



JAN 05 2016

Planning Dept.

## **NONRESIDENTIAL SITE PLAN APPLICATION**

### **City of Rochester, New Hampshire**

[office use only. Check # \_\_\_\_\_ Amount \$ \_\_\_\_\_ Date paid \_\_\_\_\_]

Date: January 5, 2016 Is a conditional use needed? Yes: \_\_\_\_\_ No: X Unclear: \_\_\_\_\_  
(If so, we encourage you to submit an application as soon as possible.)

### **Property information**

Tax map #: 267; Lot #'s: 3; Zoning district: Recycling Industrial

Property address/location: 62 Turnkey Way, Rochester, NH

Name of project (if applicable): Leachate Treatment Plant Expansion – Stage II

Size of site: 89.13 acres; overlay zoning district(s)? No

### **Property owner**

Name (include name of individual): Waste Management of New Hampshire, Inc. (Bob Magnusson, Sr. District Manager)

Mailing address: 30 Rochester Neck Road, Rochester, NH

Telephone #: (603) 330-2164 Email: bmagnusson@wm.com

### **Applicant/developer** (if different from property owner)

Name (include name of individual): \_\_\_\_\_

Mailing address: \_\_\_\_\_

Telephone #: \_\_\_\_\_ Email: \_\_\_\_\_

### **Engineer/designer**

Name (include name of individual): Timothy W. Reed, P.E., CPESC

Mailing address: Sanborn, Head & Associates, Inc., 20 Foundry Street, Concord, NH 03301

Telephone #: (603) 415-6107 Fax #: (603) 229-1919

Email address: treed@sanbornhead.com Professional license #: 11048

### **Proposed activity** (check all that apply)

New building(s): X Site development (other structures, parking, utilities, etc.): X

Addition(s) onto existing building(s): \_\_\_\_\_ Demolition: X Change of use: \_\_\_\_\_

Describe proposed activity/use: WMNH is proposing to increase the treatment capacity of the existing Leachate Treatment Plant that supports operations at the Turnkey Recycling & Environmental Enterprise (TREE) Facility by adding a treatment process that employs ultrafiltration. The process requires constructing two glass lined above-grade storage tanks (ASTs) and a 61 foot x 61 foot pre-engineered building to house process equipment. To accommodate the storage tanks and equipment, WMNH proposed to excavate soil surrounding the existing AST area to expand the lined, secondary containment area, and to provide a relatively level area upon which to construct the equipment building. The excavation will require the demolition of an existing barn and shed located north of the AST area. Excavated material will be stockpiled on site for use on other TREE construction projects.

Describe existing conditions/use (vacant land?): The lot is 89.13 acres with a variety of buildings and site features supporting operations at the TREE Facility

### Utility information

City water? yes ☐ no ☒ ; How far is City water from the site? \_\_\_\_\_

City sewer? yes ☐ no ☒ ; How far is City sewer from the site? \_\_\_\_\_

If City water, what are the estimated total daily needs? \_\_\_\_\_ 0 gallons per day

The building will house process equipment that will operate unmanned. Staff will only need to check on the equipment occasionally and provide routine maintenance. Water and sewer connections are not necessary.

If City water, is it proposed for anything other than domestic purposes? yes ☐ no ☒

If City sewer, do you plan to discharge anything other than domestic waste? yes ☐ no ☒

Where will stormwater be discharged? Stormwater from the slope north of the AST area is conveyed by a swale to an existing culvert beneath Turnkey Way, which eventually drains to a large detention basin. Precipitation that falls within the secondary containment area is held and released to the large detention basin following a visual inspection confirming that no spill has occurred.

### Building information

Type of building(s): The proposed building is a pre-engineered metal framed, roofed, and sided building.

Building height: 35' Finished floor elevation: 188.5

### Other information

# parking spaces: existing: 0 total proposed: 3 ; Are there pertinent covenants? No

Number of cubic yards of earth being removed from the site approximately 18,500 cubic yards

Number of existing employees: 0 ; number of proposed employees total: the same - no change.

Check any that are proposed: variance ☐ ; special exception ☐ ; conditional use ☐

Wetlands: Is any fill proposed? No ; area to be filled: N/A ; buffer impact? N/A

Proposed <u>post-development</u> disposition of site (should total 100%)		
	Square footage	% overall site
Building footprint(s) – give for each building	104,218 (see Table)	2.7
Parking and vehicle circulation	707,252	18.2
Planted/landscaped areas (excluding drainage)	2,138,400	55.1
Natural/undisturbed areas (excluding wetlands)	337,821	8.7
Wetlands	150,065	3.9
Other – drainage structures, outside storage, etc.	444,747	11.5

### Comments

Please feel free to add any comments, additional information, or requests for waivers here:  
Requests for waivers are provided separately.

### Submission of application

This application must be signed by the property owner, applicant/developer (if different from property owner), and/or the agent.

*I/we hereby submit this Site Plan application to the City of Rochester Planning Board pursuant to the City of Rochester Site Plan Regulations and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. As applicant/developer (if different from property owner)/as agent, I attest that I am duly authorized to act in this capacity.*

Signature of property owner: \_\_\_\_\_

Date: \_\_\_\_\_

Signature of applicant/developer: \_\_\_\_\_

Date: \_\_\_\_\_

Signature of agent: \_\_\_\_\_

Date: \_\_\_\_\_

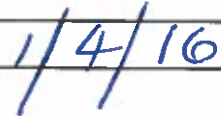
## Authorization to enter subject property

*I hereby authorize members of the Rochester Planning Board, Zoning Board of Adjustment, Conservation Commission, Planning Department, and other pertinent City departments, boards and agencies to enter my property for the purpose of evaluating this application including performing any appropriate inspections during the application phase, review phase, post-approval phase, construction phase, and occupancy phase. This authorization applies specifically to those particular individuals legitimately involved in evaluating, reviewing, or inspecting this specific application/project. It is understood that these individuals must use all reasonable care, courtesy, and diligence when entering the property.*

Signature of property owner:



Date:





**TURNKEY RECYCLING & ENVIRONMENTAL ENTERPRISE**

30 Rochester Neck Road  
P.O. Box 7065  
Rochester, NH 03839  
(603) 330-2197  
(603) 330-2130 Fax

January 5, 2016

Mr. James B. Campbell, Director  
Planning and Development Department  
City of Rochester  
31 Wakefield Street  
Rochester, New Hampshire 03867

Re: Letter of Intent – Leachate Treatment Plant Expansion Stage II  
Waste Management of New Hampshire, Inc.  
Turnkey Recycling and Environmental Enterprise (TREE)  
Rochester, New Hampshire

Dear Mr. Campbell:

Waste Management of New Hampshire, Inc. is proposing to increase the treatment capacity of the existing Leachate Treatment Plant that supports operations at the Turnkey Recycling & Environmental Enterprise (TREE) Facility by adding a treatment process that employs ultra-filtration technology. The leachate treatment process proposed requires two above-grade glass lined storage tanks (AST) and a building to house the process equipment. Permitting of the treatment technology and discharge capacity will be completed separately with the City of Rochester (Department of Public Works) and the New Hampshire Department of Environmental Services as part of revising our Industrial Discharge Agreement. The following information is being provided for the Site Plan Application.

**Applicant's Name:** Waste Management of New Hampshire, Inc. (property owner)

**Property Location:** 62 Turnkey Way, Tax Map 267 Lot 3

**Size and Use:** The development will involve adding two new glass lined steel ASTs, a building to house the ultra-filtration process equipment, and a paved parking area. The entire area of development will disturb about 1.3 acres of the approximately 90-acre parcel.

**Proposed Use:** WMNH is proposing to add a leachate treatment process that employs ultra-filtration.

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<b>Previous Use:</b>	There are several operations related to the TREE facility on the 90-acre parcel including the Material Recovery Facility, the Residential Drop-off area, Landfill Gas to Energy Facilities and the Leachate Treatment Plant.
<b>Existing Conditions:</b>	As indicated above, the development is proposed to take place on the parcel on which several other TREE facilities are located. WMNH owns the properties abutting the parcel. The project site will be screened from view by existing vegetation along Rochester Neck Road. The present location of the Leachate Treatment Plant is on Rochester Neck Road and the facility is accessed by Turnkey Way that intersects Rochester Neck Road. WMNH anticipates no change in traffic on Rochester Neck Road as a result of this construction. WMNH is not proposing to increase the number of vehicles at this location. Other nearby uses on Rochester Neck Road includes the aggregate operations for Pike Industries and Brox.
<b>Resulting Employees:</b>	The proposed process will be automated and will be supported with existing on-site staff with the exception of occasional maintenance. WMNH is not proposing to increase employees with this change.
<b>Hours of Operation:</b>	Facility operating hours shall be 24-hours, 7 days a week.
<b>Off-street Parking:</b>	Parking spaces will be established near the existing building.
<b>Proposed Site Changes:</b>	<p>The proposed development includes the following:</p> <ul style="list-style-type: none"><li>▪ Constructing a 61 foot by 61 foot pre-engineered building</li><li>▪ Constructing two glass lined steel ASTs along with associated secondary containment liner system and piping.</li><li>▪ Constructing 8,740 square feet of new paved parking area;</li><li>▪ Removing 14,830 square feet of existing pavement;</li><li>▪ Removing an existing barn and shed;</li><li>▪ Providing power and lighting to the proposed building and parking area;</li><li>▪ Constructing a stormwater diversion swale and 12-inch diameter culvert to convey stormwater to existing culvert under Turnkey Way.</li></ul>
<b>Property Access:</b>	Access to the facility will be via Turnkey Way, the same road used to access the existing facility. No changes to the intersection of the Turnkey Way and Rochester Neck Road are proposed.

