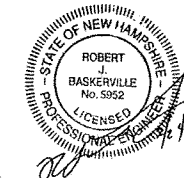
WETLAND CERTIFICATION

WETLANDS WERE DELINEATED BY LUKE D. HURLEY, CWS OF BSC GROUP IN AUGUST 2023, UTILIZING THE FOLLOWING STANDARDS:

- REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTH-CENTRAL AND NORTHEAST REGION, (VERSION 2.0) JANUARY 2012, U.S. ARMY CORPS OF ENGINEERS.
- FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, A GUIDE FOR IDENTIFYING AND DELINEATING HYDRIC SOILS, VERSION 8.2, UNITED STATES DEPARTMENT OF AGRICULTURE (2018).
- NEW ENGLAND HYDRIC SOILS TECHNICAL COMMITTEE, 2019 VERSION 4, FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND. NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION, LOWELL, MA.
- NATIONAL WETLAND PLANT LIST, VERSION 3.2 (2016).

LEGEND

- PROPOSED CONTOUR
- EXISTING CONTOUR
- PROPOSED SPOT GRADE
- EXISTING SPOT GRADE
- EDGE OF JURISDICTIONAL WETLANDS
- WETLAND SYMBOL
- PROPOSED TREE LINE
- EXISTING TREE LINE
- EXISTING ROADWAY
- PROPOSED RETAINING WALL
- PROPOSED DRIVEWAY
- PROFILE STATION NUMBERS
- ABUTTING PROPERTY LINE
- PROPERTY LINE
- BUILDING SETBACK LINE
- PROPOSED GAS LINE
- PROPOSED WATER LINE
- EXISTING WATER LINE
- PROPOSED SEWER LINE
- EXISTING SEWER LINE
- PROPOSED DRAIN LINE
- PROPOSED UNDERGROUND ELECTRIC
- EXISTING OVERHEAD WIRES
- PROPOSED CATCH BASIN
- EXISTING CATCH BASIN
- EXISTING HYDRANT
- EXISTING UTILITY POLE
- EXISTING GUY WIRE
- EXISTING WATER SHUTOFF
- PROPOSED WATER SHUTOFF
- EXISTING GATE VALVE
- PROPOSED GATE VALVE
- PROPOSED LIGHT
- SEWER MANHOLE
- DRAIN MANHOLE
- # OF PARKING SPACES
- PROPOSED BUILDING
- TREATMENT BUFFER
- PROPOSED SILT FENCE
- TEST PIT
- PROPOSED STRAW BALE
- RIPRAP
- WATER FLOW ARROW



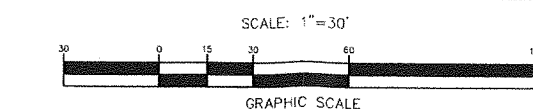
PLANT LIST SEE DETAIL SHEETS FOR LANDSCAPE DETAILS AND NOTES

QUANTITY	KEY	BOTANICAL NAME	COMMON NAME	MATURE SIZE	PURCHASE SIZE
6	JV	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	30'-40'H x 15'-20"W	7'-8' B&B
3	PG	PICEA GLAUCOA	WHITE SPRUCE	40'-60' x 15'-20"W	6'-7' B&B
5	PS	PINUS STRUBUS 'FASTIGIATA'	FASTIGIATA WHITE PINE	60' x 15'-20"W	6'-7' B&B

LIGHTING NOTES

WALL MOUNTED LIGHT HEIGHT IS 15 FEET. WALL UNIT IS ICA DARK SKY COMPLIANT.

Luminaire Schedule						
Qty	Label	Arrangement	Lumens	Input Watts	LLF	BUG Rating
4		WALLPACK	6076	52	0.850	B1-U0-G2



GRAPHIC SCALE

DATE	DESCRIPTION	BY	REV.

TAX MAP 82 LOT 408-1 SITE, LANDSCAPE, & LIGHTING PLAN GARAGE & STORAGE SITE PLAN

LOCATED AT:

COMMERCE DRIVE
FRANKLIN, NEW HAMPSHIRE
PREPARED FOR: GILMAN CARPENTRY
35 OAK ST
FRANKLIN, NH 03235
PROPERTY OWNER: HENRY DOW PROPERTIES, LLC
P.O. BOX 247
CONCORD, NH 03302

SCALE: 1" = 30' DECEMBER 12, 2023 SHEET 3 OF 9

DESIGN: KAW DRAWN: KAW CHECKED: RJB FB: PG: 1733-01

Bedford Design Consultants Inc.
ENGINEERS AND SURVEYORS
592 Harvey Road, Manchester, NH 03103
Telephone: (603) 622-5533
www.bedforddesign.com



WETLAND CERTIFICATION

WETLANDS WERE DELINEATED BY LUKE D. HURLEY, CWS OF BSC GROUP IN AUGUST 2023, UTILIZING THE FOLLOWING STANDARDS:

- REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTH-CENTRAL AND NORTHEAST REGION, (VERSION 2.0) JANUARY 2012, U.S. ARMY CORPS OF ENGINEERS.
- FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, A GUIDE FOR IDENTIFYING AND DELINEATING HYDRIC SOILS, VERSION 8.2, UNITED STATES DEPARTMENT OF AGRICULTURE (2018).
- NEW ENGLAND HYDRIC SOILS TECHNICAL COMMITTEE, 2019 VERSION 4, FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION, LOWELL, MA.
- NATIONAL WETLAND PLANT LIST, VERSION 3.2 (2016).

EROSION CONTROL NOTES

- SEE DETAIL SHEET 1 FOR CONSTRUCTION SEQUENCE.
- A STOCKPILE AREA IS SHOWN ON THE PLAN.
- SILT FENCE AND STRAW BALES SHALL BE USED FOR EROSION CONTROL PROTECTION.
- THREE BMP'S ARE PROPOSED FOR THIS PROJECT: A DEEP SUMP CATCHBASIN, WOODLAND BUFFER STRIP, AND DETENTION (INFILTRATION) POND.
- A COPY OF THE INSPECTION AND MAINTENANCE MANUAL IS ON FILE AT THE CITY OF FRANKLIN.

TEST PIT DATA

ALL TEST PITS PERFORMED BY:
LUKE D. HURLEY, CSS #395 OF BSC GROUP ON 9/28/2023

TEST PIT NO. 1, ELEV. 410.1

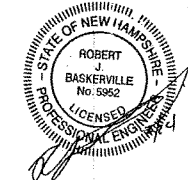
0-6, 10YR3/2, FINE SANDY LOAM, GRANULAR, FRIABLE
6-20, 10YR4/4, FINE SANDY LOAM, GRANULAR, FRIABLE
20-26, 2.5Y5/4, FINE SANDY LOAM, GRANULAR, FRIABLE
26-33, 2.5Y4/3, VERY FINE SAND, OM, FIRM IN PLACE
33-39, 10YR4/6, FINE SAND, GRANULAR, FRIABLE, REDOX 25%
39-64, 2.5Y4/4, VERY FINE SAND, OM, FIRM IN PLACE, REDOX 25%
ESHW: 33", OBSERVED WATER: NONE @ 60"
TERMINATION @ 64", REFUSAL: NONE, INFILTRATION RATE: 4.3 MIN/INCH

TEST PIT NO. 2, ELEV. 417.0

0-6, 10YR3/2, FINE SANDY LOAM, GRANULAR, FRIABLE
6-22, 10YR4/4, FINE SANDY LOAM, GRANULAR, FRIABLE
22-48, 2.5Y6/4, FINE SANDY LOAM, GRANULAR, FRIABLE
48-74, 2.5Y5/3, FINE SAND, GRANULAR, LOOSE, REDOX 15%
ESHW: 48", OBSERVED WATER @ 70"
TERMINATION @ 74", REFUSAL: NONE

LEGEND

- PROPOSED CONTOUR
- EXISTING CONTOUR
- PROPOSED SPOT GRADE
- EXISTING SPOT GRADE
- EDGE OF JURISDICTIONAL WETLANDS
- WETLAND SYMBOL
- PROPOSED TREE LINE
- EXISTING TREE LINE
- EXISTING ROADWAY
- PROPOSED RETAINING WALL
- PROPOSED DRIVEWAY
- PROFILE STATION NUMBERS
- ABUTTING PROPERTY LINE
- PROPERTY LINE
- BUILDING SETBACK LINE
- PROPOSED GAS LINE
- PROPOSED WATER LINE
- EXISTING WATER LINE
- PROPOSED SEWER LINE
- EXISTING SEWER LINE
- PROPOSED DRAIN LINE
- PROPOSED UNDERGROUND ELECTRIC
- EXISTING OVERHEAD WIRES
- PROPOSED CATCH BASIN
- EXISTING CATCH BASIN
- EXISTING HYDRANT
- EXISTING UTILITY POLE
- EXISTING GUY WIRE
- EXISTING WATER SHUTOFF
- PROPOSED WATER SHUTOFF
- EXISTING GATE VALVE
- PROPOSED GATE VALVE
- PROPOSED LIGHT
- SEWER MANHOLE
- DRAIN MANHOLE
- # OF PARKING SPACES
- PROPOSED BUILDING
- TREATMENT BUFFER
- PROPOSED SILT FENCE
- TEST PIT
- PROPOSED STRAW BALE
- RIPRAP
- WATER FLOW ARROW



TAX MAP 82 LOT 408-1

GRADING & EROSION PLAN GARAGE & STORAGE SITE PLAN

LOCATED AT:

COMMERCE DRIVE
FRANKLIN, NEW HAMPSHIRE

PREPARED FOR:
GILMAN CARPENTRY
35 OAK ST
FRANKLIN, NH 03235

PROPERTY OWNER:
HENRY DOW PROPERTIES, LLC
P.O. BOX 247
CONCORD, NH 03302

SCALE: 1" = 30'

DECEMBER 12, 2023

SHEET 4 OF 9

DESIGN:

DRAWN:

CHECKED:

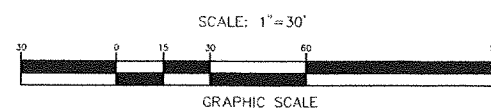
FB:

PG:

