

Town of Montague Personnel Status Change Notice

Authorized Signature: _____

Employee # 1587

General Information:

Full name of employee: <u>Tina Sulda</u>	Department: <u>Treasurer (Collector)</u>
Title: <u>Financial Assistant</u>	Effective date of change: <u>12/14/2020</u>

New Hire: Change from permanent part time to permanent full-time

Permanent: <u>X</u> Y ___ N ___	If temporary, estimated length of service: _____
Hours per Week: <u>35</u>	Union: <u>NAGE</u>
Pay: Grade <u>B</u> Step <u>8</u>	Wage Rate: <u>\$20.75</u> (annual/ hourly) <u>(NO CHANGE)</u>
Board Authorizing: _____	Date of Meeting: _____

Grade/Step/COLA Change:

Union: _____			
Old Pay: Grade _____	Step _____	Wage Rate: _____	(annual/hourly)
New Pay: Grade _____	Step _____	Wage Rate: _____	(annual/ hourly)
Notes: _____			

Termination of Employment:

Resignation: _____	Layoff: _____	Involuntary Termination: _____
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Other:

_____ Unpaid Leave of Absence	Termination Date: _____
_____ Unpaid Sick Leave	Termination Date: _____
_____ Other/Specify: _____	Termination Date: _____

Copies to:

- | | | |
|------------------|------------------|--------------------------|
| _____ Employee | _____ Department | _____ Board of Selectmen |
| _____ Treasurer | _____ Accountant | _____ Retirement Board |
| _____ Town Clerk | | |

AGREEMENT

between

THE TOWN OF MONTAGUE, MASSACHUSETTS

and

**UNITED ELECTRICAL, RADIO AND MACHINE WORKERS
OF AMERICA, LOCAL 274**

EFFECTIVE: July 1, 2019 through June 30, 2022

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ARTICLE 1
AGREEMENT

- A. Agreement entered into between the TOWN OF MONTAGUE in the County of Franklin, Massachusetts (hereinafter called the "Town") and the UNITED ELECTRICAL, RADIO & MACHINE WORKERS OF AMERICA (UE) and its AFFILIATE LOCAL 274 of the UNITED ELECTRICAL, RADIO AND MACHINE WORKERS OF AMERICA (hereinafter called the "Union").

ARTICLE 2
PURPOSE OF AGREEMENT

- A. This Agreement is entered into by the Parties hereto in order to provide for orderly collective bargaining relations between the Town, its employees in the bargaining unit and the Union.
- B. It is the desire of both Parties to cooperate in maintaining a harmonious relationship between the Town and its employees, to provide an amicable method of settling any difference or grievance relating to wages, hours and other conditions of employment which may arise from time to time, and to provide for the performance by the Town employees of their work in a conscientious, productive and skillful manner which will serve the efficiency and economy of operation of the service to the Town.

ARTICLE 3
UNION RECOGNITION

- A. The Town recognizes the Union as the exclusive representative of all full-time and regular part-time employees in the Department of Public Works ("DPW"), and Water Pollution Control Facility ("WPCF") and excluding all superintendents and assistant superintendents, working foremen, professional employees, clerical employees, all temporary, seasonal and casual employees, and all other employees of the Town.

ARTICLE 4
NO DISCRIMINATION

- A. The Town agrees that no employee shall in any manner be discriminated against on account of membership in the Union or by reason of any Union activity.

- B. The Town and the Union hereby agree that neither Party shall discriminate against employees because of race, color, creed, sex, sexual orientation, genetic information, gender identity, religious affiliation, ancestry, veteran/active military status, national origin, or age as defined and protected under state or other applicable federal law.

ARTICLE 5
CHECKOFF OF DUES

- A. The Town agrees to deduct current monthly dues in installments weekly for any employee covered by this Agreement who so individually authorizes the Town in writing on the following form, and promptly remit the same to the Financial Secretary of the Local.

CHECKOFF AUTHORIZATION

By: _____
(Name of Employee)

To: Town of Montague

Effective: _____
(Date)

I hereby request and authorize you to deduct from my earnings each week, the amount of UE membership dues. This amount shall be paid to the Financial Secretary of Local 274, United Electrical, Radio & Machine Workers of America (UE). These deductions may be terminated by me by giving you a sixty (60) days written notice in advance to both the Town and the Union, or upon termination of my employment.

Employee's Signature

- B. The Union agrees to and does hereby indemnify, defend and hold the Town harmless from and against any and all claims, demands, liabilities, obligations, suits or any other form of legal action or litigation arising from or related to any action taken by the Town in reliance upon any information, list, notice, statement, or authorization for the checkoff of Union dues delivered to the Town by the Union.

ARTICLE 6
NO STRIKE CLAUSE

- A. The Union and the employees agree that they will not for any reason, including an alleged prohibited practice within the meaning of the M.G.L. c. 150E, authorize, threaten or participate in any strike (including a "sympathy" strike), job action, slowdown, work stoppage, or any interruption of or interference with the operations and services of the Town by concerted action.
- B. No grievance or other dispute need be taken up for discussion and settlement by the Town until any such violations have been terminated. Any employee or employees who engage or participate in any of the prohibited conduct described in Paragraph A shall be subject to disciplinary action, including reprimand, suspension or discharge, and such action, if taken by the Town, shall not be subject to the provisions of the grievance procedure except as to the question as to whether the employee or employees who were disciplined or discharged did in fact participate in or encourage or were responsible for the violation of the provisions of Paragraph A. In the event that any employees engage or participate in any of the prohibited conduct described in Paragraph A, the Union shall promptly, forthwith and without delay:
- (1) Publicly disavow such action by the employees; and
 - (2) Instruct such employees to cease such action, to return to work immediately, and to comply promptly with the provisions of this Article.
- C. The Town agrees that, during the term of this Agreement, it shall not institute a lockout against the employees covered by this Agreement.

ARTICLE 7
TOWN RIGHTS

- A. The Town, the Union and the employees agree that the right and responsibility to operate and manage the business and the affairs of the Town, to select and direct the working forces and to control, direct, discontinue and change the use of its properties and facilities are vested exclusively in the Town. These rights and responsibilities include by way of illustration the right to determine, control and change work and experimental operations; the right to select, test, train and to determine the ability and the qualifications of the employees; the right to determine, control and change emergency, experimental, operating, production, shift, training and working assignments and schedules; the right to control, plan, change and direct facilities equipment, tools and operations; the right to determine, control, plan and change routes, route schedules, and job assignments; the right to determine, control, plan and change all matters pertaining to purchase, sale or disposition of equipment, and the organization of the management staff; the right to establish, distribute, modify and enforce reasonable rules of employee conduct, manuals of operating procedures and rules and regulations governing matters pertaining to safety and health within the operations of the Town; the right to determine, control and change the quality and nature of its products, materials and services and the quantity of production; the right to employ, lay off, discharge, retire, assign, discipline, transfer, interview and promote its employees, including casual, seasonal, temporary employees and contract labor except as specifically limited by this Agreement; the right to obtain from any source and to contract and subcontract for materials, services, supplies and equipment whether or not arguably within the capacity of Town employees to perform; the right to determine, control and make changes in work assignments, job content, productivity and performance standards, frequency and standards of inspection, the size of the work force and the right to investigate all matters relating to Town operations, citizen complaints and employee conduct; the right to determine, control, plan, direct and change facilities and services on Town premises for the use or benefit of the employees; the right to introduce and operate new or improved methods, facilities, processes or techniques; the right to control, determine, direct, establish, change and discontinue Town functions and services or the location or the operation of its garage, office, or other facilities; the right to acquire, change, discard, install and remove equipment, machinery, time recording systems, buildings,

tools and other facilities; the right to determine, establish and change any form of employee benefits not otherwise provided for in this Agreement; the right to maintain discipline and order and to maintain or improve efficiency within its operations and all other rights pertaining to the operation and the management of the business and the affairs of the Town and the establishment and change of conditions of employment not specifically given in this agreement to the Union or to the employees. The failure by the Town to exercise any of the rights as provided in this Article shall not be construed as a waiver of these rights nor of the right of the Town to control, operate and manage its business. The Union and the employees agree that, except as otherwise specifically provided in this Agreement, nothing contained in this Agreement shall be construed or deemed to constitute a waiver of or any restriction upon the inherent right to the management of the Town to operate and conduct its business, facilities and services within maximum efficiency or of the common law right of the Town to control, direct, manage, plan and make changes in the business or the affairs of the Town, and to unilaterally exercise rights and authority as provided and illustrated in this Section; provided, however, that none of these rights shall be exercised by the Town contrary to any specific provisions of this Agreement.

ARTICLE 8
SENIORITY

- A. The Town recognizes the principle of seniority and agrees to apply said principle in accordance with the provisions of this Article. Seniority shall be defined as the employee's total length of active service for the Town, excluding prior periods of employment from the Town in case of rehire. Seniority shall not accrue during periods of unpaid leave in excess of thirty (30) consecutive calendar days. To the extent provided in this Article, seniority may be exercised within, but not between, each of the following units:
- (1) DPW (including Light Maintenance and Landfill)
 - (2) Water Pollution Control Facility
- B. Should the Town decide to lay off employee(s) within a particular job classification, the Town agrees to lay off the least senior employee if the

abilities and experience within the classification of the remaining employees are otherwise equal. The Town agrees to provide the Union and the employees involved with a week's notice of any intended layoff. An employee faced with layoff shall have a single option to bump laterally or downward within his/her unit (as defined in Paragraph A), provided the employee has more seniority and is then immediately qualified to fully perform the job. An employee who has the qualifications and experience may request he/she be allowed to bump into a higher grade job held by a less senior employee, and any denial of such request may be grieved up to and including Step 3 of the grievance procedure, where the decision shall be final. Recall from layoff shall be in the inverse procedure.