Please contact me should you require additional information regarding this proposed development.

Sincerely,

WASTE MANAGEMENT OF NEW HAMPSHIRE, INC.

A handwritten signature in black ink, appearing to read "Anne Reichert". The signature is fluid and cursive, with a large initial "A" and a stylized "R".

Anne Reichert, P.E.  
Construction Project Manager

Enclosures: Site Plan Application (22 copies)  
Checklist (1 copy)  
Abutters List (1 copy)  
Waiver Requests (22 copies)  
Narrative (1 Copy)  
11" x 17" Drawings (22 copies)  
22" x 34" Drawings (3 copies)  
Web Soil Survey (1 copy)  
Drainage Calculations (2 copies)  
Application Fee

Copies to: Bob Magnusson, WMNH  
Timothy Reed, Sanborn Head

**Building Areas for Post-Development Disposition of Site  
Nonresidential Site Plan Application  
Leachate Treatment Plant Expansion - Stage II  
Waste Management of New Hampshire, Inc.  
Tax 267 Lot 3**

<b>Building</b>	<b>Pre-Development Area (square feet)</b>	<b>New Construction With This Project (square feet)</b>	<b>Post-Development Area (square feet)</b>
Livestock Shed	655		655
Equipment Storage Building	3,647		3,647
Equipment Storage Building	8,880		8,880
Equipment Storage Building	8,153	-8,153	0
Office/Leachate Equipment Repair	917		917
Livestock Stable	1,300		1,300
Homeless Shelter	3,184		3,184
Equipment Storage Building	2,494		2,494
Groundwater Pump House	366	-366	0
Emergency Generator Building	213		213
Leachate Loadout Canopy	1,077		1,077
Leachate Treatment Plant	4,593		4,593
Gas Recovery Facility I	3,753		3,753
Equipment Storage Building	363		363
Combustion Air Filter House for Enclosed Flare	222		222
Livestock Shed	39		39
Livestock Shed	61		61
Gas Recovery Facility II	6,090		6,090
Existing Scale House	90		90
Material Recovery Facility (MRF)	27,315		27,315
MRF Fire Suppression Building	181		181
Former IPS Composting Facility Office	1,636		1,636
MRF Storage Area	4,462		4,462
WMNH Container Repair Building	1,812		1,812
Equipment Storage Building	1,308		1,308
Park Pavilion	141		141
8' x 10' Attendant Shed	80		80
10' x 14' CRT Storage Shed	1,800		1,800
Rochester Hauling Company	27,905		27,905
Proposed UF Building		3,721	
<b>Total Building Area</b>	<b>112,737</b>	<b>-4,798</b>	<b>104,218</b>





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30 Rochester Neck Road  
P.O. Box 7065  
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(603) 330-2130 Fax

January 5, 2016

Mr. James B. Campbell, Director  
Planning and Development Department  
City of Rochester  
31 Wakefield Street  
Rochester, New Hampshire 03867

Re: Waiver - Reduction of Parking Spaces Required  
Site Plan Application – Leachate Treatment Plant Expansion Stage II  
Rochester, New Hampshire

Dear Mr. Campbell:

Waste Management of New Hampshire, Inc. (WMNH) is requesting a waiver to reduce the number of required parking spaces for a project in the Recycling Industrial zone for the above noted Site Plan Application. Section 10 Part (A) of the Site Plan Regulations provides minimum requirements for the number of required parking spaces for various building uses.

The proposed building to house the ultrafiltration equipment for the expansion of WMNH's Leachate Treatment Plant would be a 3,721 square foot Industrial Use building, which would require six parking spaces per the Table of Parking Requirements. According to Section 10 Part (D), which provides minimum requirements for the number of wheelchair accessible parking spaces, the proposed building also would require one wheelchair accessible parking space.

Section 10 Part (C) of the Site Plan Regulations encourages applicants to request that the Planning Board reduce the number of required parking spaces when they believe that the inclusion of fewer parking spaces on site is appropriate. To that end, we offer the following justification for a waiver to reduce the required parking spaces to three as proposed:

- The proposed building houses process equipment that operates unmanned and requires only occasional minor maintenance. There will be no full time staff at the facility. The main building for this area of the WMNH's facility is located to the east and is equipped with offices, parking, restrooms and an employee breakroom.
- Additional parking will require additional pavement (impervious area), unnecessarily increasing runoff from the site.

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We trust that the above information fully addresses the City's need for a waiver request from the parking space requirements for this project. Should you require additional information, please contact me at [areichert@wm.com](mailto:areichert@wm.com).

Very truly yours,

WASTE MANAGEMENT OF NEW HAMPSHIRE, INC.

A handwritten signature in black ink, appearing to read "Anne Reichert". The signature is fluid and cursive, with the first name "Anne" being more prominent than the last name "Reichert".

Anne Reichert, P.E.  
Construction Project Manager

cc: Bob Magnusson, WMNH  
Timothy Reed, Sanborn Head



January 5, 2016

Mr. James B. Campbell, Director  
Planning and Development Department  
City of Rochester  
31 Wakefield Street  
Rochester, New Hampshire 03867

**TURNKEY RECYCLING & ENVIRONMENTAL ENTERPRISE**

30 Rochester Neck Road  
P.O. Box 7065  
Rochester, NH 03839  
(603) 330-2197  
(603) 330-2130 Fax

Re: Waiver - Underground Utilities Requirement  
Site Plan Application – Leachate Treatment Plant Expansion Stage II  
Rochester, New Hampshire

Dear Mr. Campbell:

Waste Management of New Hampshire, Inc. (WMNH) is requesting a waiver to the requirement of underground utilities for a project in the Recycling Industrial zone for the above noted Site Plan Application. Section 15 Part (D) (1) of the Site Plan Regulations requires that,

*"All electric, telephone, television and other communication lines and structures shall be placed underground throughout the site including utilities extended onto the site from existing poles near the site."*

As discussed in Part (D) (3) of Section 15, WMNH understands that a waiver request from these requirements would be accepted for consideration. To that end, WMNH reviewed the applicable sections of the Regulations with respect to the proposed project, and we offer the following justification for a waiver from the underground utilities requirements of the Regulations.

1. Many of the proposed utilities for this project are located along and down a 2H:1V cut slope. It would be impractical because it would require a significant amount of over-excavation, at times near existing buildings, to properly bury the proposed lines.
2. Some of the proposed utilities would require excavation across existing pavement. This, along with the constructability issues described above, prohibitively increases the cost of the project.
3. The site currently has overhead high voltage utilities in this area of the Turnkey Recycling & Environmental Enterprise (TREE) facility. WMNH is proposing the installation of three utility poles for this project to continue an existing overhead high

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voltage line to the proposed building. The installation of this section of overhead utility will not create unnecessary visual impact or detract from a favorable view or landscape. The installation of this section of overhead utilities would be keeping with the commercial/industrial development theme of WMNH's property in this portion of the TREE facility. The proposed utilities will also not cause obstruction or nuisance for any vehicles driving along Rochester Neck Road.

4. In addition, the running of excessive lengths of high voltage underground utilities can pose a safety concern as familiarity with their buried location becomes vague with time. Even with diligent efforts to locate and mark utilities with survey, without having installations being clear from a given utility pole to a known location this knowledge is at risk and raises the potential for accidents. Utility locating services such as Dig Safe do not cover private property such as the TREE facility, resulting in dependence on third party utility locators when as-builts are not available. Typically, responsiveness by these service providers is not as prompt increasing the potential for work to begin before locating is completed.

We trust that the above information fully addresses the City's need for a waiver request from the underground utilities requirements for this project. Should you require additional information, please contact me at [areichert@wm.com](mailto:areichert@wm.com).