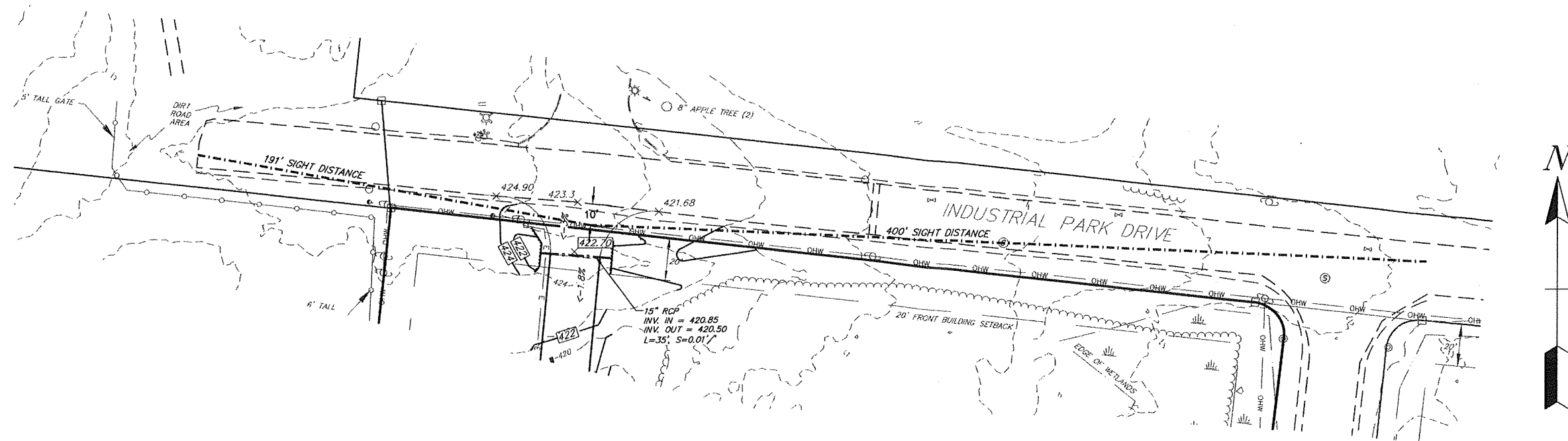
1733-01

Bedford Design Consultants Inc.
ENGINEERS AND SURVEYORS

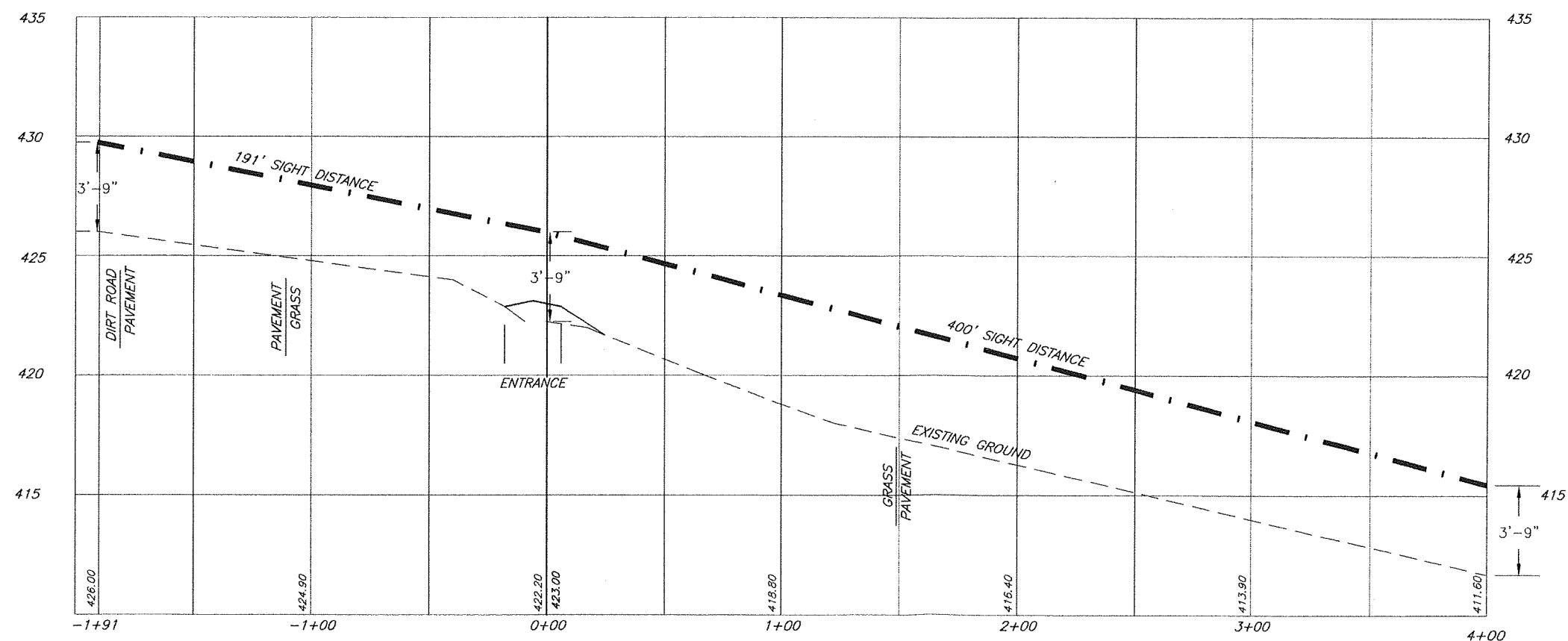
592 Harvey Road, Manchester, NH 03103
Telephone: (603) 622-5533
www.bedforddesign.com



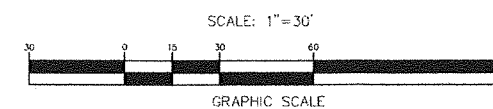
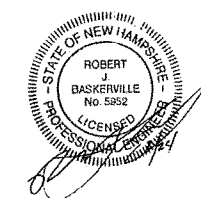
DATE	DESCRIPTION	BY	REV.



SIGHT DISTANCE PLAN
SCALE: 1" = 30'



SIGHT DISTANCE PROFILE



TAX MAP 82 LOT 408-1

*SIGHT DISTANCE PLAN
GARAGE & STORAGE SITE PLAN*

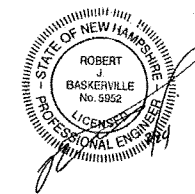
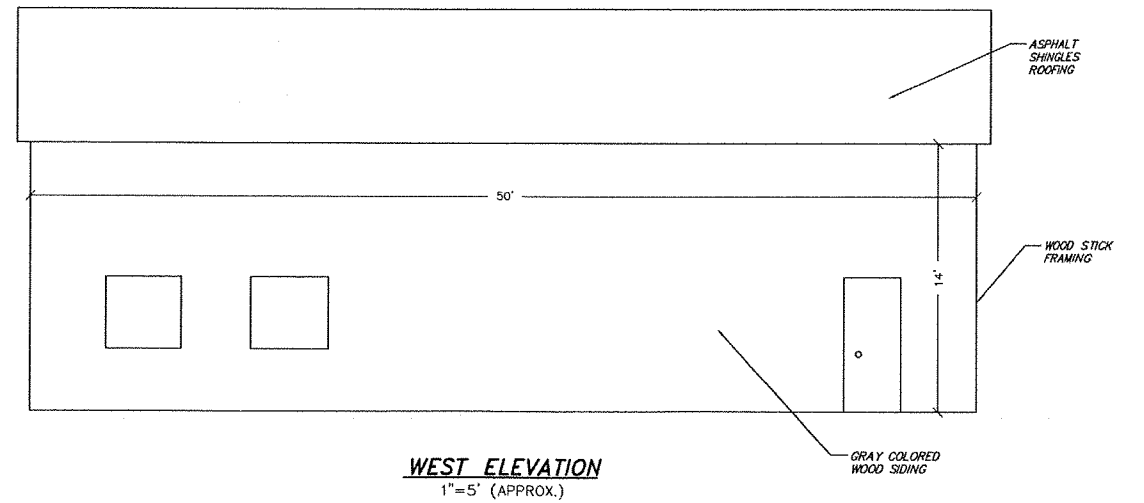
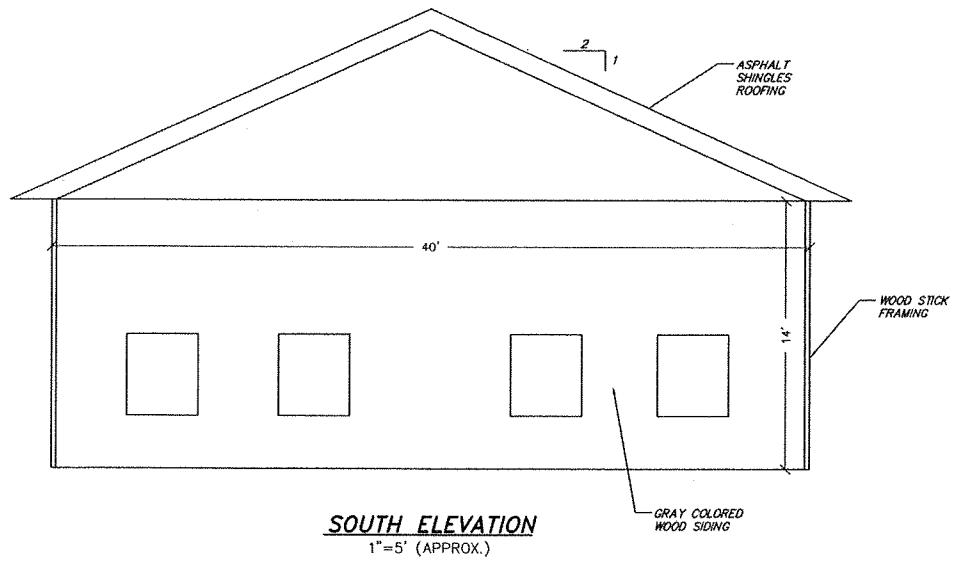
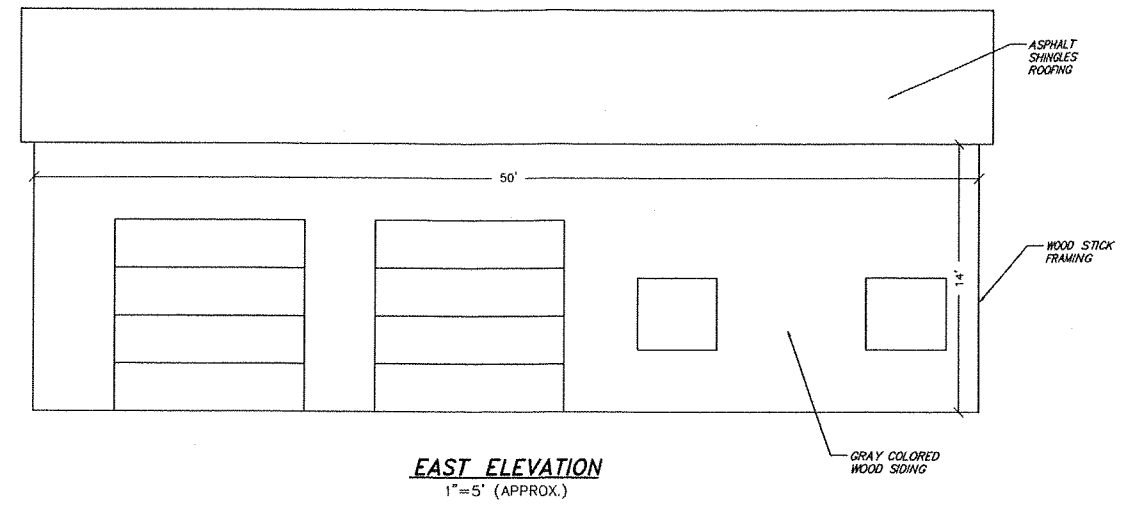
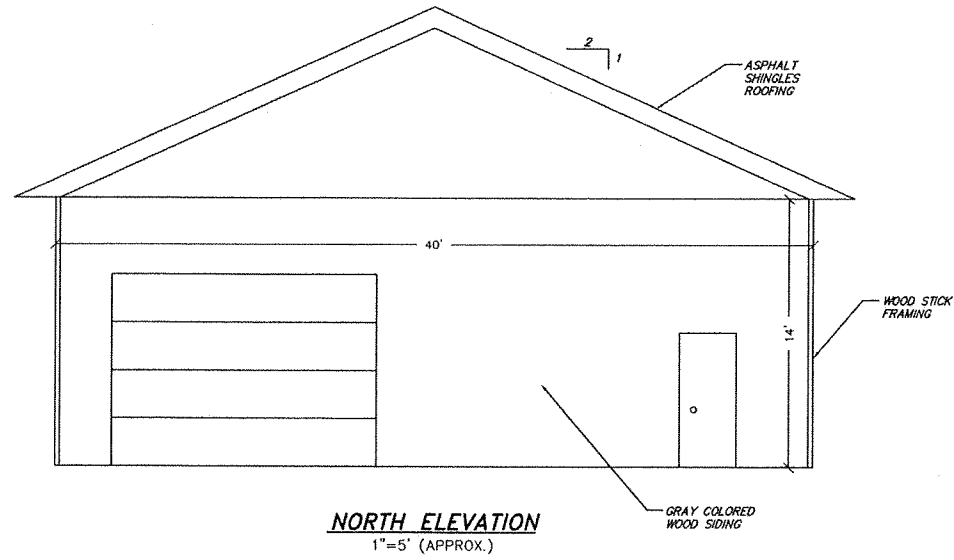
LOCATED AT:
COMMERCE DRIVE
FRANKLIN, NEW HAMPSHIRE
PREPARED FOR: PROPERTY OWNER:
GILMAN CARPENTRY HENRY DOW PROPERTIES, LLC
35 OAK ST P.O. BOX 247
FRANKLIN, NH 03235 CONCORD, NH 03302

SCALE: AS NOTED	DECEMBER 12, 2023	SHEET 5 OF 9
-----------------	-------------------	--------------

DESIGN:	DRAWN:	CHECKED:	FB:	PG:	1733-01
KAW	KAW	RJR	###	###	

Bedford Design Consultants Inc.
ENGINEERS AND SURVEYORS
592 Harvey Road, Manchester, NH 03103
Telephone: (603) 622-5533
www.bedforddesign.com





TAX MAP 82 LOT 408-1			
ARCHITECTURAL PLAN			
GARAGE & STORAGE SITE PLAN			
LOCATED AT:			
COMMERCE DRIVE			
FRANKLIN, NEW HAMPSHIRE			
PREPARED FOR:		PROPERTY OWNER:	
GILMAN CARPENTRY		HENRY DOW PROPERTIES, LLC	
35 OAK ST		P.O. BOX 247	
FRANKLIN, NH 03235		CONCORD, NH 03302	
SCALE: AS NOTED	DECEMBER 12, 2023	SHEET 6 OF 9	
DESIGN:	DRAWN:	CHECKED:	FB: PG:
KAW	KAW	RUB	### 1733-01
Bedford Design Consultants Inc.			
ENGINEERS AND SURVEYORS			
592 Harvey Road, Manchester, NH 03103			
Telephone: (603) 622-5533			
www.bedforddesign.com			

DATE	DESCRIPTION	BY	REV.