- C. Whenever the Town determines to fill a vacancy, other than temporary vacancies, the Town shall post the job for three (3) work days on the appropriate bulletin boards, during which time interested employees may submit written bids to the appropriate Superintendent. In posting a job, the Town may establish a minimum term of up to one year during which the employee who fills the job may not, without a specific and written waiver, bid on another job posting. In deciding upon the appointment, the Town will give due regard to unit and Town seniority, but shall also give due regard to an employee's attendance record and experience. Prior disciplinary action may also be considered if relevant to the requirements of the posted job. In any new assignment, there shall be a probationary period of at least thirty (30) days, during which either the employee or the Town may rescind the assignment, provided that the employee is returned to his/her former position. Any employee who is aggrieved by any decision under this Section shall have the right to appeal to the Selectboard or its designee(s), whose decision shall be final, except with respect to an alleged violation of Article 4. Upon request, the employee and the Union shall have the right to a copy of the job bid, the names of bidders, the name of the selected individual, and the reason for the decision.
- D. An employee shall lose his/her seniority and cease to be an employee of the Town for any of the following reasons:
 - (1) If the employee quits;
 - (2) If the employee is discharged for just cause in accordance with Article 10;

- (3) If the employee fails to report within five (5) days after recall from layoff;
 - (4) If the employee is on layoff through three (3) complete fiscal years;
 - (5) If the employee is absent without notice for over three (3) days.
- E. Bargaining unit employees shall have the right to bid into vacant foreman positions which the Town intends to fill. The bidding procedure established shall apply. Employees who are awarded such a bid shall have a training period of one (1) year, during which time the Town or the employee, at the discretion of either, may terminate the award and restore the employee to his/her former position (or, if no longer vacant or existent, an equivalent position at the same grade). Seniority previously accrued shall be recognized after an employee has returned to the bargaining unit after having left it for a non-unit position.
- F. The Town may fill temporary unposted vacancies for no longer than thirty (30) calendar days with temporary transfers, after which it must post the job, unless the vacancy is caused by an employee being on a leave of absence for a defined time or a Town-authorized medical leave recovery period.

ARTICLE 9
PROBATIONARY PERIOD

- A. The first sixty (60) calendar days of an employee's employment, plus time off due to illness or leave of absence, together with the DPW employee's first snow season, shall constitute trial period during which no transfer, layoff, suspension, discipline or discharge shall be deemed a violation of any of the provisions of this Article or a cause for or subject to the grievance or arbitration provisions of this Article. The snow season shall be the period between December 15th and the following February 1st. The Town may waive some or all of the trial period for specific employees, and the Town may extend the trial period by an additional 60 days. In the case where the Town chooses to extend the probationary period, the employee will receive all contractual benefits except those noted in this Article. No employee is guaranteed employment for the duration of a trial period.

ARTICLE 10
PROCEDURES FOR DISCIPLINARY ACTION OR DISCHARGE

- A. The Town agrees that it will not discipline or discharge any employee except for just cause.
- B. The Town agrees to give notice to the Union of any discharge as soon as possible. Any grievance or arbitration arising out of this Article shall be conducted as follows. The grievance may be filed with the Town Administrator at Step 2. A hearing on the grievance shall be scheduled at a mutually convenient time between the Union and Town Administrator, but in no event more than fourteen (14) days after the filing of the Step 2 grievance. The Town Administrator shall respond to the Step 2 grievance in writing within seven (7) days after the meeting. Thereafter, the parties shall follow the grievance procedure as outlined in Article 11.
- C. In making a determination as to whether or not discipline was administered for just cause, the arbitrator shall take into consideration the Town's policy on Standards of Conduct, Appendix "A."

ARTICLE 11
GRIEVANCE PROCEDURE

- A. A grievance is a dispute arising during the term of this Agreement between the Town and the Union or any employee as to the application and interpretation of this Agreement.
- B. The Union and employees agree that the exclusive method for the adjustment, processing and settlement of a grievance is and shall be in accordance with the grievance and arbitration procedure prescribed in this Agreement. The Town, the Union and employees agree to be bound by any determination or decision which shall be made in accordance with this Agreement.
- C. All time limits provided in this Article may be extended by mutual agreement. Wherever the phrase "working days" is used, the phrase includes Monday through Thursday but does not include holidays as defined in this Agreement. A grievance as defined in this Agreement shall be processed

and, if possible, settled in accordance with the following grievance procedure:

Step 1: The employee and/or the Union shall present the grievance orally or in writing to the employee's Superintendent within five (5) working days after the action or matter occurred or the time when knowledge of the events leading to the grievance should reasonably be known to the affected employee(s). If they cannot reach a satisfactory settlement within three (3) work days, then the matter shall be submitted in writing to the Town Administrator at Step 2 within the next five (5) work days.

Step 2: A meeting between the Union grievance committee, accompanied, if desired, by representatives of the Local or International Union, the aggrieved employee, if he/she so desires, and the Town Administrator or his designee, shall be scheduled at a mutually convenient time between the Town Administrator and the Union, but in no event more than fourteen (14) calendar days after the filing of the Step 2 grievance. The Town Administrator shall submit a written answer to the Union within seven (7) calendar days after the meeting. If the answer is unsatisfactory, the complaint shall be referred to Step 3 within five (5) work days after receipt of the answer, to the Selectboard.

Step 3: Upon timely receipt of a Step 3 grievance, the Selectboard shall schedule a meeting with the Union, to be scheduled at a mutually convenient time between the Selectboard and the Union, but in no event more than fourteen (14) calendar days after the filing of the Step 3 grievance. Within seven (7) calendar days after the meeting, the Selectboard, or its representatives designated for the purpose of this grievance, shall provide the Union with its written decision on the grievance.

Step 4: A grievance which is not settled after the completion of the Step 3 procedure may be submitted to arbitration in accordance with the following procedure:

- (a) Within forty (40) calendar days after receipt of the Selectboard's denial of the Step 3 response, the Union may submit a request for arbitration to the Federal Mediation and Conciliation Service, with a copy to the Town. At any time prior to the appointment of an arbitrator, the Town and the Union may agree upon an arbitrator.
 - (b) The demand for arbitration shall state the provision or provisions of this Agreement allegedly violated and shall state the remedy or relief sought.
 - (c) The parties shall select an arbitrator in accordance with FMCS Labor Arbitration Rules.
 - (d) The authority of the arbitrator shall be limited to the terms and provisions of this Agreement and to the question or questions submitted. The arbitrator shall be bound by the provisions of this Agreement and he shall not have any authority to add to, subtract from, modify or alter any of the terms or provisions of this Agreement.
- D. The expenses of the arbitration shall be shared equally by the Town and by the Union, except that expenses related to witnesses will be borne by the party calling the witness.
- E. The Town need not arbitrate and will not be bound by any arbitration award involving a matter also subject to Civil Rights, OSHA, Labor Relations Commission or other administrative agency action, unless the Town is first satisfied that such other procedures and avenues of litigation have been effectively waived.
- F. The Union grievance committee shall consist of up to three (3) employees for the Highway Department unit and up to two (2) employees for Water Pollution Control Facility unit grievances, with the Town being provided with the names of these individuals and any changes as they occur.
- G. Grievance meetings shall normally be held after normal first shift hours; however, if the Town schedules such meeting(s) during regular work hours,

those employees essential for participation shall be released, without loss of pay, but only for so long as the meeting shall be held.

ARTICLE 12
WAGES

- A. The classifications, grades and minimum rate ranges for all bargaining unit positions are made a part of this Agreement by attachment as Appendix "B". The rates shall be effective commencing with the first full payroll period in the designated fiscal year.
- B. Employees will be hired at no less than the minimum of the grade.
- C. Any employee who is unable to work due to injury sustained in the course of performing his duties will be compensated for the balance of the shift without requiring the use of sick leave.
- D. Step increases shall go into effect on July 1st of each year. Newly hired, transferred and promoted employees must be working in their June 30th grade/step on or before March 31st of a calendar year to be eligible to the step increase on July 1st of that calendar year. When an employee successfully bids on a job in a higher labor grade, he/she shall be placed in the higher grade in the Step with the rate closest to but higher than the rate of his/her current position.
- E. Upon thirty days' notice to the Union, the Town may change the present payroll practice to one on which employees will be paid on Friday for the full and complete preceding payroll period.
- F. When a qualified employee is assigned to operate equipment regularly operated by an employee in a higher grade, or when the Town request a WPCF employee to fill in for an operator with a higher operations license or the operations foreman at the plant, the employee shall be paid at a rate equal to \$1.25 more than his regular hourly wage for all hours worked performing the job, provided the employee possesses the required license(s). An employee shall be considered qualified on the equipment after he has operated the equipment for at least forty (40) hours, and for at least twenty (20) most recent hours without accident or damage; the qualification time

may be extended by mutual agreement if the Superintendent does not consider the employee qualified on the equipment. Nothing in this Agreement shall be interpreted to require the Town to assign any employee to the operation of any equipment or to any function where the Superintendent or his designee believes the assignment may create an unsafe situation. Assignments to above-grade duties shall be within the discretion of the Town and are not subject to arbitration. It is understood that the Heavy Equipment Operator is eligible for Working Out of Grade Compensation under this section when assigned to perform as Supervisor for an entire week as vacation fill-in.