Very truly yours,

WASTE MANAGEMENT OF NEW HAMPSHIRE, INC.



Anne Reichert, P.E.  
Construction Project Manager

cc: Bob Magnusson, WMNH  
Timothy Reed, Sanborn Head

## **Project Narrative**

Waste Management of New Hampshire, Inc. (WMNH) is proposing to increase the treatment capacity of the existing Leachate Treatment Plant that supports operations at the Turnkey Recycling & Environmental Enterprise (TREE) Facility at 62 Turnkey Way by adding a treatment process that employs the use of membranes and ultra-filtration. The Leachate Treatment Plant is an integral part of the Turnkey Recycling and Environmental Enterprise (TREE) facility, and is situated on a 90-acre parcel designated by the City of Rochester Tax Maps as Map 267, Lot 3. The current site conditions are shown on the Overall Site and Zoning Plan provided as Sheet C1 of the drawings and the Existing Conditions Plan provided as Sheet C2. Reduced drawings are included in this application.

### **Existing Conditions**

The existing facility includes five Above Ground Storage Tanks (ASTs) and three supporting buildings. In the immediate vicinity of the proposed work is a Sequencing Batch Reactor (SBR) tank, a Post SBR-tank, a 500,000-gallon AST, and an existing sludge tank all of which are located within a secondary containment liner system. The SBR is supported by an equipment building.

The existing ground surface elevations range from about 180 to 200 feet. Based on monitoring well observations and historical subsurface borings, bedrock at the site is between elevation 100 feet and 120 feet and groundwater is at about elevation 130 feet.

The facility is permitted with the City of Rochester (Permit Number: RIDA 12-015) and the New Hampshire Department of Environmental Services (NH DES) (Permit Number: IDR 13-001) to pretreat and discharge up to a maximum of 160,000 gallons per day (GPD) of landfill wastewater from the TREE facility. WMNH is proposing this project to allow the facility to achieve a permitted discharge of 240,000 GPD. WMNH will be permitting with the City of Rochester (Department of Public Works) and the NH DES in early 2016, a change to the treatment technology to incorporate membranes and ultra-filtration, which will allow for a treatment capacity of 240,000 GPD. This request is separate from the Site Plan Approval process and requires acquiring a revised Industrial Discharge Agreement for the facility with the City and the NH DES.

### **Proposed Conditions**

The proposed project includes removing two buildings (a barn and a shed currently used for storage) and associated paved areas, and installing two new ASTs and a 61-foot x 61-foot building to house process equipment. The finished floor of the building is proposed at 188.5 feet and the base of the ASTs will be at 180.5 feet. The secondary containment liner system will be expanded to accommodate the proposed ASTs. A paved parking area and access road will be constructed along with the building. Proposed construction includes removing a utility pole that supplies power to a storage barn; WMNH is proposing to reconfigure the existing power lines to ensure this utility service remains in place to this structure.

## Stormwater Management

Pre-development (Figure 1) and Post-development (Figure 2) conditions were modeled using HydroCAD™ software developed by HydroCAD Software Solutions, LLC located in Chocorua, New Hampshire. HydroCAD™ is a computer aided design program developed for modeling the hydrology and hydraulics of stormwater runoff based largely on hydrology techniques developed by the Soil Conservation Service (now the National Resources Conservation Service), combined with other hydrology and hydraulics calculations. A comparison of the 2-, 10-, 25-, and 50-year, 24-hour storm shows that post-development flows are equal to or less than flows predicted for pre-development site conditions.

Figures and reports are included in this application. Below is a discussion of the existing and proposed drainage patterns at the site.

### *Pre-Development*

Currently, stormwater within the secondary containment area (Subcatchment 1) is detained within the secondary containment area with a closed operator valve. If clean, stormwater can be released to a series of swales and culverts that discharge to an existing pond south of the site (Pond 1) after the storm event once flows have subsided. Stormwater north of the secondary containment area (Subcatchment 2) flows south through a series of swales and culverts to an existing 24-inch diameter culvert underneath Turnkey Way and ultimately to Pond 1. Stormwater east of the secondary containment area flows south east through a series of swales, culverts, and drainage structures to Pond 1. These flows were not modeled as there is no proposed devolvement in this area.

Based on United States Department of Agriculture Soil Survey mapping for Strafford County (see enclosed soil survey), the surficial soils at the parcel consists of the following soil types:

NRCS State Legend Number	Name	Hydrologic Soil Group (HSG)
BzA	Buxton silt loam, 0 to 3 percent slopes	C/D
HaA	Hinkley loamy sand, 0 to 3 percent slopes	A
HaC	Hinkley loamy sand, 8 to 15 percent slopes	A
HgB	Hollis-Gloucester very rocky fine sandy loams, 3 to 8 percent slopes - Hollis	D
	Hollis-Gloucester very rocky fine sandy loams, 3 to 8 percent slopes - Gloucester	A
ScB	Scantic silt loam, 3 to 8 percent slopes	C/D
SfC	Suffield silt loam, 8 to 15 percent slopes	C
WfB	Windsor loamy fine sand, clay subsoil variant, 0 to 8 percent slopes	A

The soils within the proposed excavation area are predominantly Hinkley loamy sand, 8 to 15 percent slopes (HaC), which has a hydrologic soil classification of Group A.

### **Post-development**

Proposed development does not materially change the general drainage patterns. A swale is proposed on the cut slope to divert stormwater from areas north of the proposed development from entering the secondary containment area (similar to the existing conditions). A 12-inch diameter culvert is proposed south of the proposed building to convey storm water from the parking lot beneath the proposed access road to the existing 24-inch diameter culvert. The secondary containment area is larger and therefore, more stormwater is detained during a storm event. During construction, the existing 24-inch diameter culvert will be fitted with an inlet sediment control as shown on the drawings.

The proposed development reduces the total and impervious area that contributes to the existing 24-inch diameter culvert. Therefore, there is a small, but measurable, reduction in stormwater runoff from the site from the pre-development to post-development. A summary of the flows comparison is below.

<b>Comparison of Pre- and Post-Development Flows</b>		
<b>Storm Event (24-hour)</b>	<b>Pre-Development Runoff (cfs)</b>	<b>Post-Development Runoff (cfs)</b>
2 - Year	1.64	1.54
10 - Year	6.73	6.35
25 - Year	11.91	11.27
50 - Year	17.29	16.35

### **Erosion and Sediment Control**

During construction the primary concern will be sediment leaving the site. The disturbed area flows to one of two places, either to the existing 24-inch diameter culvert, or into the secondary containment area. Stormwater in the secondary containment area is already detained and requires no further controls. However, the existing 24-inch diameter culvert will need to be protected from sediment as shown on the drawings.



# SITE PLAN APPLICATION

## LEACHATE TREATMENT PLANT EXPANSION STAGE II

### WASTE MANAGEMENT OF NEW HAMPSHIRE, INC.

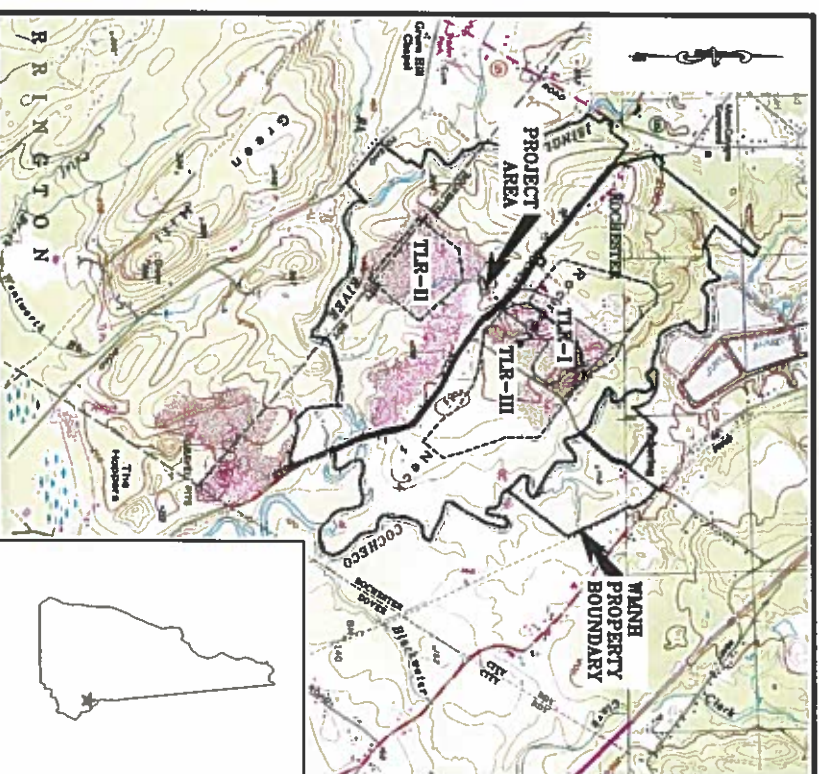
### TURNKEY RECYCLING & ENVIRONMENTAL ENTERPRISES

ROCHESTER, NEW HAMPSHIRE

JANUARY 2016

#### SHEET INDEX

- C1 OVERALL SITE AND ZONING PLAN
- C2 EXISTING CONDITIONS PLAN
- C3 PROPOSED SITE PLAN
- C4 TYPICAL DETAILS AND SECTIONS
- C5 TYPICAL DETAILS AND SECTIONS
- C6 TYPICAL DETAILS AND SECTIONS
- G1 BUILDING ARRANGEMENT (PREPARED BY OBG)
- G2 ELEVATIONS (PREPARED BY OBG)
- G3 LEAK DETECTION DETAIL