GENERAL CONSTRUCTION NOTES:

- BOTH THE CONTRACTOR AND OWNER NEED TO SUBMIT A SEPARATE "NOTICE OF INTENT" TO BE COVERED BY THE N.H.O.E.S. GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES.
- A MANDATORY PRECONSTRUCTION MEETING SHALL BE HELD WITH THE TOWN, CONTRACTOR, OWNER, AND ALL UTILITY REPRESENTATIVES PRIOR TO CONSTRUCTION. NO WORK SHALL BEGIN UNTIL APPROVAL BY THE TOWN HAS BEEN OBTAINED.
- ALL CONSTRUCTION MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPROPRIATE SECTION OF THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS (LATEST EDITION) AND LOCAL REGULATIONS.
- ANY SUBSTITUTIONS OF MATERIALS SHALL BE APPROVED BY THE ENGINEER IN WRITING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED LOCAL AND STATE CONSTRUCTION PERMITS PRIOR TO BEGINNING WORK.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THESE DRAWINGS AND ACTUAL FIELD CONDITIONS PRIOR TO BEGINNING CONSTRUCTION.
- SHOULD GROUND WATER OR UNSUITABLE MATERIALS BE ENCOUNTERED DURING CONSTRUCTION, THE ENGINEER SHALL BE CONTACTED IMMEDIATELY FOR DETERMINATION OF POSSIBLE CONSTRUCTION DESIGN CHANGES SUCH AS (BUT NOT LIMITED TO) UNDERDRAINS OR ALIGNMENT AND GRADE CHANGES.
- CLEARING THE SITE SHALL INCLUDE THE REMOVAL AND DISPOSAL OF DOWN TIMBER, RUBBISH AND DEBRIS FOUND EXISTING WITHIN THE AREAS TO BE CLEARED. CLEARING SHALL NOT TAKE PLACE UNTIL THE CONTRACTOR HAS DETERMINED FROM THE OWNER WHICH TREES ARE TO BE SAVED WITHIN THE CLEARING LIMITS.
- PAVEMENT OF THE DRIVEWAY SHALL CONSIST OF A HOT BITUMINOUS LAYER, A CRUSHED GRAVEL LAYER AND A GRAVEL SUBBASE LAYER.
 - BITUMINOUS TYPE F WEARINGS AND TYPE B BASE COURSES SHALL BE CONSTRUCTED PER N.H.D.O.T. SPECIFICATION 401 CONSTRUCTION REQUIREMENTS.
 - GRAVEL SHALL MEET THE REQUIREMENTS OF N.H.D.O.T. 304.2.
 - THE CRUSHED GRAVEL SHALL MEET THE REQUIREMENTS OF N.H.D.O.T. 304.3.
 - REFER TO THE TYPICAL CROSS SECTION DETAIL FOR DIMENSIONS.
- COMPACTION OF BACKFILL:
 - GRASSSED AREAS: EMBANKMENT FILL AREAS SHALL CONSIST OF COMMON FILL PLACED IN 12 INCH LIFTS AND COMPACTED TO 90% ROADWAY.
 - THE COMPACTION REQUIREMENTS FOR MATERIALS PLACED AS BACKFILL, SUBGRADE, BASE COURSE AND PAVEMENT SHALL BE AS SPECIFIED FOR EACH SEPARATE ITEM IN THE N.H.D.O.T. "STANDARD SPECIFICATIONS" FOR ROAD AND BRIDGE CONSTRUCTION.
- CATCH BASINS AND MANHOLES SHALL BE PRE-CAST REINFORCED CONCRETE DESIGNED BY AN ENGINEER REGISTERED IN THE STATE OF NEW HAMPSHIRE AND ABLE TO WITHSTAND LOADINGS OF 8 TONS (H=20 LOADING).
- TRENCH CONSTRUCTION WILL CONFORM WITH SECTION 603.3.1. OF THE N.H.D.O.T. STANDARD SPECIFICATIONS (LATEST EDITION).
- WOOD SHEETING OR A SUITABLE TRENCH BOX SHALL BE USED TO SUPPORT THE TRENCH AS NECESSARY. IF WOOD SHEETING IS USED, IT SHALL BE DRIVEN AT A DISTANCE OF ONE FOOT FROM THE OUTSIDE DIAMETER OF THE PIPE TO A DEPTH SIX INCHES BELOW THE INVERT OF THE PIPE. WOOD SHEETING SHALL BE CUT OFF AND LEFT IN PLACE TO AN ELEVATION NOT LESS THAN ONE FOOT ABOVE THE TOP OF THE PIPE, BUT NOT GREATER THAN THREE FEET BELOW THE FINISHED GRADE.
- TRENCH BEDDING SHALL CONFORM WITH SECTION 603.3.2. OF THE STANDARD SPECIFICATIONS (LATEST EDITION). FIRST CLASS BEDDING WILL BE REQUIRED FOR ALL PIPES 48" OR MORE IN DIAMETER OR SPAN.
- BACKFILL MATERIAL FOR TRENCHES WILL CONFORM WITH SECTION 603.3.5. OF THE STANDARD SPECIFICATIONS (LATEST EDITION) AND IN ADDITION, SHALL EXCLUDE DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTE, TOP SOIL, ALL NET OR SOFT MUCK, PEAT OR CLAY, ALL EXCAVATED LEDGE MATERIAL, ALL ROCKS OVER SIX INCHES IN LARGEST DIMENSION, OR ANY MATERIAL WHICH AS DETERMINED BY THE ENGINEER, WILL NOT PROVIDE SUFFICIENT SUPPORT OR MAINTAIN THE COMPLETED CONSTRUCTION IN A STABLE CONDITION. BACKFILL SHALL NOT BE PLACED ON FROZEN MATERIAL.
- COMPACTION OF TRENCH BACKFILL AND PIPE BEDDING SHALL BE SIX INCH LIFTS FOR BEDDING AND BACKFILL TO A PLANE ONE FOOT ABOVE THE PIPE AND IN 12 INCH LIFTS THEREAFTER BY AN APPROVED MECHANICAL COMPACTOR.
- SHOULD FROZEN MATERIAL BE ENCOUNTERED, IT SHALL NOT BE PLACED IN THE BACKFILL NOR SHALL BACKFILL BE PLACED UPON FROZEN MATERIAL.
- THE DISTURBED AREA SHALL BE KEPT TO A MINIMUM. DISTURBED AREAS REMAINING IDLE FOR MORE THAN 30 DAYS SHALL BE STABILIZED.
- ALL SEEDD AREAS SHALL BE MULCHED WITHIN 24 HOURS AFTER SEEDING. A GOOD QUALITY OF STRAW MULCH SHOULD BE USED AND APPLIED AT THE RATE OF 2 TONS PER ACRE.
- BASIN FLOORS IN THE INFILTRATION BASINS ARE TO BE DEEPLY TILLED TO RESTORE INFILTRATION RATES, FOLLOWED BY A PASS WITH A LEVELING DRAG PRIOR TO FINAL SEEDING. STORMWATER FLOWS SHALL NOT BE DIRECTED TO THE INFILTRATION BASINS, SWALES, OR DITCHES UNTIL ALL CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
- ALL SLOPES GREATER THAN 3:1 MUST BE MATTED WITH NORTH AMERICAN GREEN S150BN EROSION CONTROL BLANKETING.
- THE PROJECT SHALL BE MANAGED TO MEET THE REQUIREMENTS OF AND INTENT OF RSA 430:51-57 AND Ag 3800 RELATIVE TO INVASIVE SPECIES. AND FUGITIVE DUST IS TO BE CONTROLLED IN ACCORDANCE WITH ENV-A 1000.
- THE CITY OF FRANKLIN RESERVES THE RIGHT TO REQUIRE THAT ADDITIONAL EROSION CONTROL MEASURES BE INSTALLED DURING CONSTRUCTION BASED ON FIELD OBSERVATIONS/INSPECTIONS.

FUELING AND MAINTENANCE OF CONSTRUCTION EQUIPMENT

- IF ANY CONSTRUCTION EQUIPMENT, INCLUDING BUT NOT LIMITED TO EARTHMOVING, EXCAVATION, AND BORING EQUIPMENT, WILL BE FUELED FROM A TANK TRUCK OR OTHER CONTAINER THAT IS MOVED AROUND THE SITE, THE FOLLOWING SHALL APPLY:
 - PORTABLE CONTAINMENT EQUIPMENT THAT IS SIZED TO CONTAIN THE MOST LIKELY VOLUME OF FUEL TO BE SPILLED DURING A FUEL TRANSFER SHALL BE USED, WHERE THE MOST LIKELY VOLUME TO BE SPILLED IS DETERMINED BASED ON THE FUEL TRANSFER RATE, THE AMOUNT OF FUEL BEING TRANSFERRED, THE DISTANCE BETWEEN THE HOSE NOZZLE AND PUMP SHUT OFF SWITCH, AND THE RESPONSE TIME OF PERSONNEL AND EQUIPMENT AVAILABLE AT THE FACILITY.
 - THE CONTAINMENT EQUIPMENT SHALL BE POSITIONED TO CATCH ANY FUEL SPILLS DUE TO OVERFILLING THE EQUIPMENT AND ANY OTHER SPILLS THAT MIGHT OCCUR AT OR NEAR THE FUEL FILLER PORT TO THAT EQUIPMENT.
 - THE TYPE OF CONTAINMENT EQUIPMENT USED AND ITS POSITIONING AND USE SHALL ACCOUNT FOR ALL OF THE DRIP POINTS ASSOCIATED WITH THE FUEL FILLING PORT AND THE HOSE FROM THE FUEL DELIVERY TRUCK; AND
 - PERSONNEL SHALL NOT LEAVE THE IMMEDIATE AREA WHILE FUEL IS BEING TRANSFERRED, TO ENSURE THAT ANY SPILLS WILL BE OF LIMITED VOLUME.
- IF THE SITE WILL HAVE A FIXED LOCATION FOR FUELING CONSTRUCTION EQUIPMENT, THE FOLLOWING SHALL APPLY:
 - ALL FUEL CONTAINERS, INCLUDING BUT NOT LIMITED TO SKID-MOUNTED TANKS, DRUMS, AND FIVE GALLON CANS, SHALL HAVE SECONDARY CONTAINMENT THAT:
 - IS CAPABLE OF CONTAINING 110% OF THE VOLUME OF THE LARGEST FUEL STORAGE CONTAINER; AND
 - HAS AN IMPERVIOUS FLOOR.
 - SECONDARY CONTAINMENT FOR TANKS MAY COMPRISE A METAL, PLASTIC, POLYMER OR PRECAST CONCRETE VAULT PROVIDING 110 PERCENT OF THE VOLUME OF THE LARGEST FUEL STORAGE CONTAINER.
 - FOR FUEL CONTAINERS, SECONDARY CONTAINMENT MAY COMPRISE CONTAINMENT PALLETS;
 - THE AREA WHERE FUEL IS TRANSFERRED SHALL BE A FLAT, IMPERVIOUS AREA THAT:
 - IS ADJACENT TO THE FUEL CONTAINER(S); AND
 - EXTENDS BEYOND THE FULL REACH, OR LENGTH, OF THE FUEL HOSE; AND
 - SECONDARY CONTAINMENT AREAS MAY BE IN THE FORM OF A BASIN THAT IS:
 - SLOPED DOWN TO A CENTRAL LOW POINT OR LENGTH OF THE PERIMETER;
 - LINED WITH A CONTINUOUS SHEET OF 20 MIL OR THICKER POLYMER MATERIAL OR APPROPRIATE GEOMEMBRANE LINER; AND
 - BACKFILLED WITH AT LEAST 6 INCHES OF SAND