- G. Annual longevity increases will be provided in the following amounts for employees who have completed the indicated number of years of service:

5 years	-	\$200
10 years	-	\$300
15 years	-	\$400
20 years	-	\$500
25 years	-	\$600
30 years	-	\$700

ARTICLE 13 **HOURS AND OVERTIME**

- A. The pay week shall begin at 12:01 A.M. on Sunday and end at Midnight on the following Saturday. The pay day shall begin at 12:01 A.M. and end at Midnight that same day.
- B. The work week shall consist of ten (10) hours per day, four (4) consecutive days per week, Monday through Thursday (except for unit members in the Water Treatment Plant). The Water Treatment Plant unit members shall work Monday through Friday 40 hours per week and 8 hours per day, with varying hours to be assigned by the Superintendent or his/her designee. Nothing in this Article shall be interpreted as limiting the hours during which the Town facilities may be open or during which work may be performed. Nor shall anything in this Article constitute or imply a guaranteed work week. In the event, due to financial problems, the Town determines a need to reduce the work week or other alternatives, it will

negotiate in good faith with the Union to reach an agreement. Prior to instituting any change of the work week or any furloughs, the Town will provide financial information requested by the Union and there will be no subcontracting of any work that could be done by the bargaining unit during such period. The Town agrees to meet and discuss with the Union a four day, ten hour work week and, if mutually agreed, to implement such a schedule for whatever work groups are covered by the agreement during the summer period. Overtime will not be paid until after ten hours of work in one day under such a schedule and all leave time will be calculated in hourly increments.

- C. The first shift starting time shall be 7:00 A.M., except as otherwise mutually agreed. Any second shift or overlapping shift which the Town intends to establish for a duration of one week or more shall not be implemented, except in emergency, without two weeks advance notice to the Union and an opportunity for the Union to discuss the effects of such a decision. Landfill shift starting times will normally change in February and November to reflect patterns of use. Significant changes will not take place without one week's notice to affected employees.

The Union agrees to continue working beyond 4:00 P.M. in the event of an emergency as determined by the Town. If it becomes necessary due to the requirements of the Town's customers to change the hours of some or all operations, the parties agree to reopen negotiations as to the impact of such change.

- D. During every full shift, there shall be a ten (10) minute "coffee" break and a twenty (20) minute paid "lunch" break, each of them being on site. Water Pollution Control employees shall have a ten (10) minute break between lunch and the end of the shift. There shall also be a five (5) minute "washing up" time at the end of each shift for employees whose assignments that day warrant such time; Water Pollution Control employees shall be allowed a twenty (20) minute shower time. Employees who are called in for emergency overtime shall be entitled to a twenty (20) minute break for each four (4) hours of work performed, said breaks to be delayed, if possible, until the emergency work is completed.
- E. The Town will provide vehicles with waterless hand-cleaning materials and containers for drinking water.

- F. The Town may alter the work schedules of employees who are in a probationary period as necessary for training purposes.
- G. All hours which an employee is required to work in excess of (a) forty (40) hours in one calendar week or (b) ten (10) hours in one day shall be compensated at one and one-half (1 1/2) times the employee's straight time hourly wage rate. Vacation, holiday and sick time, paid for but not actually worked shall be considered hours worked for the purpose of calculating an overtime obligation of the Town. There shall be no pyramiding of premium and/or overtime pay.
- H. The Town may require employees to be available for and to perform overtime work, and all parties to this Agreement understand that this requirement is an essential element of the employment relationship. The Town agrees that normal overtime opportunities will be offered to all available and qualified employees within the classification on an impartial basis and with as much notice as practicable. All DPW employees who are qualified and regularly remove snow and treat ice shall be offered the chance to work before any non-union person is called in for overtime work, provided that this does not impact the ability of on-duty managers to perform such work or to deal appropriately with emergencies. An employee shall be charged with overtime refused. An employee who cannot be reached by telephone or other agreed upon arrangement shall be regarded as refusing overtime.
- I. All work performed on a day celebrated as a holiday as provided in this Article shall be compensated on an overtime basis.
- J. In emergency conditions (e.g., flooding, storm damage, ice or snow emergencies), the provisions in Sections B and C above shall not be applicable, provided that normal schedules shall be resumed as soon as possible and the overtime provisions of this Article shall remain in effect. If an employee works a regular shift then has fewer than six (6) consecutive hours rest before his normal shift starts again, the hours worked on this next shift will be paid at the overtime rate.
- K. There shall be a shift differential for regularly scheduled second and third shifts of twenty-five cents (\$.25) and forty cents (\$.40), respectively.

- L. In case of a call-in, and if the employee reports to work within twenty (20) minutes, there shall be a minimum guarantee of three (3) hours work or pay. A second call-in for the same job and location within the guarantee period will not trigger a new guarantee.
- M. Separately from the general responsibility of each DPW employee to be available for such operations as snow plowing, there shall be a standby crew as follows:
- For DPW employees, winter season standby shall be based on seven (7) days, after regularly scheduled workhours. Winter season standby shall commence at the discretion of the Superintendent, but shall be no less than fifteen (15) non-consecutive weeks in duration.
 - Non-winter standby pay for DPW employees shall include all weekends (Thursday 4:00 p.m. to Monday 6:00 a.m.) and Holiday coverage (Thursday 4:00 p.m. to Monday 6:00 a.m. or 6:00 a.m. of the next regularly scheduled work day).
 - Winter standby or any seven-day standby for DPW employees shall be one-hundred seventy dollars (\$170). Weekly standby pay for WPCF employees shall be one-hundred sixty dollars (\$160) per week.
 - Non-winter weekend standby pay for DPW employees shall be ninety dollars (\$90) per weekend.
 - Holiday standby shall be one hundred dollars (\$100) per Holiday weekend.
 - Weekday standby pay for WPCF employees shall be twenty dollars (\$20) per day.
 - Management will provide the standby schedule and the Union members will volunteer for standby shifts and volunteers will be scheduled in order of seniority by management.

- In the event there are no volunteers, employees shall be mandated in reverse order of seniority to fill standby shifts.
 - The Town agrees to provide pagers to the employees on standby or as deemed necessary to cover emergency situations. Failure on the part of an employee on standby, or an employee generally during periods of snow or other weather emergencies, to be available and reliable for assignments, unless Union prior excuse, shall constitute a failure or refusal to perform assigned work and shall be subject to Article 10 procedures.
 - Call in hours from 6:00 a.m. to 10:00 p.m. will be a minimum three (3) hour call-in pay
 - 10:01 p.m. until 6:00 a.m. will be a minimum four (4) hour call-in pay.
- N. Overtime Bank: The Town agrees that on a reasonable advance notice to the Town an employee may elect to defer winter overtime payments, to a maximum of sixty straight-time hours to an overtime bank and the employee will be able to take such time off during the following summer vacation season on request, subject to scheduling approval by the Superintendent. For each hour of overtime worked the employees if they so choose, will have one and one half hours credited to their overtime bank, up to the maximum of eighty hours. There will be no mandatory department shutdowns during the summer months except as provided below. The overtime bank cannot be carried over from year to year but 16 hours of current wages per year can be deferred for retirement.
- O. Scheduled overtime for WPCF employees shall be a minimum of three (3) hours.

ARTICLE 14
HOLIDAYS

- A. The following twelve (12) days shall be considered paid holidays under this Agreement:

New Year's Day
Martin Luther King's Birthday
Washington's Birthday
Patriot's Day
Thanksgiving Day
Christmas

Memorial Day
Independence Day
Labor Day
Columbus Day
Veterans Day

The day before Christmas (i.e., December 24th) shall be a paid holiday when it falls during the Monday through Thursday work week (or when it falls on a scheduled work day of an employee on a different work week). In any year in which the day before Christmas is not a paid holiday, the day after Thanksgiving shall be a paid holiday.

- B. Holiday pay equal to straight time pay for eight (8) hours for all full-time WPCF employees and ten (10) hours for all full-time Highway Department employees shall be paid to all full-time employees who have actually worked for the Town at least thirty (30) days prior to the holiday.
- C. Holidays that fall on Saturday shall be celebrated the previous day (Friday), and holidays that fall on Sunday shall be celebrated the next day (Monday).
- E. If a paid holiday occurs during an employee's vacation period, the employee will receive an extra vacation day in lieu of the holiday.

ARTICLE 15
VACATIONS

- A. Vacation leave with pay shall be earned by employees after completion of each year of service, on the anniversary date, in accordance with the following schedule:

One Year	---	40 hours of vacation
Two Years	---	80 hours of vacation
Five Years	---	120 hours of vacation
Ten Years	---	160 hours of vacation
Twenty Years	---	200 hours of vacation

Employees hired after July 1, 2013 will be capped at a maximum of 160 hours of vacation.

In addition, new hires earn 8 hours of vacation each ten (10) weeks of work during their first year, to a maximum of 40 hours, so that they've earned a total of 80 hours as of their 1st anniversary date.