FROM USG TOPOGRAPHIC MAP ROCHESTER, NEW HAMPSHIRE (PROVISIONAL 1983)

## LOCUS PLAN

SCALE: 1"=2000'

FOR MORE INFORMATION ABOUT THESE PLANS CONTACT THE CITY OF ROCHESTER PLANNING DEPARTMENT 31 WILKIEFIELD STREET ROCHESTER, NH 03607 (603) 335-1336

ROCHESTER PLANNING BOARD

APPROVAL CERTIFIED BY:

DATE:



PREPARED FOR:



WASTE MANAGEMENT OF NEW HAMPSHIRE, INC.

ROCHESTER, NEW HAMPSHIRE

PREPARED BY:

SANBORN HEAD

20 FOUNDRY STREET, CONCORD, NEW HAMPSHIRE 03301  
(603) 229-1900 FAX (603) 229-1919

RECEIVED  
JAN 05 2016  
Planning Dept.





APPROVAL CERTIFIED BY:

# HEAD



**DRAWN BY: T. REED**  
**DESIGNED BY: T. REED**  
**REVIEWED BY: E. STEINHAUSER**  
**PROJECT MGR: T. REED**  
**PIC: E. STEINHAUSER**  
**DATE: JANUARY 2016**

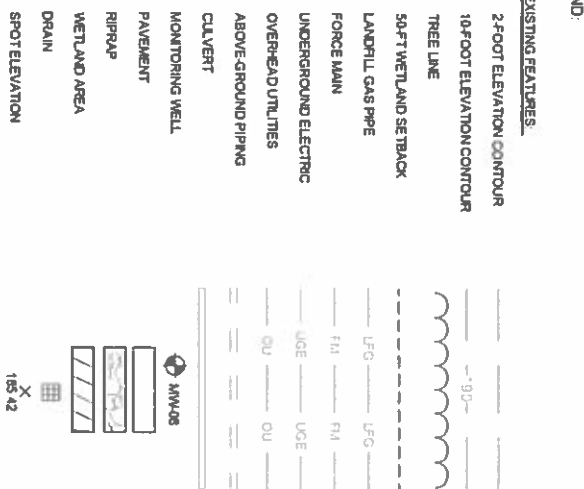
ROCHESTER, NEW HAMPSHIRE

SHEET NUMBER:

PROJECT NUMBER:

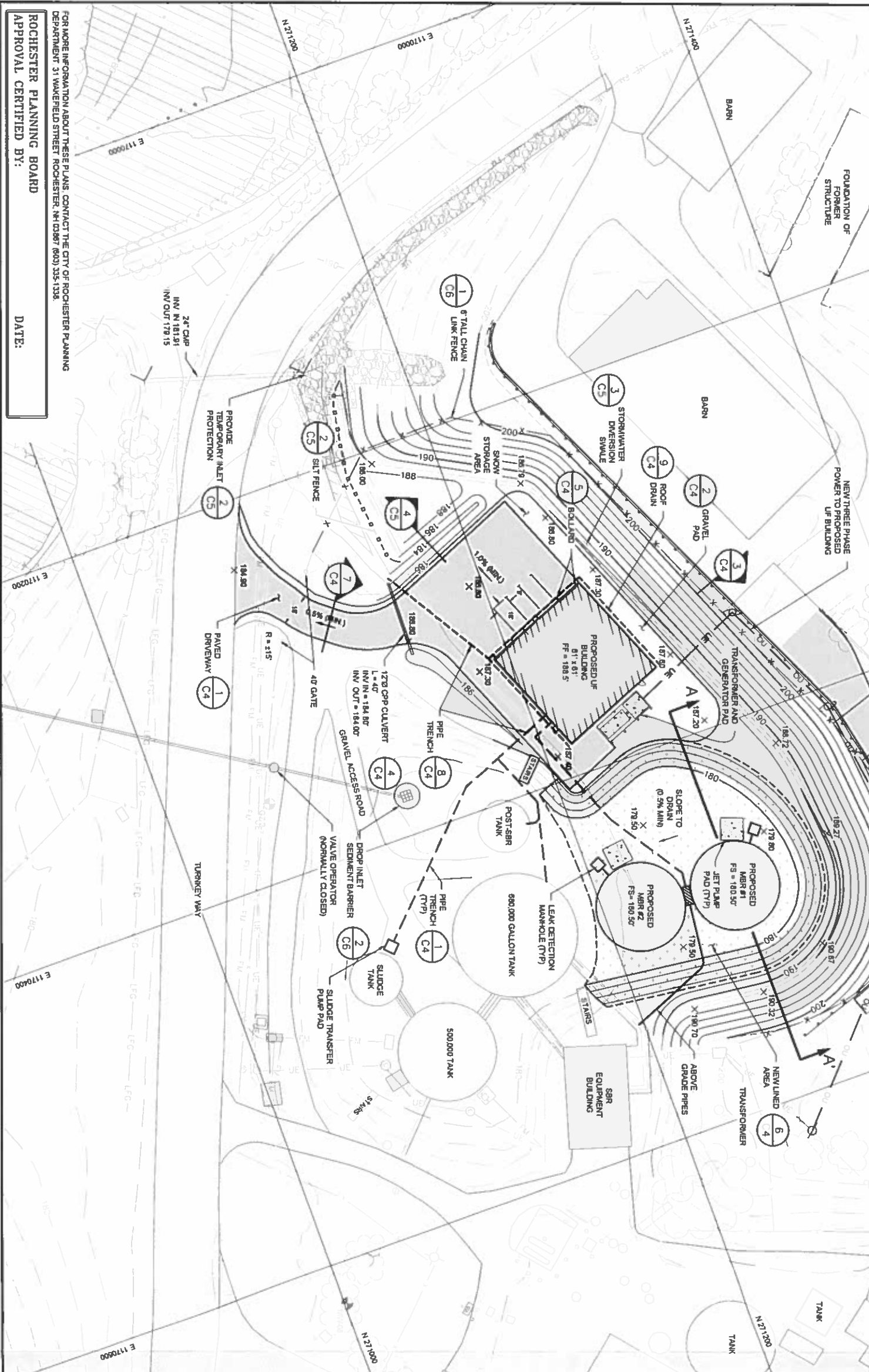
3534.03

BARRY H. KEITH: REGISTERED WETLAND SCIENTIST NO. 08



- NOTES:
1. EXISTING TOPOGRAPHY AND SITE FEATURES WERE PROVIDED TO SANBORN HEAD IN AN ELECTRONIC FILE TITLED "THE 150AMP DWG" COMPILED USING PHOTOGRAMMETRIC METHODS BY QUANTUM SPATIAL OF DALLAS, VIRGINIA, FOR WASTE MANAGEMENT OF NEW HAMPSHIRE, INC. (MAWH) USING AERIAL PHOTOGRAPHY DATED MAY 2, 2015. ORIGINAL SCALE OF 1" = 100' AND CONTROLS INTERVAL OF 2 FEET. VERTICAL DATUM IS BASED ON NAVD 1929. GRID 5 BASED ON NEW HAMPSHIRE STATE PLANE COORDINATE SYSTEM AND 1983.2.
2. REFER TO SHEET C1 FOR ADDITIONAL WETLAND INFORMATION. WETLANDS IN THIS VICINITY NORTH OF TURNER WAY, WERE PROVIDED ELECTRONICALLY IN A DRAWING ENTITLED "W0304-077-1-WAMP DWG" PROVIDED BY MSP GLOBAL, INC. OF RASHUA, NEW HAMPSHIRE IN FEBRUARY 2015. THESE WETLANDS WERE DELINEATED BY BR KETH A ASSOCIATES IN DECEMBER OF 2014.