CONSTRUCTION SEQUENCE:

- A MANDATORY PRECONSTRUCTION MEETING SHALL BE HELD WITH THE TOWN, CONTRACTOR, OWNER, AND ALL UTILITY REPRESENTATIVES PRIOR TO CONSTRUCTION. NO WORK SHALL BEGIN UNTIL APPROVAL BY THE HIGHWAY DEPARTMENT HAS BEEN OBTAINED.
- CLEAR AREA FOR CONSTRUCTION ENTRANCE AND INSTALL STABILIZED CONSTRUCTION ENTRANCES AS SHOWN ON THESE PLANS.
- CUT AND CLEAR TREES IN CONSTRUCTION AREAS ONLY.
- INSTALL EROSION CONTROL MIX BERM.
- REMOVE STUMPS FROM SITE FOR SITE GRADING (CUT AND/OR FILL) TO SUBGRADE. STABILIZE AREAS WITH BASE GRAVEL WITHIN SIX WEEKS OF REMOVAL OF STUMPS.
- THE MAXIMUM UNSTABILIZED AREA SHALL BE LIMITED TO THE MINIMUM AREA PRACTICABLE FOR SITE CONSTRUCTION. A WAIVER HAS BEEN REQUESTED FROM ENV-WQ 1506.03 TO DISTURB GREATER THAN 5 ACRES OF LAND AT ONE TIME. SEE EROSION CONTROL NOTES FOR MORE INFORMATION. NO AREA SHALL BE LEFT UNSTABILIZED MORE THAN 6 WEEKS. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS HAPPENED:
 - BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
 - A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
 - A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP-RAP HAS BEEN INSTALLED; OR
 - EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
- CONSTRUCT TEMPORARY AND PERMANENT SEDIMENT, EROSION AND DETENTION CONTROL FACILITIES AS PER THE NOTES IN THESE DRAWINGS. EROSION, SEDIMENT, AND DETENTION MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING OPERATION.
 - SILT FENCE
 - RIP RAP LINED SWALES
 - RIP RAP APPROXS AT CULVERT OUTLETS
 - TREATMENT SWALES
 - DETENTION PONDS
- ALL DITCHES/SWALES/BASINS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
- IF, DURING CONSTRUCTION, IT BECOMES APPARENT THAT ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES ARE REQUIRED TO STOP ANY EROSION ON THE CONSTRUCTION SITE DUE TO ACTUAL SITE CONDITIONS, THE OWNER SHALL BE REQUIRED TO INSTALL THE NECESSARY EROSION AND SEDIMENT CONTROL MEASURES.
- BASIN FLOORS IN THE INFILTRATION BASINS ARE TO BE DEEPLY TILLED TO RESTORE INFILTRATION RATES, FOLLOWED BY A PASS WITH A LEVELING DRAG PRIOR TO FINAL SEEDING. STORMWATER FLOWS SHALL NOT BE DIRECTED TO THE INFILTRATION BASINS, SWALES, OR DITCHES UNTIL ALL CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
- FINISH CLEARING AND GRUBBING.
- CONSTRUCT TEMPORARY CULVERTS AND DIVERSION CHANNELS, AS NECESSARY.
- CONSTRUCT EROSION AND SEDIMENT CONTROL AREAS.
- BEGIN CONSTRUCTION OF UTILITIES AND STORM DRAINAGE AS NECESSARY.
- MODIFY EROSION CONTROL MEASURES.
- BEGIN PERMANENT AND TEMPORARY INSTALLATION OF SEED AND MULCH. ALL CUT AND FILL SLOPES SHALL BE STABILIZED.
- DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAIN DITCHES, SILT FENCES, SEDIMENT TRAPS, ETC., MULCH AND SEED AS NECESSARY.
- PAVE ALL PARKING AREAS AS SPECIFIED ON THE PLAN.
- INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION. ALL EROSION AND SEDIMENT CONTROLS NEED TO BE INSPECTED WEEKLY AND AFTER EVERY 0.5" OF RAINFALL.
- COMPLETE PERMANENT SEEDING AND LANDSCAPING.
- ALL DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 72 HOURS OF FINISH GRADING. MAXIMUM EXPOSURE LENGTH FOR ALL DISTURBED AREAS IS 30 DAYS.
- REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER SEEDD AREAS HAVE ESTABLISHED THEMSELVES AND SITE IMPROVEMENTS ARE COMPLETED.

SITE MAINTENANCE AND INSPECTION PROGRAM

- INSPECTIONS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES THROUGHOUT THE DURATION OF THE CONSTRUCTION PROJECT. MAINTENANCE PRACTICES SHALL INCLUDE, BUT ARE NOT LIMITED TO

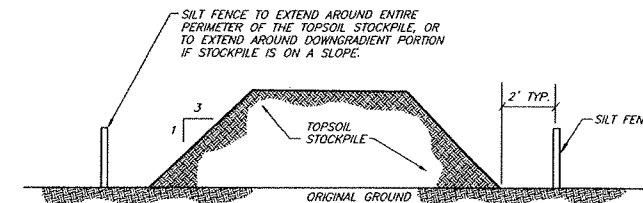
 - CLEANING OF CATCH BASINS TWICE PER YEAR OR MORE FREQUENTLY AS DICTATED BY WEEKLY INSPECTIONS AND/OR AFTER 0.5" RAINFALL EVENTS.
 - CLEANING OF SEDIMENT OR DEBRIS FROM STORM WATER MANAGEMENT AREA INLETS TWICE PER YEAR OR MORE FREQUENTLY AS DICTATED BY WEEKLY INSPECTIONS AND/OR AFTER 0.5" RAINFALL EVENTS.
 - WEEKLY SITE INSPECTIONS TO DETERMINE/IMPLEMENT NECESSARY REPAIR AND MAINTENANCE ACTIVITIES.
 - REMOVAL OF SEDIMENT BUILDUP ALONG SILT FENCES, STRAW BALE BARRIERS, GRASS SWALES, AND TREATMENT BASIN INLETS. REMOVE SEDIMENT BUILDUP IN BOTTOM OF TREATMENT BASINS SUCH THAT ALL OUTLETS ARE KEPT FREE FROM SEDIMENT AND DEBRIS.
 - INSPECTION/RECONSTRUCTION OF THE STABILIZED CONSTRUCTION ENTRANCE.
 - TREATMENT OF NON-STORMWATER RELATED DISCHARGES SUCH AS WATER BE DIRECTED TO A TEMPORARY SEDIMENTATION BASIN OR CONSTRUCTED STORM WATER MANAGEMENT AREA WITH WATER QUALITY SKIMMER OUTLETS.
 - SWEEP PAVED PARKING LOTS AND DRIVES REGULARLY TO MINIMIZE SEDIMENT ACCUMULATION.
- GOOD HOUSEKEEPING PRACTICES

THE CONTRACTOR SHALL EMPLOY MEASURES AND PRACTICES TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS TO STORM WATER RUNOFF. THE CONTRACTOR SHALL USE CARE IN THE HANDLING, USE AND DISPOSAL OF MATERIALS SUCH AS PETROLEUM PRODUCTS, FERTILIZERS AND PAINTS TO ENSURE THAT THE RISK ASSOCIATED WITH THE USE OF THESE PRODUCTS IS MINIMIZED. THE FOLLOWING PRACTICES SHALL BE FOLLOWED DURING THE CONSTRUCTION OF THIS PROJECT:

 - AN EFFORT SHALL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED FOR THIS SPECIFIC SITE.
 - ALL MATERIALS STORED ON SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER SUITABLE ENCLOSURE.
 - PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THEIR ORIGINAL LABELS.
 - WHENEVER POSSIBLE, ALL OF THE PRODUCT SHALL BE USED BEFORE DISPOSING OF THE CONTAINER.
 - THE MANUFACTURER'S RECOMMENDATIONS SHALL BE FOLLOWED IN REGARD TO THE PROPER USE AND DISPOSAL OF ALL PRODUCTS.
 - THE CONTRACTOR SHALL INSPECT DAILY TO ENSURE THE PROPER USE AND DISPOSAL OF ALL MATERIALS ON SITE.
- SPILL PREVENTION AND CLEANUP PRACTICES

THE CONTRACTOR/OPERATOR SHALL BE RESPONSIBLE FOR THE SAFE HANDLING, USE AND DISPOSAL PROGRAM OF ALL HAZARDOUS MATERIALS FOR THE DURATION OF THIS PROJECT AND SHALL HAVE A SPECIFIC SPILL PREVENTION AND CLEANUP PROTOCOL FOR ALL HAZARDOUS MATERIALS, INCLUDING, BUT NOT LIMITED TO:

 - MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND SITE PERSONNEL WILL BE MADE AWARE OF THESE PROCEDURES AND THE LOCATION OF THE CLEANUP SUPPLIES.
 - MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ON SITE. EQUIPMENT AND MATERIAL WILL INCLUDE, BUT NOT BE LIMITED TO, BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST, AND PLASTIC/METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.
 - ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.
 - THE SPILL AREA SHALL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
 - SPILLS OF TOXIC OR HAZARDOUS MATERIALS WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE.
 - THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING, AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED.



NOTES:

- AN ON-SITE DRAINAGE SWALE SHALL BE LOCATED BETWEEN THE TOPSOIL STOCKPILE AND OFF-SITE PROPERTY.
- REFERENCE IS MADE TO SILT FENCE DETAIL FOR MATERIALS AND INSTALLATION METHODS.
- IF THE STOCKPILE IS TO REMAIN FOR MORE THAN 14 DAYS, IT SHALL BE STABILIZED WITH EROSION CONTROL MATTING OR SEEDD WITHIN 7 DAYS OF COMPLETION TO MINIMIZE EROSION.
- INSPECTION OF SILT FENCES SHALL BE AT LEAST ONCE PER WEEK AND AFTER RAINFALL EVENTS IN EXCESS OF 0.5 INCHES. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
- SEDIMENT TRAPPED BY THE FENCES SHALL BE REMOVED AND PROPERLY DISPOSED OF WHENEVER SIGNIFICANT ACCUMULATION OCCURS.
- SILT FENCES SHALL BE MAINTAINED IN PLACE UNTIL TOPSOIL STOCKPILE HAS BEEN ELIMINATED AND SHALL BE REMOVED ONLY WHEN DIRECTED BY THE TOWN.