- B. In the event of conflicting requests for vacation preference, seniority shall control. In the event of conflicting requests for the scheduling for time off (other than vacation requests in work week blocks, which requests shall take priority), seniority shall control unless departmental operations will be adversely affected. Up to 40 hours of vacation may be carried over to the next anniversary year; otherwise all vacation leave must be taken within twelve (12) months after it is earned, or it will be lost. Requests for vacation leave shall be made to the Superintendent with reasonable advance notice; if so made, the request shall be answered within five (5) work days and approval shall not be unreasonably withheld.
- C. A vacation, once set, cannot be canceled or changed, except by mutual agreement. An employee who is hospitalized while on vacation will be allowed to substitute sick leave for the vacation days involved.
- D. Vacation shall be taken in no less than half day increments, except that DPW employees who have used vacation under prior Agreements in less than half day increments may continue such practice.
- E. Whenever the employment of any person subject to the provisions of this Section is terminated during a year by layoff, resignation, discharge, retirement or death, without his having been granted a vacation to which he is entitled under such Section, he, or in the case of his death, his estate, shall be paid at the regular rate of compensation payable to him at the termination of his employment, an amount in lieu of such vacation; provided that no monetary or other allowance has already been made therefor. The official head of the department in which the person was last employed shall enter on the departmental payroll all amounts payable under this Section.
- F. Vacation shutdown for the DPW: Upon notice to the Union, no later than the end of February, the Town may request that the employees of the highway department select one week during the vacation season for a

highway department shutdown. At the time the Town requests such shutdown they will notify the Union of the approximate number of employees they will require to work during such shutdown. The opportunity to work during the shutdown will be offered by seniority to the highway department employees.

ARTICLE 16
SICK LEAVE

- A. Full-time employees shall earn sick leave as follows: Employees shall earn 8 hours for each five (5) weeks worked, until they have worked for the Town at least one year, at which time, and annually on the anniversary date of that unit member thereafter, they shall be credited with 120 hours of sick leave, pro-rated for any employee who, during the previous year, was on layoff, unpaid leave, or Worker's Compensation for thirty (30) or more days.
- B. Unused sick leave, up to a maximum of 1,000 hours, may be accumulated and carried forward.
- C. Accrued sick leave of up to 80 hours per year may be used in the case of a serious illness of a spouse, parent or dependent where the employee's attendance at home or hospital is reasonably necessary.
- D. To be eligible for sick leave, the employee must notify the supervisor as soon as possible in advance of the employee's scheduled work hours. An application for sick leave must be filled out and signed by the employee and submitted to the office for approval by the Superintendent before sick leave can be paid for. In order to remain on sick leave status, it shall be the responsibility of the employee to notify the Town of the anticipated length of absence and any change therein.
- E. The Town may require the employee to produce a statement from a physician acceptable to it before authorizing sick leave or permitting the employee to return to work after an absence for medical reasons, but shall not impose such requirements unreasonably. Sick leave may be used only when the employee has a bona fide illness or injury prohibiting work and not covered by Worker's Compensation, and in the case of serious illness of the spouse or dependent as described in "C" above; provided that no sick pay is

available where the disability occurred during the course of employment elsewhere or self-employment.

- F. Sick pay shall be calculated only on the straight time rate applicable to the employee on the day of the absence, and shall be paid only for hours that the employee was scheduled to work at straight time. On request, in July of each year, the Town will provide a statement of such leave accruals.
- G. On or before July 15th of each year, the Town shall provide each employee with a statement showing the balance of that employee's accrued sick leave.
- H. Upon the death of an employee with 15 years of Town service, or upon an approved retirement under the Town Retirement plan, the Town will buy back up to twenty-five percent (25%) of the employee's unused sick leave, at the straight time rate then applicable. The amount of the buyback shall not exceed three thousand five hundred dollars (\$3,500.00).

ARTICLE 17
BEREAVEMENT AND PERSONAL LEAVE

- A. An employee shall be granted up to 40 hours off with pay in the event of a death in his or her immediate family for purposes of grieving, making funeral arrangements and attending the funeral. Payment shall only be made for those days on which the employee was actually scheduled to work. Immediate family for purposes of this Article is defined as spouse, child, parent, brother, sister, grandparent, grandchild, or parent of spouse. Upon the death of any other relative, the employee shall be entitled to leave work without loss of pay for one day. An employee may be granted additional time off with pay at the discretion of the supervisor. The Town may request that an employee claiming the foregoing shall provide reasonable proof of death.
- B. On his/her anniversary, an employee shall be entitled to 24 hours of personal leave, to be scheduled and used in the same anniversary year with the mutual agreement of the employee and the Superintendent, or his designee. Personal leave requests must be for minimum one hour increments, and response will not be delayed beyond the reasonable time needed to arrange for coverage.

- C. In an instance where DPW unit members have four (4) or less hours of personal time, the Town will allow a one-time use in the fiscal year of vacation time to cover up to six (6) hours of personal time so the DPW unit member can take the whole day off.

ARTICLE 18
JURY DUTY LEAVE

- A. Any employee who is called to and reports for jury duty shall have his regular salary continued during the period of jury service. The employee will be paid only for time lost on regular work days. In order to receive payment for jury time, the employee must give the Town prior evidence of the summons and must furnish satisfactory evidence from the Clerk of Court of the time served and amounts paid. Jury duty pay, when received from the government, is to be paid over to the Town, which shall return to the employee any amounts earned on days the employee was not scheduled to work, plus any amounts constituting expense payments. Nothing herein shall be applied so that an employee shall receive in jury pay and regular pay more than his normal wages. In order to receive benefit of this provision, employees on the day shift are expected to report to work whenever they are released from jury duty before Noon. This Article does not apply in cases where the employee voluntarily applies for jury duty.

ARTICLE 19
OTHER LEAVES OF ABSENCE

- A. Unpaid leaves of absence for up to one (1) year may be granted by the Superintendent, subject to approval of the Selectboard, at their discretion.
- B. Leaves of absence by an employee due to her pregnancy will be granted in accordance with state law.
- C. The Town agrees that up to two (2) Union Representatives will be granted unpaid time off to attend not more than three (3) District Council meetings, and one (1) National Union Convention per year, provided that there is no interruption or disruption of operations or security. The Union shall provide reasonable written notice to the Town's Executive Secretary prior to such meetings.

- D. Leaves under the provisions of this Agreement which are eligible for coverage under the Family and Medical Leave Act (FMLA) shall run concurrent as both FMLA and contractual leave, and the more liberal provisions shall apply.
- E. When Town Hall employees have a full paid day off due to snow, employees in this unit will be given a paid floater personal day to be taken later in the fiscal year.

ARTICLE 20
INSURANCE

- A. The Town will offer Hospital and Medical Insurance and Life Insurance (\$10,000) plans to its employees. The Town, after negotiating with the Union and after consulting with the Insurance Advisory Board, shall have the right to make the final decision on the plans offered.
- B. The contribution towards health insurance premiums shall be an 80% contribution rate for the Town and a 20% contribution rate for employees.
- C. The Town shall continue its obligation to the Town employees in compliance with the provisions of Chapter 32B of the General Laws, and will establish and maintain an Insurance Advisory Board.
- D. The Union agrees to consider the Town moving into the GIC plan if all other conditions required by the law are met and if the move will have a positive cost benefit to the employees compared to the other options available to the Town from its current provider(s).

ARTICLE 21
PENSION PLAN

- A. The retirement system and pension plan provided under Chapter 32, M.G.L. shall continue to be applicable to employees covered by this Agreement in accordance therewith. The Town shall furnish each employee with booklets or any other information available to it setting forth the rights and benefits under the plan.

ARTICLE 22
SAFETY

- A. The Town and the Union and the employees agree to cooperate in order to provide the public and the employees of the Town with safe departmental operations. Each party agrees to make reasonable efforts to take necessary steps to accomplish the objectives of the parties.
- B. No employee shall be required to perform any task which he/she reasonably believes would create an abnormally dangerous condition.
- C. The Town will furnish each new DPW employee with adequate rain gear, rubber boots, gloves, ANSI-approved reflective vests/wear, and helmets. The employee shall be responsible for the proper storage, use, care and maintenance of the items assigned. The items shall remain the property of the Town and are to be used on for Town business. The Town will reimburse each employee up to Three-Hundred Fifty Dollars (\$350.00) per year to cover the cost of the purchase of approved clothing.
- D. All employees shall wear steel or composite-toed safety shoes, the purchase of which the Town will provide reimbursement of up to Two-Hundred Fifty Dollars (\$250.00) per year per employee. Safety shoes are not to be unreasonably used outside of Town business.
- E. The Town will contribute up to Two Hundred Fifty Dollars (\$250.00) for the repair or replacement of glasses damaged in the course of work without negligence, provided however that such a replacement will be with safety glasses.
- F. Should a member be on a call-in and deem another bargaining unit member is needed for safety reasons, the member shall have a right to request that a second bargaining unit member be called in to provide assistance. The request shall not be unreasonably denied.