**ROCHESTER PLANNING BOARD  
APPROVAL CERTIFIED BY:**

FOR MORE INFORMATION ABOUT THESE PLANS, CONTACT THE CITY OF ROCHESTER PLANNING DEPARTMENT 31 WAKEFIELD STREET ROCHESTER, NH 03867 (603) 335-1336.

# SANBORN HEAD

GRAPHICAL SCALE

[illegible]

DRAWN BY E GALVIN / T REED  
DESIGNED BY E GALVIN / T REED  
REVIEWED BY E STEINHAUSER  
PROJECT MGR: T REED  
PIC E STEINHAUSER  
DATE: JANUARY 2016

**SITE PLAN APPLICATION  
LEACHATE TREATMENT PLANT EXPANSION STAGE II  
WASTE MANAGEMENT OF NEW HAMPSHIRE, INC.**

## PROPOSED SITE PLAN

PROJECT NUMBER

3534.03

SHEET NUMBER:



GENERAL NOTES

- CONDUCT EARTHWORK ACTIVITIES SO THAT THE SMALLEST PRACTICAL AREA IS EXPOSED AT ANY ONE TIME PRIOR TO FINAL GRADING AND STABILIZING WITH SEED AND MULCH UNDISTURBED AREAS NOT WITHIN THE LANDFILL FOOTPRINT SHALL BE LIMITED TO NOT MORE THAN 2 CONTIGUOUS ACRES AT ANY ONE TIME. THE TERM "STABLE" IS DEFINED AS MEETING ONE OF THE FOLLOWING CRITERIA:
  - BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED.
  - A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED.
  - A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE RIPRAP HAS BEEN INSTALLED. OR
  - EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
- APPLY SEED, LIME, FERTILIZER, AND HAY MULCH TO DISTURBED AREAS. NEWLY PLACED FILL SLOPES AND GRASS-LINED SWALES WITHIN 7 DAYS OF ACHIEVING FINAL GRADE. ALSO APPLY SEED AND HAY MULCH TO THOSE AREAS OUTSIDE OF THE LANDFILL FOOTPRINT WHICH WILL NOT BE RE-DISTURBED FOR A PERIOD OF 30 DAYS OR MORE. HAY MULCH SHALL BE APPLIED AT THE RATE OF 1.5 TO 2 TONS PER ACRE.
- SLIT FENCE/SILT FENCE EROSION CONTROL STRUCTURES SHALL BE INSTALLED AT THE PERIPHERY OF THE ENGINEER AND OWNER SHALL BE INSTALLED LONG THE CONTOUR AND TOP OF SLOPE. SLIT FENCE/SILT FENCE BARRIERS ARE TO BE MAINTAINED AND CLEANED UNTIL VEGETATIVE COVER IS ESTABLISHED.
- ALL EROSION CONTROL SUCH AS SLIT FENCE SHALL BE INSPECTED WEEKLY DURING THE LIFE OF THE PROJECT AND AFTER EACH STORM EVENT WHICH PRODUCES 0.25 INCHES OF RAINFALL. ALL DAMAGED SLIT FENCE SHALL BE REPAIRED PROMPTLY.
- TRACK UP AND DOWN REGRADED SLOPES (OR CROSSER TRACKS PERPENDICULAR TO THE SLOPE) WITH A BULLDOZER TO LIMIT EROSION.
- REMOVE SEDIMENT FROM DETENTION PONDS RESULTING FROM CONSTRUCTION ACTIVITY AS NEEDED TO MAINTAIN STORAGE CAPACITY AND AT THE DIRECTION OF THE ENGINEER OR OWNER.
- REMOVE SEDIMENT BUILD UP FROM BEHIND EROSION AND SEDIMENT CONTROL DEVICES. MAINTAIN TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES UNTIL FULFILL ESTABLISHMENT OF PERMANENT GROUND COVER.
- DITCHES, SWALES, AND PONDS SHALL BE STABILIZED BEFORE RUNOFF IS DIRECTED TO THEM.
- CONDUCT SOIL BORROW EXCAVATION ACTIVITIES IN SUCH A MANNER THAT ALL RUNOFF FROM THE EXCAVATION AREAS IS CONTAINED WITHIN THE EXCAVATION.

SPECIFICATIONS

TOPSOIL AND SEEDING MATERIALS

- TOPSOIL SHALL BE FERTILE SOIL, CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH, FREE FROM ROOTS, STICKS, PEAT WEEDS, AND SOD. IT SHALL NOT CONTAIN MATERIAL HARMFUL TO PLANT GROWTH. TOPSOIL TO BE USED IN AREAS OUTSIDE THE PHASES 8 & 14 FOOTPRINT SHALL BE SCREENED THROUGH A 2 INCH SCREEN PRIOR TO PLACEMENT.
- FERTILIZER (15-10-10) SHALL BE LOW PHOSPHATE AND SLOW RELEASE NITROGEN AND APPLIED UNIFORMLY OVER THE DISTURBED AREAS AT A RATE OF TWENTY (20) POUNDS PER 1,000 SQUARE FEET (APPROXIMATELY 875 POUNDS PER ACRE).
- GRASS SEED SHALL BE FROM THE SAME OR PREVIOUS YEAR'S CROP. EACH VARIETY OF SEED SHALL HAVE A PERCENTAGE OF GERMINATION NOT LESS THAN NINETY (90) A PERCENTAGE OF PURITY NOT LESS THAN EIGHTY-FIVE (85), AND SHALL HAVE NOT MORE THAN ONE PERCENT (1%) WEED CONTENT.
- MULCH SHALL CONSIST OF DRY HAY OR STRAW AND BE FREE OF NOXIOUS WEEDS OR SOD.
- APPLICATION OF FERTILIZER, LIME, SEED, AND MULCH SHALL ONLY BE PERFORMED DURING THOSE PERIODS WITHIN THE SEASONS WHICH ARE NORMAL FOR SUCH WORK AS DETERMINED BY THE WEATHER AND LOCALLY ACCEPTED PRACTICE, AND AS APPROVED BY THE ENGINEER.
- ANY PART OF THE SEEDING AREA WHICH FAILS TO YIELD AN ACCEPTABLE STAND OF GRASS AS DETERMINED BY THE ENGINEER OR OWNER SHALL BE RETREATED WITH ADDITIONAL SEED, FERTILIZER, AND MULCH.

SAND BLANKET FILL

- SAND BLANKET FILL SHALL BE USED TO CONSTRUCT THE 18-INCH THICK SAND BLANKET ABOVE THE CONTAMINANT LINER WHERE CALLED FOR ON THE DRAWINGS. SAND BLANKET FILL SHALL BE FREE FROM ICE, SNOW, ROOTS, SOD, RUBBISH, AND OTHER DELETERIOUS OR ORGANIC MATTER AND SHALL BE GRADED WITHIN THE FOLLOWING LIMITS

SEIVE SIZE	PERCENT FINER BY WEIGHT
1-INCH	100
No. 10	80-85
No. 40	10-70
No. 200	0-10

- SAND BLANKET FILL SHALL, BY COMPOSITION, CONTAIN NO MORE THAN 15 PERCENT CALCULUM CARBONATE AS DETERMINED BY ASTM METHOD D 4373.
- THE HYDRAULIC CONDUCTIVITY OF SAND BLANKET FILL SHALL BE  $1 \times 10^{-8}$  CMSE OR HIGHER.

GRANULAR FILL

- GRANULAR FILL SHALL BE USED FOR BACKFILL FOR STRUCTURES AND PILING AND CONDUIT TRENCHES WHERE NOTED ON THE DRAWINGS. GRANULAR FILL SHALL BE FREE FROM ICE, SNOW, ROOTS, SOD, RUBBISH AND OTHER DELETERIOUS OR ORGANIC MATTER AND SHALL BE WELL GRADED WITHIN THE FOLLOWING LIMITS

SEIVE SIZE	PERCENT FINER BY WEIGHT
1-INCH	100
No. 10	25-65
No. 40	15-75
No. 200	0-10

FOR MORE INFORMATION ABOUT THESE PLANS, CONTACT THE CITY OF ROCHESTER PLANNING DEPARTMENT, 31 WAKEFIELD STREET, ROCHESTER, NY 02067 (603) 335-1338

ROCHESTER PLANNING BOARD

APPROVAL CERTIFIED BY:

DATE:

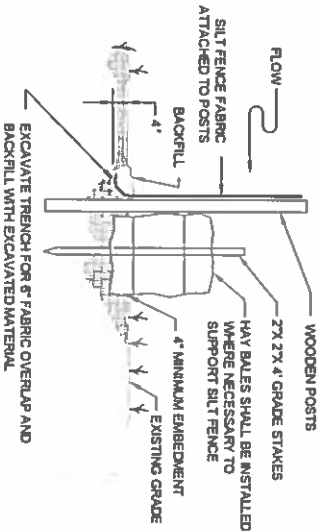
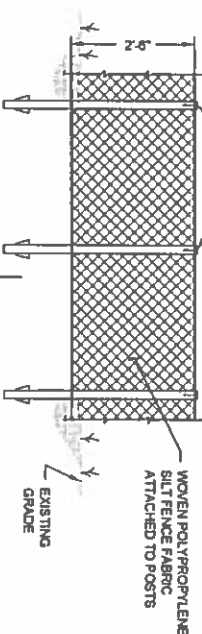
ORDINARY FILL

- ORDINARY FILL SHALL BE USED AS FILL REQUIRED TO RAISE THE GRADE AND SHALL BE FREE FROM ICE, SNOW, ROOTS, SOD, RUBBISH AND OTHER DELETERIOUS MATTER AND SHALL BE GRADED WITHIN THE FOLLOWING LIMITS

SEIVE SIZE	PERCENT FINER BY WEIGHT
1-INCH	100
4-INCH	60-100
No. 40	15-65
No. 200	0-25

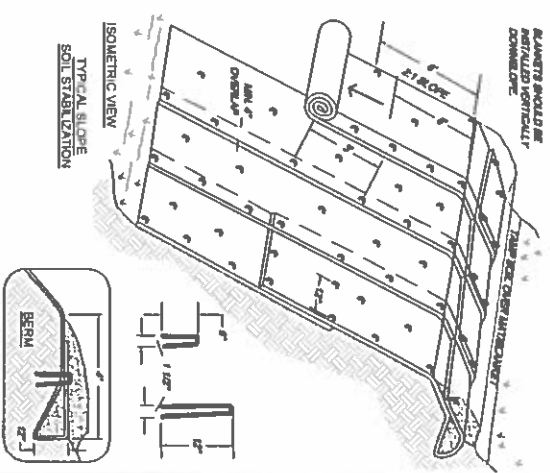
TEMPORARY EROSION CONTROL MEASURES

- THE SMALLEST PRACTICAL AREA OF LAND SHALL BE EXPOSED AT ANY ONE TIME.
- ALL DISTURBED AREAS SHALL BE FINE GRADED BEFORE BEING SEEDDED AND MULCHED.
- FILL MATERIAL SHALL BE FREE FROM STUMPS, WOOD, ROOTS, ETC.
- THE BOTTOM OF THE DETENTION PONDS SHALL BE PERIODICALLY CLEANED WITH THE SEDIMENT REMOVED TO A SECURE LOCATION SO AS TO PREVENT SALINATION OF NATURAL WATERWAYS.
- AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED, THE TEMPORARY EROSION CONTROL STRUCTURES ARE TO BE REMOVED AND ACCUMULATED SEDIMENT DISPOSED OF IN A SECURE LOCATION.
- TEMPORARY EROSION CONTROL STRUCTURES SHALL BE PERIODICALLY INSPECTED DURING THE LIFE OF THE PROJECT AND AFTER EACH STORM. SEDIMENT DEPOSITS SHALL PERIODICALLY BE REMOVED.



SILT FENCE

NOT TO SCALE



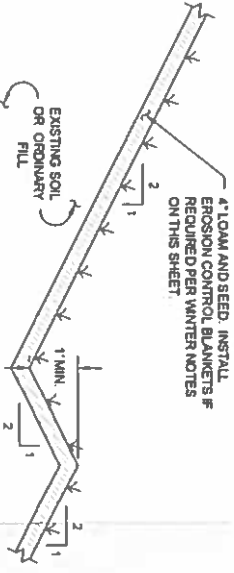
SLOPE INSTALLATION

- NOTES:
- DIMENSIONS GIVEN IN THE DRAWINGS ARE EXAMPLES. DEVICE SHOULD BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
  - SLOPE SURFACE SHALL BE FREE OF ROCKS, CLDS, STICKS AND GRASS. MATS/BLANKETS SHALL HAVE GOOD SOIL CONTACT.
  - APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
  - LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.

- SOURCE:
- NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3 EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION, REVISION 1.0, DECEMBER 2008, PAGES 74 AND 75.

EROSION CONTROL BLANKET INSTALLATION

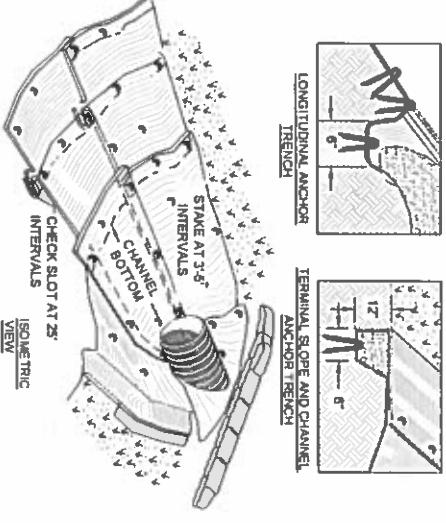
NOT TO SCALE



- NOTES:
- PROVIDE MINIMUM OF 1 PERCENT SLOPE ON SWALE INVERT.

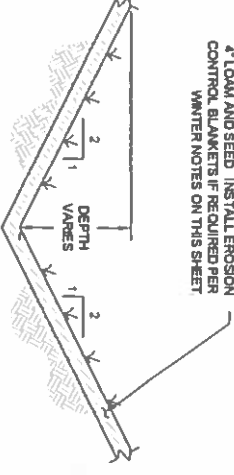
STORMWATER DIVERSION SWALE

NOT TO SCALE



CHANNEL INSTALLATION

- NOTES:
- DIMENSIONS GIVEN IN THE DRAWINGS ARE EXAMPLES. DEVICE SHOULD BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
  - CHECK SLOTS TO BE CONSTRUCTED PER MANUFACTURER'S SPECIFICATIONS.
  - STAKING OR STAPLING LAYOUT PER MANUFACTURER'S SPECIFICATIONS.

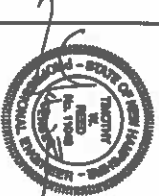


GRASS-LINED SWALE

NOT TO SCALE

SANBORN HEAD

SCALE: AS NOTED



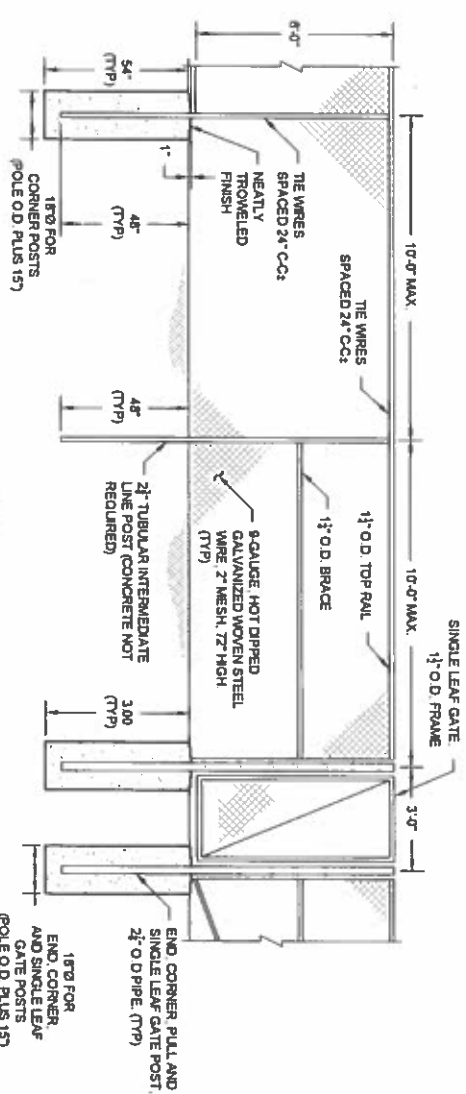
NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
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8		

DRAWN BY: T. REED  
DESIGNED BY: T. REED  
REVIEWED BY: E. STEINHAUSER  
PROJECT MGR: T. REED  
PIC: E. STEINHAUSER  
DATE: JANUARY 2016