TEMPORARY STOCKPILE DETAIL

NOT TO SCALE

GENERAL EROSION CONTROL NOTES:

- PERIMETER CONTROLS MUST BE INSTALLED PRIOR TO EARTH MOVING OPERATIONS;
- STORMWATER TREATMENT PONDS AND DRAINAGE SWALES MUST BE INSTALLED BEFORE ROUGH GRADING THE SITE;
- RUNOFF MUST BE DIRECTED TO TEMPORARY PRACTICES UNTIL STORMWATER BMPs ARE STABILIZED;
- BASINS, DITCHES AND SWALES MUST BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM;
- ROADWAYS AND PARKING AREAS MUST BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE;
- CUT AND FILL SLOPES MUST BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE;
- ALL AREAS OF UNSTABILIZED SOIL MUST BE STABILIZED AS SOON AS PRACTICABLE BUT NO LATER THAN 45 DAYS OF INITIAL DISTURBANCE;
- EROSION CONTROL PRACTICES MUST BE INSPECTED AT LEAST WEEKLY AND AFTER EVERY RAIN EVENT OF 0.5 INCH OR MORE;
- IN AREAS THAT WILL NOT BE PAVED, STABLE MEANS THAT:
 - A MINIMUM OF 85% VEGETATIVE COVER HAS BEEN ESTABLISHED;
 - A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED;
- EROSION CONTROL BLANKETS HAVE BEEN INSTALLED IN ACCORDANCE WITH ENV-WQ 1506.03; AND
- IN AREAS TO BE PAVED, STABLE MEANS THAT BASE COURSE GRAVELS MEETING THE REQUIREMENTS OF NHDOT STANDARD FOR ROAD AND BRIDGE CONSTRUCTION, 2016, ITEM 304.2 HAVE BEEN INSTALLED.

TEMPORARY SEDIMENT TRAP. TEMPORARY SEDIMENT TRAPS SHALL COMPLY WITH THE FOLLOWING:

- THE TRAP SHALL BE INSTALLED AS CLOSE TO THE DISTURBED AREA OR SOURCE OF SEDIMENT AS POSSIBLE;
- THE MAXIMUM CONTRIBUTING DRAINAGE AREA TO THE TRAP SHALL BE LESS THAN 5 ACRES;
- THE MINIMUM VOLUME OF THE TRAP SHALL BE 3,600 CUBIC FEET OF STORAGE FOR EACH ACRE OF DRAINAGE AREA;
- THE SIDE SLOPES OF THE TRAP SHALL BE 3:1 OR FLATTER, AND SHALL BE STABILIZED IMMEDIATELY AFTER THEIR CONSTRUCTION;
- 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;
- THE TRAP SHALL BE CLEANED WHEN 50 PERCENT OF THE ORIGINAL VOLUME IS FILLED; AND
- THE MATERIALS REMOVED FROM THE TRAP SHALL BE PROPERLY DISPOSED OF AND STABILIZED.

CONSTRUCTION DEWATERING. DEWATERING SHALL COMPLY WITH THE FOLLOWING:

- THE DISCHARGE SHALL BE STOPPED IMMEDIATELY IF THE RECEIVING AREA SHOWS ANY SIGN OF INSTABILITY OR EROSION;
- ALL CHANNELS, SWALES, AND DITCHES DUG FOR DISCHARGING WATER FROM THE EXCAVATED AREA SHALL BE STABLE PRIOR TO DIRECTING DISCHARGE TO THEM;
- IF A CONSTRUCTION EQUIPMENT BUCKET IS USED, IT SHALL EMPTY THE MATERIAL TO A STABLE AREA;
- NO DEWATERING SHALL OCCUR DURING PERIODS OF INTENSE, HEAVY RAIN;
- FLOW TO THE SEDIMENT REMOVAL STRUCTURE SHALL NOT EXCEED THE STRUCTURE'S CAPACITY TO SETTLE AND FILTER FLOW OR ITS VOLUME CAPACITY; AND
- WHEREVER POSSIBLE, THE DISCHARGE FROM THE SEDIMENT REMOVAL STRUCTURE SHALL DRAIN TO A WELL-VEGETATED SHEET FLOW WHILE MAXIMIZING THE
- (G) DISTANCE TO THE NEAREST WATER RESOURCE AND MINIMIZING THE SLOPE OF THE BUFFER AREA

TEMPORARY STORMWATER DIVERSION. TEMPORARY STORMWATER DIVERSION SHALL COMPLY WITH THE FOLLOWING:

- WHEN NECESSARY TO MINIMIZE RELEASE OF SEDIMENT-LADEN RUNOFF PRIOR TO STABILIZATION OF THE SITE THE PERMANENT STORMWATER MANAGEMENT SYSTEM COMPONENTS, SEDIMENT-LADEN WATER SHALL BE DIVERTED AND STORED IN TEMPORARY DIVERSION PRACTICES SUCH AS SEDIMENT BASINS OR TRENCHES;
- SUBJECT TO (C), BELOW, TEMPORARY DIVERSION PRACTICES SHALL BE STABILIZED PRIOR TO RECEIVING RUNOFF;
- TEMPORARY DIVERSION CHANNELS WITH A GRADIENT OF 2 PERCENT OR GREATER SHALL BE STABILIZED, HOWEVER CHANNELS WITH A SLOPE OF LESS THAN 2% SHALL BE STABILIZED ONLY IF EROSION IS OBSERVED;
- THE AREA DRAINING TO EACH TEMPORARY DIVERSION PRACTICE SHALL BE LESS THAN 5 ACRES;
- TEMPORARY DIVERSION CHANNELS SHALL CONVEY, AND TEMPORARY BASINS AND TRENCHES SHALL CONTAIN, THE 2-YEAR, 24 HOUR DESIGN STORM WITHOUT OVERTOPPING THE BANKS;
- THE BED SLOPE OF DIVERSION CHANNELS SHALL HAVE A POSITIVE GRADE TO ASSURE DRAINAGE;
- WHERE DIVERSIONS CARRY CONCENTRATED FLOWS, ENERGY DISSIPATION METHODS SHALL BE IMPLEMENTED TO DISPERSE FLOW INTO AREAS DOWNSTREAM OF THE DISTURBED AREA;
- IF EROSION OF DIVERSION PRACTICES OCCURS DURING CONSTRUCTION, CORRECTIVE ACTION SHALL BE TAKEN TO STABILIZE THE BASIN, CHANNEL, AND BERM;
- DIVERSION BASINS AND TRENCHES SHALL BE CLEARED OF SEDIMENT WHENEVER SEDIMENT ACCUMULATES.

SEEDING/MULCHING OF DISTURBED AREAS

TEMPORARY AND PERMANENT MULCHING. MULCHING SHALL COMPLY WITH THE FOLLOWING:

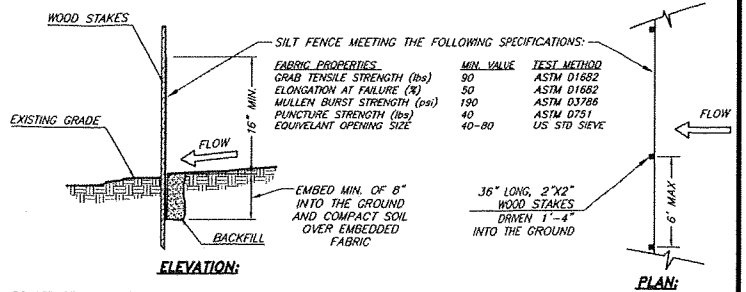
- HAY AND STRAW MULCHES SHALL BE ANCHORED WITH MULCH NETTING OR TACKIFIER SO THAT THEY ARE NOT BLOWN AWAY BY WIND OR WASHED AWAY BY FLOWING WATER;
- MULCH MATERIALS SHALL BE SELECTED BASED UPON SOILS, SLOPE, FLOW CONDITIONS, AND TIME OF YEAR;
- HAY OR STRAW MULCH SHALL BE APPLIED AT A RATE OF 1.5 TO 2 TONS PER ACRE, EQUIVALENT TO 70 TO 90 POUNDS PER 1,000 SQUARE FEET;
- WOOD CHIPS OR GROUND BARK SHALL BE APPLIED AT 2 TO 6 INCHES DEEP AT A RATE OF 10 TO 20 TONS PER ACRE, EQUIVALENT TO 460 TO 920 POUNDS PER 1,000 SQUARE FEET;
- JUTE AND FIBROUS MATS AND WOOD EXCLESOR SHALL BE INSTALLED ACCORDING TO THE APPLICABLE MANUFACTURER'S INSTRUCTIONS; AND
- EROSION CONTROL MIX SHALL:
 - MEET THE CRITERIA OF ENV-WQ 1506.05(B); AND
 - BE PLACED AT A THICKNESS OF 2 INCHES OR MORE.

VEGETATION. VEGETATING DISTURBED AREAS SHALL BE COMPLETED ONLY AS SPECIFIED BELOW:

- ALL ESSENTIAL GRADING AND TEMPORARY STRUCTURES, SUCH AS DIVERSIONS, DAMS, DITCHES, AND DRAINS NEEDED TO PREVENT GULLYING AND REDUCE SILTATION, SHOULD BE COMPLETED PRIOR TO SEEDING;
- STONES AND TRASH SHALL BE REMOVED FROM THE AREA TO BE SEEDD SO AS NOT TO INTERFERE WITH THE SEEDING;
- TILL THE SOIL TO A DEPTH OF ABOUT FOUR (4) INCHES TO PREPARE A SEEDBED AND MIX FERTILIZER INTO THE SOIL. THE SEEDBED SHOULD BE LEFT IN A FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL;
- ON SLOPES 4:1 OR STEEPER, FINAL PREPARATION OF THE AREA TO BE SEEDD SHALL INCLUDE CREATING GROOVES IN THE SOIL PERPENDICULAR TO THE DIRECTION OF THE SLOPE TO CATCH SEED AND REDUCE RUNOFF;
- IF NEEDED TO ENSURE GROWTH, FERTILIZER OR OTHER ORGANIC SOIL AMENDMENTS SHALL BE APPLIED DURING THE GROWING SEASON;
- FERTILIZER APPLIED TO ANY AREA WITHIN 100 FEET OF ANY RIVER, STREAM, POND, OR LAKE SHALL BE LOW PHOSPHATE, SLOW RELEASE NITROGEN FERTILIZER ONLY;
- FERTILIZER APPLIED TO ANY AREA THAT IS SUBJECT TO RSA 483-B, THE COMPREHENSIVE WATER QUALITY PROTECTION ACT (ACT), SHALL MEET OR BE MORE PROTECTIVE OF WATER QUALITY THAN THE MINIMUM STANDARDS OF THE ACT;
- ALL SEEDD AREAS SHALL BE FERTILIZED, FERTILIZATION SHALL BE AT THE EQUIVALENT OF 500 LBS. PER ACRE OF 10-20-20 FERTILIZER.
- ALL GRADED AREAS SHALL BE SEEDD WITH:

1. TALL FESCUE:	20 POUNDS PER ACRE
2. CREEPING RED FESCUE:	20 POUNDS PER ACRE
3. BIRDSFOOT TREFOIL:	8 POUNDS PER ACRE
4. TOTAL:	48 POUNDS PER ACRE LIVE SEED

- SEED SHOULD BE SPREAD UNIFORMLY BY THE METHOD MOST APPROPRIATE FOR THE SITE. METHODS INCLUDE BROADCASTING, DRILLING, AND HYDROSEEDING. WHERE BROADCASTING IS USED, COVER SEED WITH 0.25 IN. OF SOIL OR LESS, BY CULPACKING OR RAKING;
- RUNOFF SHALL BE DIVERTED FROM THE SEEDD AREA;
- SUBJECT TO (N) BELOW, SEEDING SHALL OCCUR PRIOR TO SEPTEMBER 15TH OF THE YEAR IN WHICH THE AREA BEING SEEDD WAS DISTURBED;
- AREAS SEEDD BETWEEN MAY 15TH TO AUGUST 15TH SHALL BE COVERED WITH HAY OR STRAW MULCH MEETING THE CRITERIA OF ENV-WQ 1506.01(A) THROUGH (C); AND
- IF VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA IS NOT ACHIEVED PRIOR TO OCTOBER 15TH, ONE OR MORE ADDITIONAL EROSION CONTROL METHODS SHALL BE IMPLEMENTED.