ARTICLE 23
MISCELLANEOUS

- A. Within ten (10) days of any change in rates or classifications, or of the hire of a new employee, the Town shall notify the Union.
- B. Employees are required to notify the Town of any change in address or telephone number where he/she can be reached.
- C. The Union shall keep the Town advised of the names and titles of all Union officials representing the Union.
- D. Employees who are scheduled to work less than twenty (20) hours per week are not entitled to the benefits set forth in Articles 13 through 18, and 20 and 21.
- E. Employees who are unable to perform their regular work due to job-related illness or injury, and who are eligible for Worker's Compensation benefits, may be assigned to other duties within the department if medically authorized, and if qualified to perform the duties. If sufficient such duties are not available in the department, the Town may offer the employee work in other Town departments, which the employee may decline for good cause. Such an assignment shall not result in any substantial change in the employee's hours of work, and the employee shall receive his/her regular compensation and benefits, and shall continue to be covered by this Agreement.
- F. In the event that the Town decides to subcontract work regularly performed by bargaining unit employees in circumstances where the bargaining unit employees are available, with the necessary skills and equipment to do the work in the required time, the Town shall give the Union thirty (30) days written notice of its intention. This requirement shall not exist in the case of emergency or in the case of such long-standing practices as snow-plowing (unless radically expanded), carpentry or tree work contracting, or the use of seasonal help. Within five (5) work days of receipt of such a notice by the Union, the Town, upon request, agrees to meaningfully bargain in good faith over the effects of such decision. During snow/ice emergency periods, the Town may employ reserve drivers at the starting rate of the lowest grade

(currently \$13.55 per hour) when regular driver employees are not available and the overtime list has been exhausted.

- G. The applicable Town policy on substance abuse is at Appendix "C."
- H. The Town and the Union agree to the WPCF weekend coverage agreement attached as Appendix "D."
- I. At the Town's expense, the Town may require an employee to take an annual physical examination by a Clinic or physician of the employee's choice. The complete report will be provided only to the employee; however, the Town will be informed of any physical fitness (i.e., physical, mental or emotional) condition which may reasonably interfere with the performance of the employee's duties, together with any recommended regimen of exercise, diet or other prescription designed to alleviate, reverse, or improve the condition or concern. This provision does not have a disciplinary purpose, and the Town agrees to cooperate with the employee and the Union to reasonably accommodate and/or correct any fitness problem affecting the employee's work performance.
- J. The Town shall pay the cost of a CDL license, and shall pay testing and renewal fees for Hoisters and WPCF licenses when required by the position or request by the Town. All employees who currently possess such licenses will continue to have their license fees paid for by the Town. The Town shall pay for all test fees required for the CDL license in order to take the test one time. Additionally, the Town shall cover the cost of any DOT required annual physicals as well as any necessary state mandated continuing educational requirements to maintain any required license held or as required to meet job requirements. In the event the state requires testing that an employee fails, the Town will not pay the cost of a re-test or repeated continuing education needed for a re-test.
- K. The Town will pay the cost of typhoid and tetanus protection and hepatitis B shots required of employees who perform sewer work or WPCF work. The Town will provide Hepatitis A shots to employees required to have such protection.
- L. In the event that the Town discontinues the landfill operation, the Union will be given a sixty (60) day written notice and will be given the opportunity to

bargain with the Town over the effect(s) of the decision. The decision to discontinue the landfill operation will not be subject to grievance and arbitration.

Should the Town decide to expand its operations subject to this Agreement, with resulting impact on or opportunities for employees of this bargaining unit, it is agreed that the Town's right to do so shall not be modified except that the Town will negotiate in good faith as to the impact of such changes.

- M. The Town may only use prison labor in picking up litter and/or cutting brush. In such cases, the Town employees shall not be responsible for guarding or transporting the prisoners. The Town agrees to meet and discuss any changes to this provision with the Union.

- N. All leave time for each individual unit member shall accrue on the anniversary date of that unit member.

ARTICLE 24 **UNIFORMS**

- A. All employees shall be required to wear uniform clothing whenever working for the Town. The Town will annually provide two (2) ANSI-approved reflective hooded sweatshirts.

- B. Upon termination or lengthy interruption of employment, employees shall return all Town-purchased items of clothing and equipment in clean and good condition (It is understood that some items of clothing and equipment may no longer be in good condition due to normal wear and tear). The cost of the items not returned shall be deducted from the employee's pay.

ARTICLE 25
SCOPE OF AGREEMENT

- A. The parties acknowledge that, during their negotiations which resulted in this Agreement, each had the unlimited right and opportunity to make demands and proposals with respect to any subject or matter not removed by law from the area of collective bargaining and that the understanding and agreements arrived at by the parties after the exercise of that right and opportunity are set forth in this Agreement.

- B. Therefore, the Town and the Union for the life of this Agreement, each voluntarily and unqualifiedly waives the right and each agrees that the other shall not be obligated to bargain collectively with respect to unilateral action by either party involving any subject matter referred to or covered in this Agreement or with respect to any subject or matters not specifically referred to or covered in this Agreement, even though such subject or matters may not have been within the knowledge or contemplation of either or both of the parties at the time they negotiated or signed this Agreement.

- C. No addition to, alteration, modification or waiver of any provision of this Agreement shall be valid, binding or of any force or effect unless made in writing and executed by the Employer and the Union.

ARTICLE 26
DURATION

- A. This Agreement shall be effective July 1, 2019 and shall continue in full force and effect through June 30, 2022.

- B. Either party desiring to make any changes or modification in this Agreement to become effective at the end of the initial term or at the expiration thereof, shall notify the other party in writing of its desire either to enter into negotiations for the purpose of making changes or modifications herein, or of its desire to terminate this Agreement at least sixty (60) days prior to the expiration of the initial term or any extensions thereof. In the event that any change or modification so requested by either party is not mutually agreed upon prior to the expiration of the initial term or any extension thereof, the Agreement shall terminate at such expiration date unless the same shall be extended by mutual consent.

IN WITNESS WHEREOF, the Town of Montague has caused this Agreement, including its Appendices "A" through "F," to be executed in its behalf by its undersigned Selectboard, all duly authorized; and the United Electrical, Radio and Machine Workers of America (UE) and its affiliate Local 274 of the United Electrical, Radio and Machine Workers of America (UE), has caused this Agreement to be executed in its behalf by its officers and representatives, each duly authorized, this 30th day of November, 2020.

UNITED ELECTRICAL, RADIO AND
MACHINE WORKERS OF AMERICA
(UE) and its AFFILIATE LOCAL
274 of the UNITED ELECTRICAL,
RADIO AND MACHINE WORKERS OF AMERICA (UE):

By James Whitman By Allen Carter
By David R. Adams By [Signature]
By [Signature] By _____

TOWN OF MONTAGUE

By _____

By _____

By _____

APPENDIX "A"

STANDARDS OF CONDUCT

The following standards of conduct have been established in pursuit of the best interests of the employees, the public and the accomplishment of our public purpose.

Less Serious Matters

Certain conduct may be grounds for counseling and warning on the initial occasion. Inattention to duties, rude or discourteous behavior toward the public or co-workers, occasional absenteeism or tardiness, public use of obscene language – are typical of this kind of conduct. Repetition of such conduct after warning will be grounds for further and more serious discipline.

Serious Misconduct

Certain conduct in itself or because of its repetition is so serious that severe discipline, up to and including discharge, without counseling or warning, is warranted. Examples of such conduct are:

- (1) Deliberate damage to equipment or Town property, or damage resulting from gross negligence.
- (2) Unjustified failure or refusal to carry out a work assignment, except when due to equipment failure.
- (3) Falsifying information on an employment application, a time record or any other official document or any other form of dishonesty.
- (4) Insubordinate or deliberately flagrant antagonistic conduct.
- (5) Failure to report for work without notice and a legitimate excuse.
- (6) The use or possession of alcohol, narcotics or firearms on Town premises or work sites during working time, or in Town vehicles or equipment.
- (7) Theft of property of the Town or that of another employee.

- (8) The use of repeated verbal threats or other serious threats of violence.
- (9) Stopping work or leaving the work place during working hours without the approval of the supervisor, except for reasons beyond the employee's control, in which case the employee shall immediately notify the supervisor.
- (10) Conduct usually considered dangerous to the person or property of others.
- (11) Reporting for work under the influence of alcohol or narcotics.
- (12) Failure to maintain proper motor vehicle registry or other required permits and licenses.
- (13) Conduct which brings into disrepute or causes severe embarrassment to the Town.
- (14) Deliberate failure to require the payment of Town-required fees (e.g., landfill).

The specific conduct described above does not include all of the grounds for discipline or discharge after a warning. These descriptions are intended as illustrations of the type of conduct which must be avoided for the good of our employees and the Town. Any other material violations of the law or public regulations or conduct usually considered harmful to the person or property of others will be grounds for discipline.

Application of Discipline

Town policy with respect to employees follows one of two courses, depending on the nature of the behavior:

- (1) Aggravated or very serious misconduct should result in immediate indefinite suspension, pending investigation of all the circumstances, with the employee given a specific date and time to report to the Superintendent for further conference one or two working days later. In the meantime, the Superintendent will determine whether to impose

a written warning, a one-week suspension, a two-week suspension, or discharge. Obviously, the warning will be appropriate only where investigation reveals substantial mitigation.

- (2) Improper conduct of a less immediate nature, but which has continued or recurred despite counseling and after one written warning, should, at the time of the next occurrence, result in a three-day suspension. Another occurrence calling for discipline should result in termination.

Thus, the stages of discipline for successive instances or continuation of unacceptable but not serious misconduct (whether the same or different types of misconduct) are:

- (1) One oral warning noted in the file.
- (2) One written warning. Warnings shall be provided to or shown to the employee, and a copy shall be provided to the employee for the Steward.
- (3) Three-day suspension without pay.
- (4) Termination.