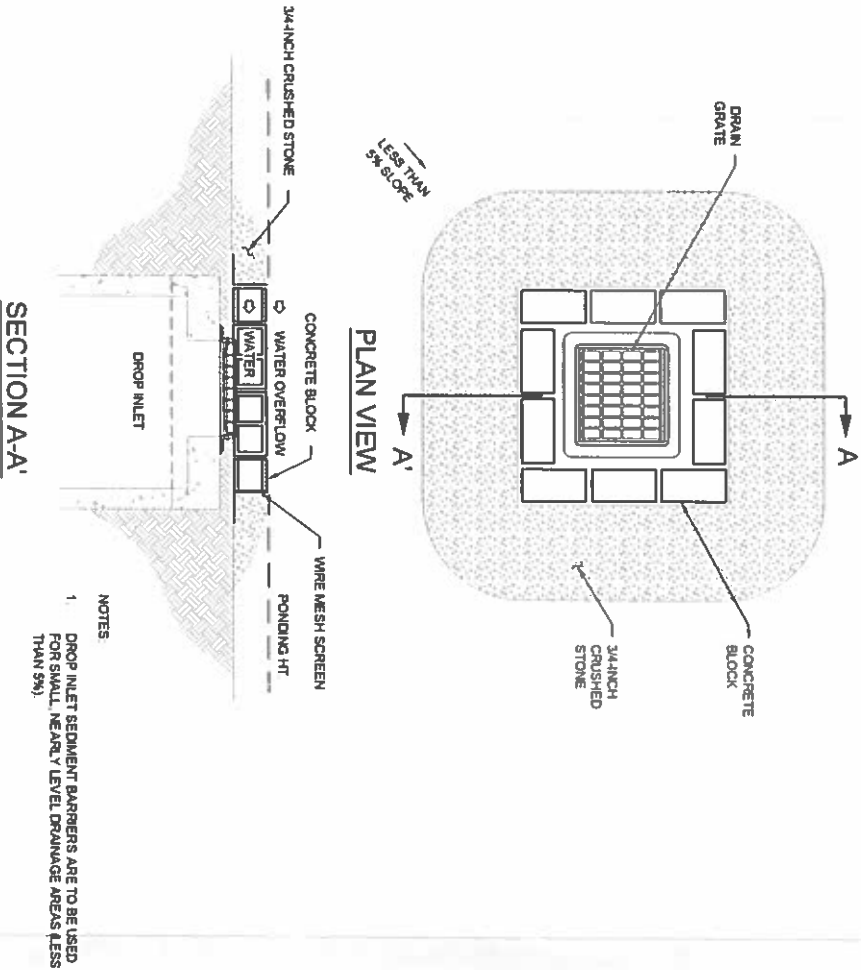
SITE PLAN APPLICATION  
LEACHATE TREATMENT PLANT EXPANSION STAGE II  
WASTE MANAGEMENT OF NEW HAMPSHIRE, INC.  
ROCHESTER, NEW HAMPSHIRE

TYPICAL DETAILS AND SECTIONS

PROJECT NUMBER:  
3534.03  
SHEET NUMBER:  
C5



- CHAIN LINK FENCE**
- NOT TO SCALE
- NOTE:
- THE CONTRACTOR SHALL SALVAGE AND REUSE EXISTING PREVIOUSLY FABRICATED RAILS AND FABRIC AND PROVIDE NEW FENCING MATERIAL AS REQUIRED TO CONSTRUCT FENCING AS SHOWN ON THE DRAWINGS
  - ALL CORNER AND INTERMEDIATE BRACES OR PULL POSTS SHALL HAVE TWO BRACES
  - GATES TO BE INSTALLED AS PER MANUFACTURER'S INSTRUCTIONS
  - CORNER POSTS AND GATE POSTS SHALL BE SET IN CONCRETE AS SHOWN



FOR MORE INFORMATION ABOUT THESE PLANS, CONTACT THE CITY OF ROCHESTER PLANNING DEPARTMENT, 31 WAKEFIELD STREET, ROCHESTER, NH 02067 (603) 335-1328

ROCHESTER PLANNING BOARD

APPROVAL CERTIFIED BY: \_\_\_\_\_

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

SANBORN

HEAD

SCALE AS NOTED



NO.	DATE	DESCRIPTION	BY

DRAWN BY: T. REED  
DESIGNED BY: T. REED  
REVIEWED BY: E. STEINHAUSER  
PROJECT MGR: T. REED  
PIC: E. STEINHAUSER  
DATE: JANUARY 2016

SITE PLAN APPLICATION  
LEACHATE TREATMENT PLANT EXPANSION STAGE II  
WASTE MANAGEMENT OF NEW HAMPSHIRE, INC.  
ROCHESTER, NEW HAMPSHIRE

PROJECT NUMBER:  
3534.03  
SHEET NUMBER:  
C6



**ROCHESTER PLANNING BOARD  
APPROVAL CERTIFIED BY:**

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1. ELEVATED PLATFORM TO BE DESIGNED BY STRUCTURAL ENGINEER.
2. ULTRAFILTRATION SKIDS AND PUMPS ARE TO BE PAD MOUNTED.
3. CURTAIN TO BE HUNG FROM BUILDING SUPERSTRUCTURE

 $\oplus$ 

ROCHESTER, NEW HAMPSHIRE

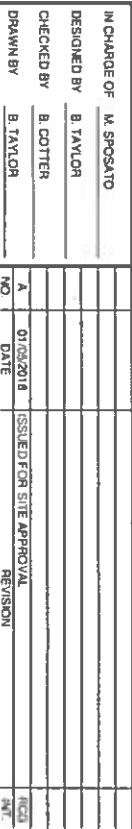
## BUILDING ARRANGEMENT

**DATA**

JANUARY 2016

G-1



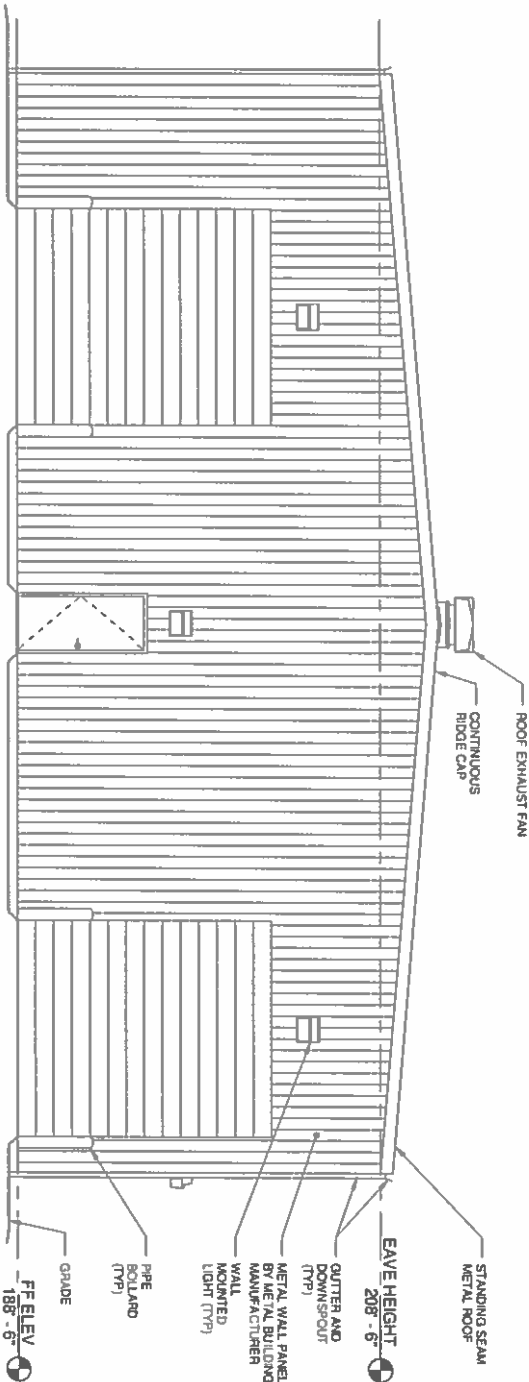


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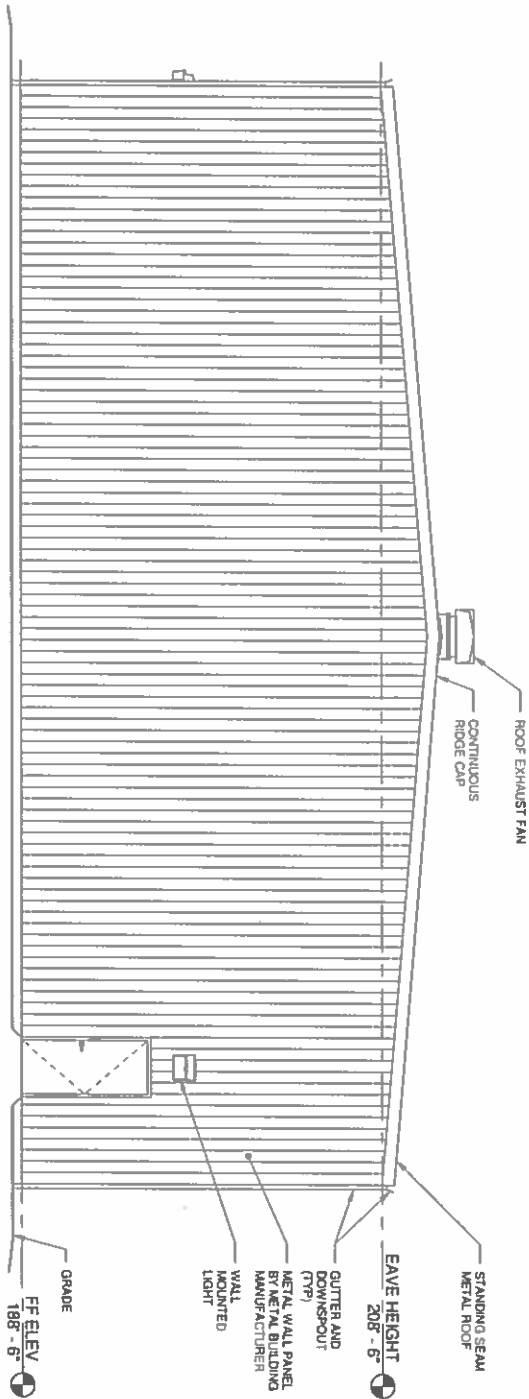
DATE:

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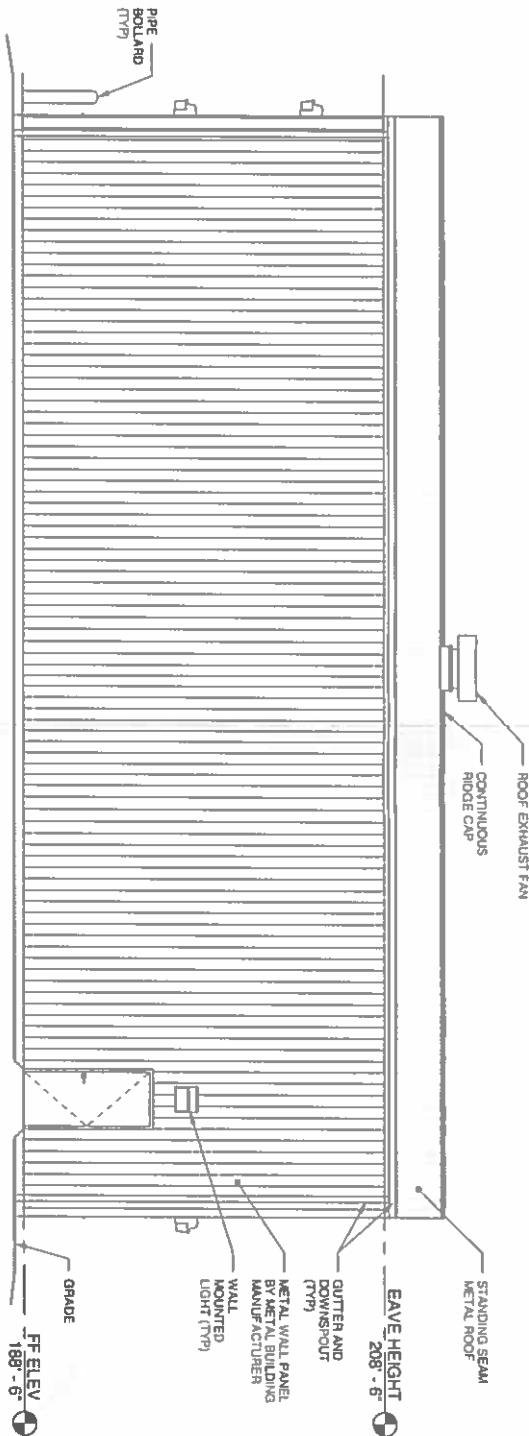
## WEST ELEVATION



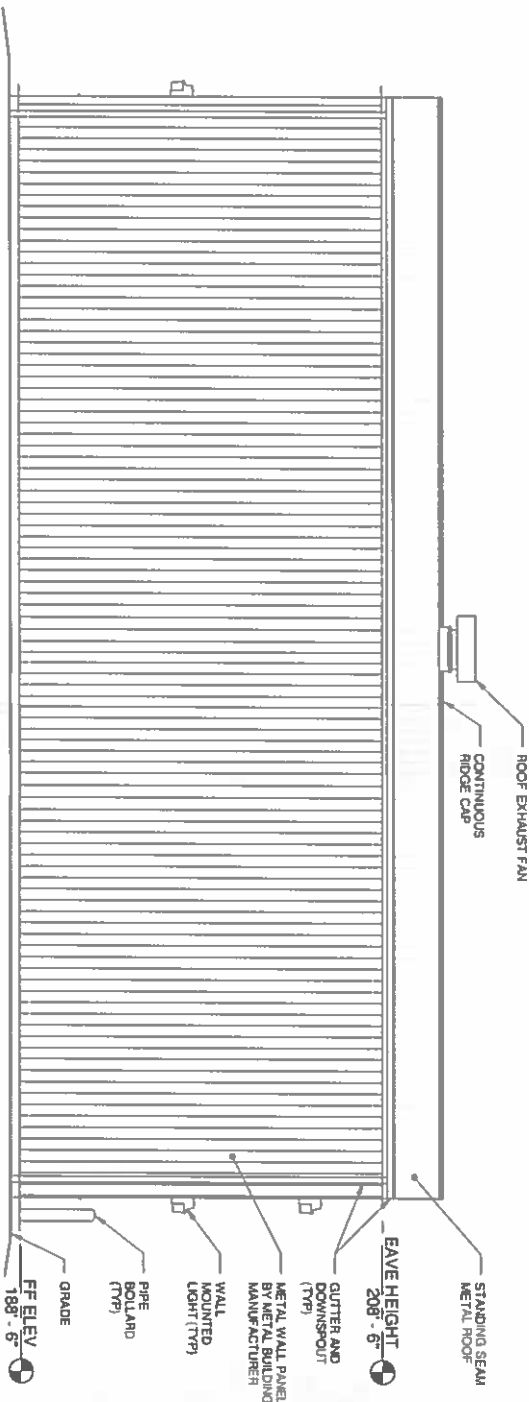
### EAST ELEVATION



## SOUTH ELEVATION



# NORTH ELEVATION



**O'BRIEN & GERE ENGINEERS, INC**



**SITE PLAN APPLICATION  
LEACHATE TREATMENT PLANT EXPANSION STAGE II  
WASTE MANAGEMENT OF NEW HAMPSHIRE, INC  
ROCHESTER, NEW HAMPSHIRE**

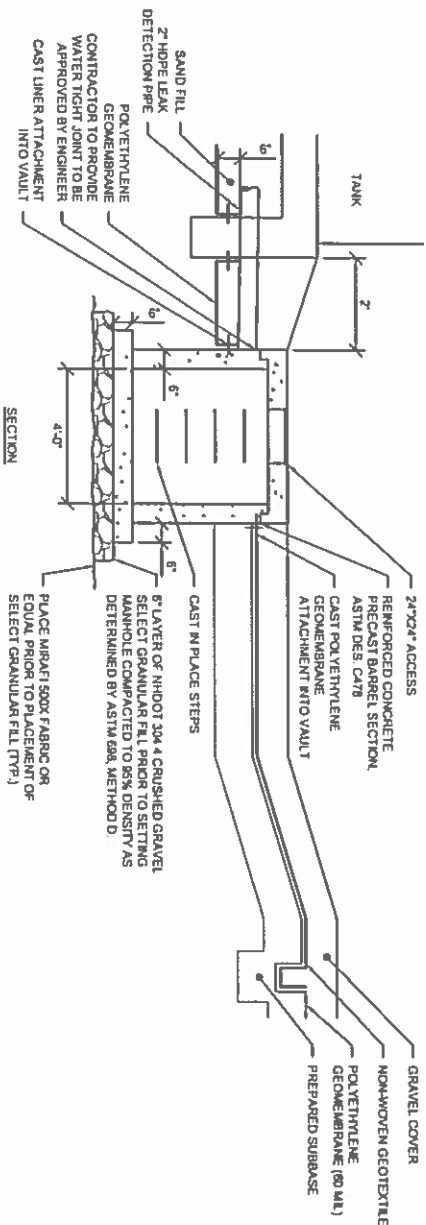
## ELEVATIONS

**FILE NO.**

62466-G-2

G-2





**NOT TO SCALE**

**ROCHESTER PLANNING BOARD  
APPROVAL CERTIFIED BY:**

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# SITE PLAN APPLICATION TURNKEY RECYCLING ENVIRONMENTAL ENTERPRISE LEACHATE TREATMENT PLANT EXPANSION STAGE II ROCHESTER, NEW HAMPSHIRE