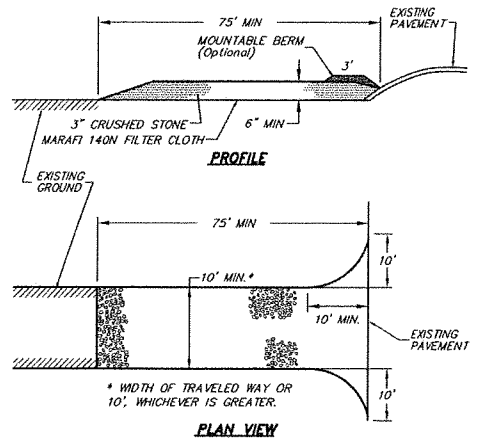


CONSTRUCTION NOTES:

- FENCES SHALL BE USED IN AREAS WHERE EROSION WILL OCCUR ONLY IN THE FORM OF SHEET EROSION AND THERE IS NO CONCENTRATION OF WATER IN A CHANNEL OR OTHER DRAINAGE WAY ABOVE THE FENCE;
- THE MAXIMUM CONTRIBUTING DRAINAGE AREA ABOVE THE FENCE SHALL BE LESS THAN 1/4-ACRE PER 100 LINEAR FEET OF FENCE;
- THE MAXIMUM LENGTH OF THE SLOPE ABOVE THE FENCE SHALL BE 100 FEET;
- THE MAXIMUM SLOPE OF THE AREA ABOVE THE FENCE SHALL BE 2:1;
- FENCES SHALL BE INSTALLED AS FOLLOWS:
 - FENCES SHALL FOLLOW THE CONTOUR OF THE LAND AS CLOSELY AS POSSIBLE;
 - THE END OF THE FENCE SHALL BE FLARED UP-SLOPE;
 - THE BASE OF THE FENCE SHALL BE:
 - FOLDED SUCH THAT NOT LESS THAN 4 INCHES OF THE FENCE IS PLACED ALONG THE BOTTOM OF A TRENCH THAT IS EXCAVATED AT LEAST 4 INCHES DEEP INTO THE GROUND, WITH THE SOIL COMPACTED OVER THE EMBEDDED FABRIC; OR
 - IF SITE CONDITIONS INCLUDE FROZEN GROUND, LEDGE, OR THE PRESENCE OF HEAVY ROOTS, EMBEDDED IN A MINIMUM THICKNESS OF 8 INCHES OF 1/4-INCH STONE;
 - SUPPORT POSTS SHALL BE SIZED AND ANCHORED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS; AND
 - ADJOINING SECTIONS OF THE FENCE SHALL BE OVERLAPPED BY 6 INCHES, FOLDED AND STAPLED TO A SUPPORT POST.
- FENCES SHALL BE INSPECTED AND MAINTAINED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL, ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY; AND
- SEDIMENT THAT ACCUMULATES AT THE FENCE SHALL BE REMOVED WITH SUFFICIENT FREQUENCY TO PREVENT THE DEPTH OF THE SEDIMENT FROM REACHING ONE-THIRD THE HEIGHT OF THE FENCE;
- INSTALL FENCE PER MANUFACTURER'S SPECIFICATIONS;
- IF THE FABRIC ON THE SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE LIFE OF THE FENCE, THE FABRIC SHALL BE PROMPTLY REPLACED;
- SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE BARRIER HAS BEEN DISMANTLED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED USING THE APPROPRIATE VEGETATIVE BMP.

SILT FENCE DETAIL:

NOT TO SCALE



STABILIZED CONSTRUCTION EXIT:

NOT TO SCALE

MAINTENANCE NOTES:

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

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

CONSTRUCTION SPECIFICATION

- THE MINIMUM STONE USED SHALL BE 3-INCH CRUSHED STONE;
- THE MINIMUM LENGTH OF THE PAD SHALL BE 75 FEET, EXCEPT THAT THE MINIMUM LENGTH MAY BE REDUCED TO 50 FEET IF A 3-INCH TO 6-INCH HIGH BERM IS INSTALLED AT THE ENTRANCE OF THE PROJECT SITE;
- THE PAD SHALL EXTEND THE FULL WIDTH OF THE CONSTRUCTION ACCESS ROAD OR 10 FEET, WHICHEVER IS GREATER;
- THE PAD SHALL SLOPE AWAY FROM THE EXISTING ROADWAY;
- THE PAD SHALL BE AT LEAST 4 INCHES THICK;
- A GEOTEXTILE FILTER FABRIC SHALL BE PLACED BETWEEN THE STONE PAD AND THE EARTH SURFACE BELOW THE PAD; AND
- THE PAD SHALL BE MAINTAINED OR REPLACED WHEN MUD AND SOIL PARTICLES CLOG THE VOIDS IN THE STONE SUCH THAT MUD AND SOIL PARTICLES ARE TRACKED OFF-SITE. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING AND FLOWING OF SEDIMENT INTO 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.
- ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BEHIND THE ENTRANCE. PIPING IS IMPRACTICAL, A BERM WITH 3:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.

TAX MAP 82 LOT 408-1

DETAIL SHEET 1

GARAGE & STORAGE SITE PLAN

LOCATED AT:

COMMERCE DRIVE
FRANKLIN, NEW HAMPSHIRE

PREPARED FOR: GILMAN CARPENTRY
35 OAK ST
FRANKLIN, NH 03235

PROPERTY OWNER: HENRY DOW PROPERTIES, LLC
P.O. BOX 247
CONCORD, NH 03302

SCALE: AS NOTED DECEMBER 12, 2023 SHEET 7 OF 9

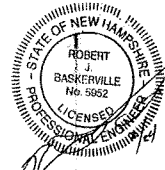
DESIGN:	DRAWN:	CHECKED:	FB:	PG:	
KAW	KAW	RJB	###	###	1733-01

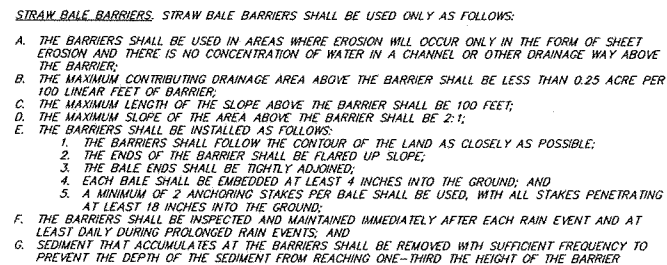
Bedford Design Consultants, Inc.
ENGINEERS AND SURVEYORS

592 Harvey Road, Manchester, NH 03103

Telephone: (603) 622-5533

www.bedforddesign.com





NOT TO SCALE

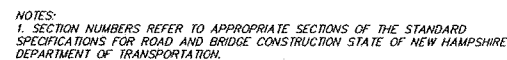


1. FILTER CLOTH TO BE FASTENED SECURELY TO WOODEN STAKES.
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES, FOLDED AND STAPLED.
3. BALES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
4. BALES SHALL BE SECURELY ANCHORED IN PLACE BY 2"x2" HARDWOOD STAKES DRIVEN THROUGH THE BALES TO A DEPTH OF 1'-6" BELOW GRADE; THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TO FORCE BALES TOGETHER.

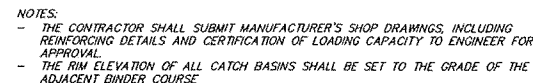
MAINTENANCE:

1. SILT FENCES AND STRAW BALES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
2. IF THE FABRIC ON THE SILT FENCE OR THE STRAW BALES SHOULD DECOMPOSE OR BECOME INEFFECTIVE THEY SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
4. SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

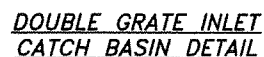
NOT TO SCALE



NOT TO SCALE



NOT TO SCALE



NOT TO SCALE



1. NO CONDUIT RUN SHALL EXCEED 360 DEGREES IN TOTAL BENDS
2. A SUITABLE PULLING STRING, CAPABLE OF 200 POUNDS OF PULL, SHALL BE INSTALLED IN THE CONDUIT PRIOR TO INSTALLING THE CONDUIT. THE STRING SHALL BE BLOWN INTO THE CONDUIT AFTER THE RUN IS ASSEMBLED TO AVOID BONDING THE STRING TO THE CONDUIT.
3. ALL CONDUIT INSTALLATIONS MUST CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRIC SAFETY CODE, STATE AND LOCAL CODES AND ORDINANCES, AND WHERE APPLICABLE, THE NATIONAL ELECTRIC CODE.
4. CONTRACTOR SHALL CONFIRM SIZE OF ELECTRICAL CONDUIT MEETS THE MINIMUM SIZE CRITERIA REQUIRED BASED ON THE NATIONAL ELECTRIC CODE FOR THE SIZE OF THE CONDUCTOR WITHIN EACH CONDUIT.

UTILITY TRENCH DETAIL

NOT TO SCALE

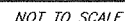


NOTES:

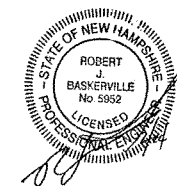
- PROVIDE BELL END AT INLET HEADWALL AND SPIGOT END AT OUTLET HEADWALL.
- RIP-RAP SHALL BE SIZED TO RESIST THE TRACTIVE VELOCITY FORCES.
- PRECAST CONCRETE HEADWALLS, WITH MORTAR RUBBLE EXPOSED SURFACES, MAY BE SUBSTITUTED FOR THE HEADWALL SPECIFIED ABOVE, SUBJECT TO THE APPROVAL OF THE TOWNS REPRESENTATIVE.



NOT TO SCALE



1. PLANTS CAN BE FOUND AT MILLIGAN NURSERIES IN CHICHESTER, NH.
2. PLANT STOCK SHALL MEET THE AMERICAN NURSERY STANDARDS AND SHALL BE PLANTED IN ACCORDANCE WITH THEIR GUIDELINES AS WELL AS THE TOWN OF BEDFORD'S REGULATIONS.
3. ANY CHANGES TO THE APPROVED PLANTING PLAN MUST BE APPROVED BY THE LANDSCAPE ARCHITECT IN WRITING.