While the Town is not obligated to do so, it will in appropriate cases make an effort to advise an employee at least one day in advance of the possibility that he/she will be suspended or terminated.

Removal of Disciplinary Records

Time actually worked without further cause for warning or discipline will result in expunging from the personnel file references to prior warnings or discipline. An oral warning, which is noted in the file, will be expunged after six months of active employment; a written warning will be expunged after one year and a suspension after four (4) years. Documents expunged from the personnel file under this section may be retained by the Town to be used for statistical purposes, or to be available for non-disciplinary purposes, it being understood that such records shall not be used by the Town to bypass the stages of discipline set forth above.

Absence and Tardiness

Repeated, unreasonable or chronic tardiness will be a matter for counseling and, if repeated or continued, will result in an oral warning, a written warning, a three-day suspension, and ultimately, termination.

Any unapproved or unjustified absence warrants a written warning against reoccurrence, and discipline if needed. Unreasonable failure by an employee to give prompt notice that he or she will not be able to work scheduled hours is also unacceptable.

Where a pattern of absences appears or where an employee is absent on a day for which attendance has been previously designated as particularly important, or in any circumstances where abuse of the sick leave benefit is reasonably suspected, the Town may require the employee to produce appropriate evidence supporting application for sick leave.

Within a period of one year, five or more single day sick leave applications, or single and two-day sick leave applications totaling more than seven days shall be a matter for administrative concern. Employees whose poor health consistently requires more sick leave than this constitute a problem for the other employees and the need of the Town to consistently maintain adequate staffing; such employees will be counseled and, if improvement does not take place, other methods of dealing with the situation will be explored. If the absenteeism continues, and if the disruption it causes cannot be avoided by such approaches, then progressive discipline may be in order, regardless of the reason(s) for the absenteeism. Counseling records, such as letters of concern, will be removed from the employee's file after six (6) months from issuance, if at that time the employee's record over the prior twelve (12) months is no longer a matter for concern under this standard.

APPENDIX "B"
HOURLY WAGES – UE LOCAL 274

JOBS AND CLASSIFICATIONS

<u>Job Title</u>	<u>Grade</u>
Custodian	A
Laborer	B
Truck Driver/Laborer	C
Building Maintenance Worker	C
Grounds Maintenance Worker	C
Heavy Equipment Operator	D
WPCF Operator	D
WPCF Lead Operator	E
WPCF Lead Mechanic	E

Step increases shall go into effect on July 1st of each year. Newly hired, transferred and promoted employees must be working in their June 30th grade/step on or before March 31st of a calendar year to be eligible to the step increase on July 1st of that calendar year. Beneficiaries of the grade changes for Truck Driver/Laborer and Heavy Equipment Operator will be moved to the lowest Grade C and Grade D scale step, respectively, that will offer a wage increase of at least \$0.25/hour.

Effective July 1, 2019

FY20	Includes 1.5% COLA									
	Steps									
Grade	1	2	3	4	5	6	7	8	9	10
A	14.74	15.10	15.48	15.88	16.25	16.68	17.05	17.43	17.77	18.14
B	17.38	17.80	18.25	18.71	19.17	19.66	20.16	20.54	20.97	21.39
C	18.70	19.16	19.64	20.14	20.62	21.16	21.67	22.12	22.55	23.00
D	20.37	20.88	21.41	21.93	22.48	23.06	23.64	24.10	24.59	25.07
E	21.98	22.54	23.11	23.69	24.28	24.88	25.51	26.01	26.54	27.07

Any wage increases for unit members as a result of changes in FY 2020 shall be applied retroactively for those years.

Effective July 1, 2020

FY21	Includes 1.5% COLA										
	Steps	1	2	3	4	5	6	7	8	9	10
Grade											
A	14.96	15.33	15.71	16.12	16.49	16.93	17.31	17.69	18.04	18.41	
B	17.64	18.07	18.52	18.99	19.46	19.95	20.46	20.85	21.28	21.71	
C	18.98	19.45	19.93	20.44	20.93	21.48	22.00	22.45	22.89	23.34	
D	20.68	21.19	21.73	22.26	22.82	23.41	23.99	24.46	24.96	25.45	
E	22.31	22.88	23.46	24.05	24.64	25.25	25.89	26.40	26.94	27.48	

Effective July 1, 2021

FY22	Includes 1.5% COLA										
	Steps	1	2	3	4	5	6	7	8	9	10
Grade											
A	15.18	15.56	15.95	16.36	16.74	17.18	17.57	17.96	18.31	18.69	
B	17.90	18.34	18.80	19.27	19.75	20.25	20.77	21.16	21.60	22.04	
C	19.26	19.74	20.23	20.75	21.24	21.80	22.33	22.79	23.23	23.70	
D	20.99	21.51	22.06	22.59	23.16	23.76	24.35	24.83	25.33	25.83	
E	22.64	23.22	23.81	24.41	25.01	25.63	26.28	26.80	27.34	27.89	

APPENDIX "C"
SUBSTANCE ABUSE

The purpose of this program is to establish the fact that the Town of Montague and its employees have the right to expect a drug free environment in the work place.

The Employer is subject to U.S. Department of Transportation ("DOT") regulations on the use of drugs and alcohol by employees. The regulations require mandatory testing of employees. In addition to employees required to be tested by DOT regulations, each employee assigned to the Waste Water Treatment Plant and those holding the positions of Ground Maintenance, Building Maintenance and Custodian shall be subject to mandatory testing for substance or alcohol use pursuant to this collectively bargained substance abuse article using the DOT regulations as the basis of when tests will be required and the procedures to be followed in such testing.

The Employer shall bear all costs of testing.

It is agreed that the Parties will make every effort to protect privacy and confidentiality.

It is agreed that for the Highway Department unit members that this Drug Testing policy will be administered by the Highway Superintendent or, in his/her absence the working foreman. For unit members working in the Water Pollution Control Facility, the Water Pollution Control Facility Superintendent shall administer this policy or, in his/her absence, the DPW working foreman. In the absence of the designated Department head and working foreman, the Selectboard liaison for the unit shall direct which supervisor will be responsible of the administration of the policy.

For purposes of this policy, CDL and non-CDL unit members will be treated as belonging to different testing pools.

It is furthered agreed that nothing in this policy is meant to abridge or alter any legal rights to union representation that an employee may have with respect to drug testing under this policy.

For CDL unit members, they will be required to participate in the pre-employment, random, post-accident, reasonable suspicion, return to duty, and follow-up testing as required by the DOT regulations.

For non-CDL unit members, they will be required to participate in the pre-employment, post-accident, reasonable suspicion, return to duty, and follow-up testing as permitted by law and this labor agreement.

When a reasonable suspicion test under this policy is used, reasonable suspicion meant to include but is not limited to an employee's condition or demeanor that includes:

1. An employee deemed impaired or incapable of performing assigned duties.
2. An employee exhibiting behavior inconsistent with previous performance.
3. An employee who exhibits irritability, mood swings, nervousness, hyperactivity or hallucinations.
4. An employee who is subject to substantiated allegations of use, possession or sale of drugs and has not agreed to participate in a rehabilitation program.
5. An employee experiencing excessive vehicle or equipment accidents, or involved in a dangerous situation reasonably suggesting the employee was not acting with his/her usual care.
6. An employee exhibiting behavior inconsistent with previous performance. An employee who exhibits irritability, mood swings, nervousness hyperactivity or hallucinations.

Failure to undergo a test as directed will result in disciplinary action including possible termination.

If an employee in this unit is sent to reasonable suspicion testing and the test proves negative, the employee will be paid double time for all time which he/she spent in testing.

APPENDIX "D"
MEMORANDUM OF UNDERSTANDING

The undersigned parties to the Agreement effective July 1, 2007 between the TOWN OF MONTAGUE and LOCAL 274 of the UNITED ELECTRICAL, RADIO AND MACHINE WORKERS OF AMERICA are further agreed with respect to the following:

- (a) Job Descriptions: the Town agrees to work with the Union to write job descriptions for the DPW. Once completed, the Town and Union will meet to review and approve the new job descriptions. If no agreement is reached then the present descriptions will remain in effect for the life of the contract.
- (b) Employees will not be subjected to deliberate efforts by Town officials to persuade them not to join the Union or to resign from the Union.
- (c) The Town agrees to consult, upon request, with employees of the WPCF prior to entering into engineering consulting contracts, for the purpose of assuring cost-effectiveness.
- (d) The Water Pollution Control Facility will be permitted to hire and train an operator trainee, who shall be allowed two years to acquire the operator's license. During the two-year period, the trainee shall not have any right to bid for other jobs, except by mutual agreement. This position shall be placed in the Grade B pay classification. The "Operator Trainee" shall be entitled to layoff rights as outlined in Article 8 of the contract. In lieu of payments under Article 12(F), the WPCF may designate an employee on an annual basis to be the employee who will fill in for the Superintendent in his absence, and, if the assignment is accepted, the employee will have an annual stipend of \$1,500.
- (d) It is understood that the operation of the flail and the sweeper is regularly assigned to the truck driver laborer class consistent with past practice.

APPENDIX "E"
SICK LEAVE BANK AGREEMENT

It is agreed between the Town of Montague and UE Local 274 that there shall be established a sick leave donation policy as follows:

- (a) Whenever a non-probationary employee in the bargaining unit has exhausted all of his/her accumulated and unused paid leave time, and remains on a Town-authorized unpaid medical leave due to serious health problems not covered by Workers Compensation, other bargaining unit employees may each volunteer to give up to eighty (80) hours of their accumulated and available sick leave to such employee.
- (b) No more than a total of 360 hours of sick time may be donated to an eligible recipient at one time.
- (c) No continuing "bank" is to be established under this policy; employee donations will be limited to the amount of sick leave authorized to be donated to the recipient by the Committee duly authorized to administer this program.
- (d) The Union will elect or appoint a Committee to administer this program, and shall notify the Town Administrator as to the names of the members of the Committee. When the Committee determines to implement a sick leave donation under this program, it shall notify the Town Administrator as to the number of sick leave days to be debited to each employee who has volunteered to donate, and the number of sick days to be provided to the recipient. The Town will then put into effect the transfer of sick days.
- (e) It is the intent of this policy to provide sick leave to a recipient on a continuous leave basis, and not to be available for intermittent days off for an employee who is on the work schedule.
- (f) The Town shall have no responsibility for seeking volunteer donors, enforcing the provisions of the program, determining who will be a recipient and how much sick leave any recipient shall receive, and

shall have no liability for such decisions made by the Committee. The Town's sole function shall be to put into effect any transfer of sick leave the Committee directs be made under this program.

APPENDIX "F"
WPCF PROVISION

Parties agree that following the Town's assessment of the WPCF Department in Fiscal Year 2017, the Parties shall re-open the agreement for the purpose of discussing re-grading and/or wage increases for WPCF operations in the event the Town decides to revise job descriptions and propose wage and/or grade increases. Re-opener may also include Article 22C and Article 24.



November 23, 2020
File No. 34790.01

Mr. James Scheffler
Massachusetts Department of Environmental Protection
Western Region
436 Dwight Street
Springfield, MA 01103

Re: Corrective Action Design Additional Waste Areas
BWP SW 45: Any Facility – Presumptive Approval
Former Sandy Lane Burn Dump
Montague, Massachusetts
MassDEP File Number 20-192-001

Dear Mr. Scheffler:

On behalf of The Town of Montague, the property owner, applicant, and developer of the Former Sandy Lane Burn Dump, GZA GeoEnvironmental, Inc. (GZA) is submitting the attached BWP SW 45 in order to modify the approved Corrective Action Design (CAD) permit that was issued for the Former Sandy Lane Burn Dump final landfill cover under Transmittal Number X272789 and File Number 19-192-001 and later modified under Approval Number SW45-0000080. The modified CAD includes the extension of final cover system installation over the additional areas of buried solid waste that were discovered during construction. The CAD approval was issued by MassDEP on April 5, 2019 and stated that the final cover must be installed by December 31, 2019. The July 27, 2020 SW45 approval extended the project completion deadline to December 31, 2020. Due to the need for time to install the final cover system in additional buried waste areas, that were recently identified during cap construction activities, this application also requests that the landfill capping completion deadline be extended from December 31, 2020 to December 31, 2021.

The Town is in the process of constructing a solar energy system on top of the landfill cap. The northern plateau area of the landfill has been capped at this time and solar deployment is occurring in this area. Solar array ballast blocks are currently being installed over the completed landfill cover system. The remaining cap areas will be completed as part of the proposed cap expansion work detailed in this application.

The completed final cover consists of 1.5 feet of low permeability soil (design hydraulic conductivity is 1.0×10^{-5} cm/sec) overlain by 8 inches of vegetative support soil. The proposed solar facility has been approved by the MassDEP as part of a Post Closure Use Permit (PCUP) for the facility. The PCUP approval was issued on April 5, 2019 under Authorization Number SW36-0000014. The Town of Montague Conservation Commission issued an Order of Conditions for the project on November 8, 2018 under DEP file 229-0252.

On July 21, 2020, buried solid waste was encountered while excavating for the stormwater pond associated with the landfill closure. Buried waste was observed beneath the proposed elevation of the bottom of the pond. In the approved CAD permit documents, the delineated waste edge did not extend into the stormwater pond area. GZA directed J. Bates and Son (Bates) to dig a series of test pits in order to document the areas where buried waste was present beyond the permitted waste limit and to observe the extent and depth of the waste area. The observed area of excess buried waste is shown on Sheet 5 of the attached figure set. Buried solid waste was encountered in Test Pits #1 through #4 and Test Pit #6. Solid waste was observed to extend to depths below the groundwater table. In the deepest test hole excavated, solid waste was present at depths greater than 14 feet below the ground surface. MassDEP was notified of this additional waste area via e-mail on July 24, 2020. Test pit logs are attached to this letter.



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On August 6, an additional area of buried solid waste was encountered in the areas of planned solar electrical equipment to service the proposed solar array. The electrical was proposed on an area of the property that was outside of the original limit of waste. This area is located adjacent to and north of the final landfill cover limits included in the original CAD application. On August 10, 2020, GZA and Bates performed additional test pit explorations to determine the extents of the solid waste. The limits of the expanded area of buried waste is shown on Sheet 5 of the attached figure set. Buried solid waste was encountered in Test Pits #9 through #12. MassDEP was notified of this additional waste area via e-mail on August 12, 2020. Test pit logs are attached to this letter.

The proposed design of the landfill cover system for the buried solid waste in the pond area and southern landfill limit will include the installation of a 40 mil LLPDE geomembrane liner over the limits of solid waste. Landfill finish grading remains similar to the current design, though subgrade will be lowered by 2-3 feet in some areas in order to accommodate the proposed stormwater pond

On the landfill side slopes, the final cover profile will consist of:

- 8 inches of topsoil
- 18 inches of vegetative support soil
- 40 mil LLDPE liner (up to approximate elevation 226)
- Cap subgrade soils

On the stormwater pond, the landfill cover profile will consist of:

- 24 inches of C-33 Sand
- 12 inches of ¾ inch crushed stone.
- 8-ounce geotextile
- 40 mil LLDPE liner
- Cap subgrade soils

In the northern waste area, the existing landfill cover system will be extended from the northern plateau to cover the new limits of solid waste. The final landfill cover profile in this area will consist of:

- 8 inches of topsoil
- 18 inches of vegetative support soil
- Cap subgrade soils

Based on Appendix E: Stormwater Information of the *Montague Burn Dump Closure / CAD and Montague II Solar Project Notice of Intent* submitted to The Montague Conservation Commission by Tighe and Bond, Inc. on October 30, 2018 (NOI) GZA understands that the primary function of the stormwater pond was control peak discharge rate and volume into the wetland areas under the post closure condition. The pond was not intended to provide water quality treatment as the NOI stated that “no sediment loading is anticipated from the Landfill closure. All runoff from pavement will travel through grass before discharging into the wetland.” However from the *Response to MassDEP Comments on request for Approval Montague Burn Dump Corrective Action Design, Montague, MA* submitted to MassDEP by Tighe and Bond, Inc. on January 29, 2019 (Response to Comments) GZA understands that the collection swale and stormwater pond were intended to provide some level of treatment for groundwater leachate. Therefore, the proposed design provides for a stormwater pond that will provide groundwater leachate treatment and peak runoff control.

The proposed combined stormwater / groundwater management system consists of a rip rap lined forebay set at elevation 224 feet along the landfill slope. The forebay will collect and convey stormwater runoff from the landfill slopes to the stormwater pond via a rip rap lined spillway. An 8-inch underdrain will be installed under the landfill cap with collection trenches set at elevations 221.20 and 219.80 to collect and convey groundwater into the stormwater pond.



The stormwater pond has been redesigned as a sand filter with a lined underdrain and an outlet structure. The underdrain consists of 4-inch perforated pipe spaced every 10-feet. The top of the sand is set at elevation 217 and the pond has a maximum water elevation of 220 feet. The proposed stormwater pond was analyzed utilizing the Hydro Cad 10 hydrologic modeling software. Drainage size, slope, hydrologic soil group, groundcover, and slope, as well as storm frequency and intensity details for the landfill's post closure condition were obtained from Appendix E of the NOI. The results of a comparison of the post-development storm water flows generated from original CAD design to the proposed design modification are summarized in the following Table, the full HydroCAD model output is included as an attachment to this letter.

Original CAD vs. SW-45 Development Net Runoff Difference								
Collection Point	Design Storm Frequency							
	2 year		10 year		25 year		100 year	
	Peak Inflow	Total Volume	Peak Inflow	Total Volume	Peak Inflow	Total Volume	Peak Inflow	Total Volume
	(cfs)	(acre-ft)	(cfs)	(acre-ft)	(cfs)	(acre-ft)	(cfs)	(acre-ft)
Off Site Wetland	-4.6	0.1	-7.6	0.1	-10.2	0.2	-12.8	0.3

Stormwater discharge from the pond will be controlled via precast concrete outlet structure with two (2) low flow 6-inch outlets located at elevations 214.30 and 217.5 and a 24-inch frame and grate emergency overflow set at elevation 219.50. The maximum elevation in the pond under the 100-year design storm event is 219.30. The outlet structure discharges to the wetland via a 24-inch HDPE pipe with an invert set at elevation 214.00. The pipe outfall is located outside of the wetland buffer offset. Landfill cap and stormwater management details and layout are included in the attached figure set.