PREPARED FOR: GILMAN CARPENTRY
35 OAK ST
FRANKLIN, NH 03235

PROPERTY OWNER:
HENRY DOW PROPERTIES, LLC
P.O. BOX 247
CONCORD, NH 03302

DESIGN:	DRAWN:	CHECKED:	FB:	PG:	1733-0
KAW	KAW	RJR	###	###	

592 Harvey Road, Manchester, NH 03103
Telephone: (603) 622-5533
www.bedforddesign.com



811
DigSafe
800-487-4848

DATE	DESCRIPTION	BY	RF

DETENTION / RETENTION POND
CONSTRUCTION AND MAINTENANCE NOTES

CONSTRUCTION SPECIFICATIONS FOR DETENTION / RETENTION PONDS

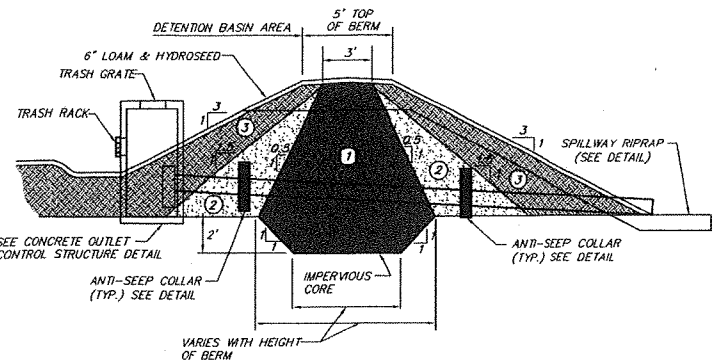
- FOUNDATION PREPARATION**
 - THE FOUNDATION AREA SHALL BE CLEARED OF TREES, LOGS, STUMPS, ROOTS, BRUSH, BOULDERS, SOD, AND RUBBISH. IF NEEDED TO ESTABLISH VEGETATION, THE TOPSOIL AND SOD SHALL BE STOCKPILED AND SPREAD ON THE COMPLETED SLOPES AND SPILLWAYS. FOUNDATION AREA SHALL BE THOROUGHLY SCARIFIED BEFORE PLACEMENT OF THE MATERIAL. THE SURFACE SHALL HAVE MOISTURE ADDED OR IS SHALL BE COMPACTED IF NECESSARY SO THAT THE FIRST LAYER OF FILL MATERIAL CAN BE COMPACTED AND BONDED TO THE FOUNDATIONS.
 - FOUNDATION AREAS SHALL BE KEPT FREE OF STANDING WATER WHEN FILL IS BEING PLACED ON THEM.
- FILL PLACEMENT**
 - THE MATERIAL PLACED IN THE FILL SHALL BE FREE OF DETRIMENTAL AMOUNTS OF SOD, ROOTS, FROZEN SOIL, STONES MORE THAN 6 INCHES IN DIAMETER (EXCEPT FOR ROCK FILLS), AND OTHER OBJECTIONABLE MATERIAL.
 - SELECTED BACKFILL MATERIAL SHALL BE PLACED AROUND STRUCTURES, PIPE CONDUITS, AND ANTISEEP COLLARS AT ABOUT THE SAME RATE ON ALL SIDES TO PREVENT DAMAGE FROM UNEQUAL LOADING.
 - THE PLACING AND SPREADING OF FILL MATERIAL SHALL BE STARTED AT THE LOWEST POINT OF THE FOUNDATION AND THE FILL BROUGHT UP IN HORIZONTAL LAYERS OF SUCH THICKNESS THAT THE REQUIRED COMPACTION CAN BE OBTAINED. THE FILL SHALL BE CONSTRUCTED IN CONTINUOUS HORIZONTAL LAYERS EXCEPT WHERE OPENINGS OR SECTIONALIZED FILLS ARE REQUIRED. IN THOSE CASES, THE SLOPE OF THE BONDING SURFACES BETWEEN THE EMBANKMENT IN PLACE AND THE EMBANKMENT TO BE PLACED SHALL NOT BE STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL. THE BONDING SURFACE SHALL BE TREATED THE SAME AS THAT SPECIFIED FOR THE FOUNDATION SO AS TO INSURE A GOOD BOND WITH THE NEW FILL.
 - THE DISTRIBUTION AND GRADATION OF MATERIALS SHALL BE SUCH THAT NO LENSES, POCKETS, STREAKS, OR LAYERS OF MATERIAL DIFFER SUBSTANTIALLY IN TEXTURE OF GRADATION FROM THE SURROUNDING MATERIAL. IF IT IS NECESSARY TO USE MATERIALS OF VARYING TEXTURE AND GRADATION, THE MOST IMPERVIOUS MATERIAL SHALL BE PLACED IN THE CENTER AND UPSTREAM PARTS OF THE FILL. IF ZONED FILLS OF SUBSTANTIALLY DIFFERING MATERIALS ARE SPECIFIED, THE ZONES SHALL BE PLACED ACCORDING TO THE LINES, GRADES, AND ELEVATIONS SHOWN ON THE DRAWINGS. THE COMPLETE WORK SHALL CONFORM TO THE LINES, GRADES, AND ELEVATIONS SHOWN ON THE DRAWINGS OR AS STAKED IN THE FIELD.
- MOISTURE CONTROL**
 - THE MOISTURE CONTENT OF THE FILL MATERIAL SHALL BE ADEQUATE FOR OBTAINING THE REQUIRED COMPACTION. MATERIAL THAT IS TOO WET SHALL BE DRIED TO MEET THIS REQUIREMENT. MATERIAL THAT IS TOO DRY SHALL HAVE WATER ADDED AND MIXED UNTIL THE REQUIREMENT IS MET.
- COMPACTION**
 - CONSTRUCTION EQUIPMENT SHALL BE OPERATED OVER THE AREAS OR EACH LAYER OF FILL TO INSURE THAT THE REQUIRED COMPACTION IS OBTAINED. SPECIAL EQUIPMENT SHALL BE USED IF NEEDED TO OBTAIN THE REQUIRED COMPACTION.
 - IF A MINIMUM REQUIRED DENSITY IS SPECIFIED, EACH LAYER OF FILL SHALL BE COMPACTED AS NECESSARY TO OBTAIN THAT DENSITY.
 - FILL ADJACENT TO STRUCTURES, PIPE CONDUITS, AND ANTISEEP COLLARS SHALL BE COMPACTED TO A DENSITY EQUIVALENT TO THAT OF THE SURROUNDING FILL BY MEANS OF HAND TAMPING OR MANUALLY DIRECTED POWER TAMPER OR PLATE VIBRATORS.
- PROTECTION**
 - A PROTECTIVE COVER OF VEGETATION SHALL BE ESTABLISHED ON ALL EXPOSED SURFACES OF THE EMBANKMENT, SPILLWAY, AND BORROW AREA IF SOIL AND CLIMATIC CONDITIONS PERMIT. IF SOIL OR CLIMATIC CONDITIONS PRECLUDE THE USE OF VEGETATION AND PROTECTION IS NEEDED, NON-VEGETATIVE MEANS, SUCH MULCHES OR GRAVEL, MAY BE USED. IN SOME PLACES, TEMPORARY VEGETATION MAY BE USED UNTIL CONDITIONS PERMIT ESTABLISHMENT OR PERMANENT VEGETATION. THE EMBANKMENT AND SPILLWAY SHALL BE FENCED IF NECESSARY TO PROTECT THE VEGETATION.
 - SEEDBED PREPARATION, SEEDING, FERTILIZING, AND MULCHING SHALL COMPLY WITH THE APPROPRIATE VEGETATIVE BMPs.

DETENTION / RETENTION POND MAINTENANCE

- THE EMBANKMENT SHOULD BE INSPECTED ANNUALLY TO DETERMINE IF RODENT BURROWS, WET AREAS, OR EROSION OF THE FILL IS TAKING PLACE.
- THE VEGETATED AREAS OF THE STRUCTURE SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH. LIME AND FERTILIZER SHOULD BE APPLIED AS NECESSARY AS DETERMINED BY SOIL TESTS. TREES AND SHRUBS SHOULD BE KEPT OFF THE EMBANKMENT AND EMERGENCY SPILLWAY AREAS.
- PIPE INLETS AND SPILLWAY STRUCTURE SHOULD BE INSPECTED ANNUALLY AND AFTER EVERY MAJOR STORM. ACCUMULATED DEBRIS AND SEDIMENT SHOULD BE REMOVED. IF PIPES ARE COATED, THE COATING SHOULD BE CHECKED AND REPAIRED AS NECESSARY.
- PIPE OUTLETS SHOULD BE INSPECTED ANNUALLY AND AFTER EVERY MAJOR STORM. THE CONDITION OF THE PIPES SHOULD BE NOTED AND REPAIRS MADE AS NECESSARY. IF EROSION IS TAKING PLACE THEN MEASURES SHOULD BE TAKEN TO STABILIZE AND PROTECT THE AFFECTED AREA OF THE OUTLET.
- SEDIMENT SHOULD BE CONTINUALLY CHECKED IN THE BASIN. WHEN SEDIMENT ACCUMULATIONS REACH THE PREDETERMINED DESIGN ELEVATION, THEN THE SEDIMENT SHOULD BE REMOVED AND PROPERLY DISPOSED OF.
- ALL PERMANENT IMPOUNDMENTS SHOULD BE INSPECTED BY A QUALIFIED PROFESSIONAL ENGINEER ON A PERIODIC BASIS. IF THERE IS POTENTIAL FOR SIGNIFICANT DAMAGE OR LOSS OF LIFE DOWNSTREAM, THEN THE INSPECTION SHOULD BE CARRIED OUT ANNUALLY. THE DESIGNATED INDIVIDUAL OR GROUP SHOULD ALSO MAKE INSPECTIONS AFTER EVERY MAJOR STORM EVENT.

DETENTION POND CONSTRUCTION:

- FOUNDATION PREPARATION**
 - THE FOUNDATION AREA SHALL BE CLEARED OF TREES, LOGS, STUMPS, ROOTS, BRUSH, BOULDERS, SOD, AND RUBBISH. IF NEEDED TO ESTABLISH VEGETATION, THE TOPSOIL AND SOD SHALL BE STOCKPILED AND SPREAD ON THE COMPLETED SLOPES AND SPILLWAYS. FOUNDATION AREA SHALL BE THOROUGHLY SCARIFIED BEFORE PLACEMENT OF THE MATERIAL. THE SURFACE SHALL HAVE MOISTURE ADDED OR IS SHALL BE COMPACTED IF NECESSARY SO THAT THE FIRST LAYER OF FILL MATERIAL CAN BE COMPACTED AND BONDED TO THE FOUNDATIONS.
 - FOUNDATION AREAS SHALL BE KEPT FREE OF STANDING WATER WHEN FILL IS BEING PLACED ON THEM.
- FILL PLACEMENT**
 - THE MATERIAL PLACED IN THE FILL SHALL BE FREE OF DETRIMENTAL AMOUNTS OF SOD, ROOTS, FROZEN SOIL, STONES MORE THAN 6 INCHES IN DIAMETER (EXCEPT FOR ROCK FILLS), AND OTHER OBJECTIONABLE MATERIAL.
 - SELECTED BACKFILL MATERIAL SHALL BE PLACED AROUND STRUCTURES, PIPE CONDUITS, AND ANTISEEP COLLARS AT ABOUT THE SAME RATE ON ALL SIDES TO PREVENT DAMAGE FROM UNEQUAL LOADING.
 - THE PLACING AND SPREADING OF FILL MATERIAL SHALL BE STARTED AT THE LOWEST POINT OF THE FOUNDATION AND THE FILL BROUGHT UP IN HORIZONTAL LAYERS. PLACE MAXIMUM 8" LIFTS COMPACTED TO 93% MAXIMUM PROCTOR DENSITY. THE FILL SHALL BE CONSTRUCTED IN CONTINUOUS HORIZONTAL LAYERS EXCEPT WHERE OPENINGS OR SECTIONALIZED FILLS ARE REQUIRED. IN THOSE CASES, THE SLOPE OF THE BONDING SURFACES BETWEEN THE EMBANKMENT IN PLACE AND THE EMBANKMENT TO BE PLACED SHALL NOT BE STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL. THE BONDING SURFACE SHALL BE TREATED THE SAME AS THAT SPECIFIED FOR THE FOUNDATION SO AS TO INSURE A GOOD BOND WITH THE NEW FILL.
 - THE DISTRIBUTION AND GRADATION OF MATERIALS SHALL BE SUCH THAT NO LENSES, POCKETS, STREAKS, OR LAYERS OF MATERIAL DIFFER SUBSTANTIALLY IN TEXTURE OF GRADATION FROM THE SURROUNDING MATERIAL. IF IT IS NECESSARY TO USE MATERIALS OF VARYING TEXTURE AND GRADATION, THE MOST IMPERVIOUS MATERIAL SHALL BE PLACED IN THE CENTER AND UPSTREAM PARTS OF THE FILL. IF ZONED FILLS OF SUBSTANTIALLY DIFFERING MATERIALS ARE SPECIFIED, THE ZONES SHALL BE PLACED ACCORDING TO THE LINES, GRADES, AND ELEVATIONS SHOWN ON THE DRAWINGS OR AS STAKED IN THE FIELD.
- MOISTURE CONTROL**
 - THE MOISTURE CONTENT OF THE FILL MATERIAL SHALL BE ADEQUATE FOR OBTAINING THE REQUIRED COMPACTION. MATERIAL THAT IS TOO WET SHALL BE DRIED TO MEET THIS REQUIREMENT. MATERIAL THAT IS TOO DRY SHALL HAVE WATER ADDED AND MIXED UNTIL THE REQUIREMENT IS MET.
- COMPACTION**
 - CONSTRUCTION EQUIPMENT SHALL BE OPERATED OVER THE AREAS OR EACH LAYER OF FILL TO INSURE THAT THE REQUIRED COMPACTION IS OBTAINED. SPECIAL EQUIPMENT SHALL BE USED IF NEEDED TO OBTAIN THE REQUIRED COMPACTION.
 - IF A MINIMUM REQUIRED DENSITY IS SPECIFIED, EACH LAYER OF FILL SHALL BE COMPACTED AS NECESSARY TO OBTAIN THAT DENSITY.
 - FILL ADJACENT TO STRUCTURES, PIPE CONDUITS, AND ANTISEEP COLLARS SHALL BE COMPACTED TO A DENSITY EQUIVALENT TO THAT OF THE SURROUNDING FILL BY MEANS OF HAND TAMPING OR MANUALLY DIRECTED POWER TAMPER OR PLATE VIBRATORS.
- PROTECTION**
 - A PROTECTIVE COVER OF VEGETATION SHALL BE ESTABLISHED ON ALL EXPOSED SURFACES OF THE EMBANKMENT, SPILLWAY, AND BORROW AREA IF SOIL AND CLIMATIC CONDITIONS PERMIT. IF SOIL OR CLIMATIC CONDITIONS PRECLUDE THE USE OF VEGETATION AND PROTECTION IS NEEDED, NON-VEGETATIVE MEANS, SUCH MULCHES OR GRAVEL, MAY BE USED. IN SOME PLACES, TEMPORARY VEGETATION MAY BE USED UNTIL CONDITIONS PERMIT ESTABLISHMENT OR PERMANENT VEGETATION. THE EMBANKMENT AND SPILLWAY SHALL BE FENCED IF NECESSARY TO PROTECT THE VEGETATION.
 - SEEDBED PREPARATION, SEEDING, FERTILIZING, AND MULCHING SHALL COMPLY WITH THE APPROPRIATE VEGETATIVE BMPs.

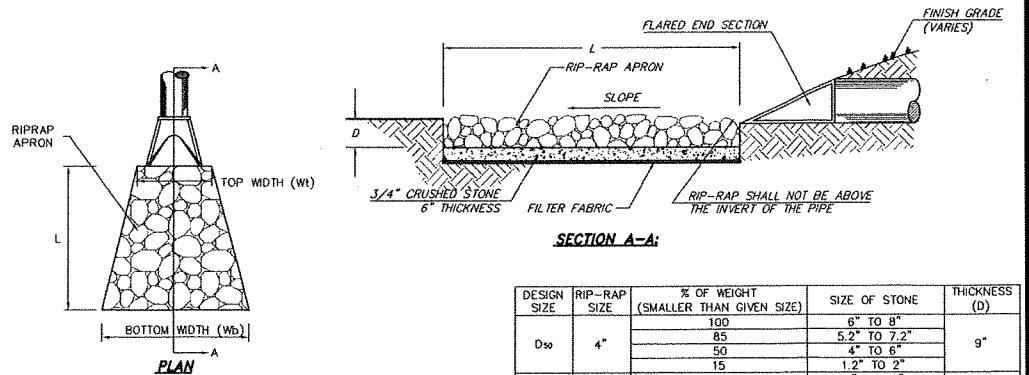


DETENTION POND MAINTENANCE

- THE EMBANKMENT SHOULD BE INSPECTED ANNUALLY TO DETERMINE IF RODENT BURROWS, WET AREAS, OR EROSION OF THE FILL IS TAKING PLACE.
- THE VEGETATED AREAS OF THE STRUCTURE SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH. LIME AND FERTILIZER SHOULD BE APPLIED AS NECESSARY AS DETERMINED BY SOIL TESTS. TREES AND SHRUBS SHOULD BE KEPT OFF THE EMBANKMENT AND EMERGENCY SPILLWAY AREAS.
- PIPE INLETS AND SPILLWAY STRUCTURE SHOULD BE INSPECTED ANNUALLY AND AFTER EVERY MAJOR STORM. ACCUMULATED DEBRIS AND SEDIMENT SHOULD BE REMOVED. IF PIPES ARE COATED, THE COATING SHOULD BE CHECKED AND REPAIRED AS NECESSARY.
- PIPE OUTLETS SHOULD BE INSPECTED ANNUALLY AND AFTER EVERY MAJOR STORM. THE CONDITION OF THE PIPES SHOULD BE NOTED AND REPAIRS MADE AS NECESSARY. IF EROSION IS TAKING PLACE THEN MEASURES SHOULD BE TAKEN TO STABILIZE AND PROTECT THE AFFECTED AREA OF THE OUTLET.
- SEDIMENT SHOULD BE CONTINUALLY CHECKED IN THE BASIN. WHEN SEDIMENT ACCUMULATIONS REACH THE PREDETERMINED DESIGN ELEVATION, THEN THE SEDIMENT SHOULD BE REMOVED AND PROPERLY DISPOSED OF.
- ALL PERMANENT IMPOUNDMENTS SHOULD BE INSPECTED BY A QUALIFIED PROFESSIONAL ENGINEER ON A PERIODIC BASIS. IF THERE IS POTENTIAL FOR SIGNIFICANT DAMAGE OR LOSS OF LIFE DOWNSTREAM, THEN THE INSPECTION SHOULD BE CARRIED OUT ANNUALLY. THE DESIGNATED INDIVIDUAL OR GROUP SHOULD ALSO MAKE INSPECTIONS AFTER EVERY MAJOR STORM EVENT.

TYPICAL DETENTION POND BERM CROSS-SECTION

NOT TO SCALE



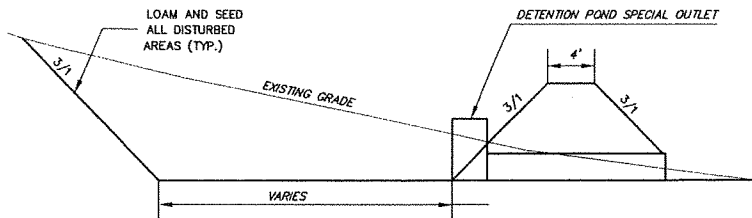
SECTION A-A:

DESIGN SIZE	RIP-RAP SIZE	% OF WEIGHT (SMALLER THAN GIVEN SIZE)	SIZE OF STONE	THICKNESS (D)
D50	4"	100	6" TO 8"	9"
		85	5.2" TO 7.2"	
		50	4" TO 6"	
		15	1.2" TO 2"	
		100	9" TO 12"	
D50	6"	85	8" TO 11"	13.5"
		50	6" TO 9"	
		15	1.8" TO 3"	

RIP-RAP GRADATION TABLE

FLARED END SECTION RIP-RAP APRON DETAIL:

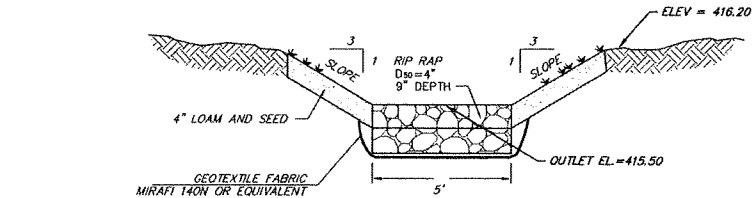
NOT TO SCALE



TYPICAL POND CROSS-SECTION

NOT TO SCALE

DATE	DESCRIPTION	BY	REV.



- NOTES:
- WIDTH OF SPILLWAY AND/OR WIDTH OF RIPRAP AS SPECIFIED ON THE PLANS.
 - REFER TO THE MAINTENANCE AND CONSTRUCTION NOTES FOR ROCK RIP-RAP FOR ADDITIONAL DETAILS.

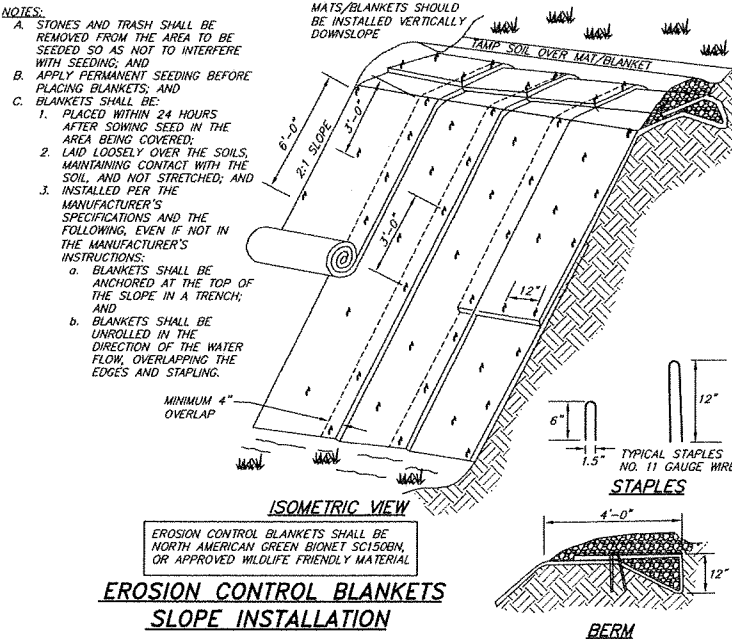
MAINTENANCE

ROCK RIPRAP SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR STORM. IF THE RIPRAP HAS BEEN DISPLACED, UNDERMINED OR DAMAGED, IT SHOULD BE REPAIRED IMMEDIATELY BEFORE FURTHER DAMAGE CAN TAKE PLACE. WOODY VEGETATION SHOULD BE REMOVED FROM THE ROCK RIPRAP ANNUALLY BECAUSE TREE ROOTS WILL EVENTUALLY DISLODGE THE ROCK RIPRAP. IF THE RIPRAP IS ON A CHANNEL BANK, THE STREAM SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS, AND SEDIMENT BARS THAT MAY CHANGE FLOW PATTERNS WHICH COULD DAMAGE OR DISPLACE THE RIPRAP. REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO THE RIPRAP.

CONSTRUCTION SPECIFICATIONS

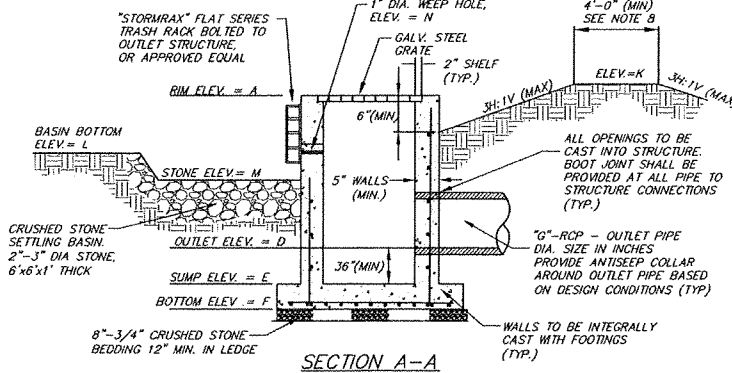
- THE SUBGRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC OR RIPRAP SHALL BE CLEARED AND GRUBBED TO REMOVE ALL ROOTS, VEGETATION, AND DEBRIS AND PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
- THE ROCK AND/OR GRAVEL USED FOR FILTER AND RIPRAP SHALL CONFORM TO THE SPECIFIED GRADATION.
- GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIPRAP BY PLACING A CUSHION OF SAND AND GRAVEL OVER THE FABRIC. 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 RIPRAP 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 PREVENT DISPLACEMENT OF THE UNDERLYING MATERIALS. HAND PLACEMENT MAY BE REQUIRED TO PREVENT DAMAGE TO ANY PERMANENT STRUCTURES.
- STONES FOR RIPRAP SHALL BE ANGULAR OR SUBANGULAR. THE STONES SHOULD BE SHAPED SO THAT THE LEAST DIMENSION OF THE STONE FRAGMENT SHALL BE NOT LESS THAN ONE-THIRD OF THE GREATEST DIMENSION OF THE FRAGMENT. FLAT ROCKS SHALL NOT BE USED FOR RIPRAP.
- VOIDS IN THE ROCK RIPRAP SHOULD BE FILLED WITH SPALLS AND SMALLER ROCKS.

EMERGENCY SPILLWAY DETAIL
DETENTION PONDS



EROSION CONTROL BLANKETS
SLOPE INSTALLATION

OUTLET STRUCTURE	ELEVATIONS/DIMENSIONS						
	A	D	E	G	K	L	N
OS#1	415.10	413.00	410.00	15"	416.20	413.00	412.50



OUTLET STRUCTURE DETAIL

NOT TO SCALE