If you have any questions or require additional information, please do not hesitate to contact either Ryan DaPonte at (401) 741-4514 or Todd Greene at (401)-374-2310.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.


Ryan DaPonte, P.E.
Project Manager


Matthew Smith, P.E.
Consultant/Reviewer


Todd Greene, P.E.^(RI)
Associate Principal

Cc: Walter Ramsey, Town Planner, Montague, MA

- Attachments: Limitations
- Application Form
- Figures 1-10
- Stormwater Pond HydroCAD Model
- Test Pit Logs



USE OF REPORT

1. GZA GeoEnvironmental, Inc. (GZA) prepared this report on behalf of, and for the exclusive use of our Client for the stated purpose(s) and location(s) identified in the Proposal for Services and/or Report. Use of this report, in whole or in part, at other locations, or for other purposes, may lead to inappropriate conclusions; and we do not accept any responsibility for the consequences of such use(s). Further, reliance by any party not expressly identified in the agreement, for any use, without our prior written permission, shall be at that party's sole risk, and without any liability to GZA.

STANDARD OF CARE

2. GZA's findings and conclusions are based on the work conducted as part of the Scope of Services set forth in the Proposal for Services and/or Report and reflect our professional judgment. These findings and conclusions must be considered not as scientific or engineering certainties, but rather as our professional opinions concerning the limited data gathered during the course of our work. Conditions other than described in this report may be found at the subject location(s).
3. GZA's services were performed using the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services, at the same time, under similar conditions, at the same or a similar property. No warranty, expressed or implied, is made. Specifically, GZA does not and cannot represent that the Site contains no hazardous material, oil, or other latent condition beyond that observed by GZA during its study. Additionally, GZA makes no warranty that any response action or recommended action will achieve all of its objectives or that the findings of this study will be upheld by a local, state or federal agency.
4. In conducting our work, GZA relied upon certain information made available by public agencies, Client and/or others. GZA did not attempt to independently verify the accuracy or completeness of that information. Inconsistencies in this information which we have noted, if any, are discussed in the Report.

SUBSURFACE CONDITIONS

5. The generalized soil profile(s) provided in our Report are based on widely-spaced subsurface explorations and are intended only to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and were based on our assessment of subsurface conditions. The composition of strata, and the transitions between strata, may be more variable and more complex than indicated. For more specific information on soil conditions at a specific location refer to the exploration logs. The nature and extent of variations between these explorations may not become evident until further exploration or construction. If variations or other latent conditions then become evident, it will be necessary to reevaluate the conclusions and recommendations of this report.
6. Water level readings have been made, as described in this Report, in and monitoring wells at the specified times and under the stated conditions. These data have been reviewed and interpretations have been made in this report. Fluctuations in the level of the groundwater however occur due to temporal or spatial variations in areal recharge rates, soil heterogeneities, the presence of subsurface utilities, and/or natural or artificially induced perturbations. The observed water table may be other than indicated in the Report.

COMPLIANCE WITH CODES AND REGULATIONS

7. We used reasonable care in identifying and interpreting applicable codes and regulations necessary to execute our scope of work. These codes and regulations are subject to various, and possibly contradictory, interpretations. Interpretations and compliance with codes and regulations by other parties is beyond our control.



SCREENING AND ANALYTICAL TESTING

8. GZA collected environmental samples at the locations identified in the Report. These samples were analyzed for the specific parameters identified in the report. Additional constituents, for which analyses were not conducted, may be present in soil, groundwater, surface water, sediment and/or air. Future Site activities and uses may result in a requirement for additional testing.
9. Our interpretation of field screening and laboratory data is presented in the Report. Unless otherwise noted, we relied upon the laboratory's QA/QC program to validate these data.
10. Variations in the types and concentrations of contaminants observed at a given location or time may occur due to release mechanisms, disposal practices, changes in flow paths, and/or the influence of various physical, chemical, biological or radiological processes. Subsequently observed concentrations may be other than indicated in the Report.

INTERPRETATION OF DATA

11. Our opinions are based on available information as described in the Report, and on our professional judgment. Additional observations made over time, and/or space, may not support the opinions provided in the Report.

ADDITIONAL INFORMATION

12. In the event that the Client or others authorized to use this report obtain additional information on environmental or hazardous waste issues at the Site not contained in this report, such information shall be brought to GZA's attention forthwith. GZA will evaluate such information and, on the basis of this evaluation, may modify the conclusions stated in this report.

ADDITIONAL SERVICES

13. GZA recommends that we be retained to provide services during any future investigations, design, implementation activities, construction, and/or property development/ redevelopment at the Site. This will allow us the opportunity to: i) observe conditions and compliance with our design concepts and opinions; ii) allow for changes in the event that conditions are other than anticipated; iii) provide modifications to our design; and iv) assess the consequences of changes in technologies and/or regulations.



Massachusetts Department of Environmental Protection
 Bureau of Waste Prevention – Solid Waste Management

- BWP SW 07 Modification of a Large Handling Facility**
- BWP SW 11 Landfills - Major Modification**
- BWP SW 16 Combustion Facilities**
- BWP SW 21 Modification of a Small Handling Facility**
- BWP SW 22 Landfills - Minor Modification**
- BWP SW 45 Any Facility – Presumptive Approval**

X272789
 Transmittal Number

19-192-001
 Facility ID# (if known)

Application for Solid Waste Management Facility Modification

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A. Project Information (all applicants must complete this section)

1. Which permit category are you applying for?
- BWP SW 07 BWP SW 11 BWP SW 16 BWP SW 21 BWP SW 22 BWP SW 45

2. Is MEPA review required for this project? Yes No

3. Permit Modification (310 CMR 19.029(2))

a. General Description

(1) Effect on Current Operation

(2) Effect on Capacity

(3) Effect on Operating Life

b. Effect on Public Health, Safety or the Environment

4. Currently Valid Department Approvals

Plan/Report #	Page #
Narrative	1
Narrative	1
Narrative	1
Narrative	1
Narrative	1
Narrative	1

DEP USE ONLY

Directions: Specify the plan/report and page numbers in which the following information is located.

B. Project Information

Note: Complete only sections applicable to requested modification. Enter NA if not applicable.

1. Plan/Report Modifications and/or Revisions

a. Waste Ban Plans (310 CMR 19.017)

b. Facility Plan (310 CMR (19.030(2)(d))

(1) Site Plan (310 CMR 19.030(2)(d)1)

(2) Facility Design Plan (310 CMR 19.030(2)(d) 3.)

Plan/Report #	Page #
N/A	
Figures	6-9
Figures	1-9
Figures	1-10

DEP USE ONLY

Important Note: Engineering Plans must be stamped by a Registered Professional Engineer (PE). Property Line Location must be stamped by a Registered Land Surveyor (RLS).



Massachusetts Department of Environmental Protection
 Bureau of Waste Prevention – Solid Waste Management

BWP SW 07 Modification of a Large Handling Facility
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 19-192-001
 Facility ID# (if known)

Application for Solid Waste Management Facility Modification

B. Project Information (cont.)	Plan/Report #	Page #	DEP USE ONLY
(4) Operation and Maintenance (310 CMR 19.030(2)(d) 4.)	N/A		
(5) Closure/Post-Closure Plan (310 CMR 19.030(2)(d) 5.)	N/A		
(6) Hydrogeological Study (310 CMR 19.104(3))	N/A		
(7) Class II Recycling Program (310 CMR 19.303) (Engineer's Supervision sign-off not required)	N/A		

C. Permit Review Documentation and Criteria

Note:
 Complete all sections applicable to requested modification. Refer to referenced regulation citation for applicability. Enter NA if not applicable.

	Plan/Report #	Page #	DEP USE ONLY
1. Documentation			
a. Site Assignment Documentation (310 CMR 19.030(2)(f))	N/A		
b. MEPA Status (310 CMR 19.030(2)(g))	N/A		
c. Wetlands Order of Conditions	N/A		
d. Waste Disposal Contract (Transfer Station)	N/A		
e. Financial Assurance Estimate and Mechanism (310 CMR 19.051)	N/A		
2. Permit Criteria (310 CMR 19.038(1)(d))			
a. MEPA Compliance	N/A		
b. Site Assignment Limits	N/A		
c. Compliance with Facility Specific Regulations	N/A		
d. Health & Environmental Impact Assessment	N/A		
e. Compliance with other applicable laws and regulations	N/A		



Massachusetts Department of Environmental Protection
 Bureau of Waste Prevention – Solid Waste Management

- BWP SW 07 Modification of a Large Handling Facility
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X272789
 Transmittal Number

19-192-001
 Facility ID# (if known)

Application for Solid Waste Management Facility Modification

C. Permit Review Documentation and Criteria (cont.)

	Plan/Report #	Page #	DEP USE ONLY
f. Compliance with Waste Bans	N/A		
g. Enforcement Status	N/A		
h. Bird Hazard	N/A		
i. Structural Support	N/A		
j. Wildlife Endangerment	N/A		
k. Capacity Utilization (N/A to Handling Facilities)	N/A		

D. Certification & Engineer's Supervision: 310 CMR 19.011

Engineer's Supervision:

All papers pertaining to design, operation, or engineering of this site or facility shall be completed under the supervision of a Massachusetts registered professional engineer knowledgeable in solid waste facility design, construction and operation, and shall bear the seal, signature and discipline of said engineer. The soils, geology, air monitoring and groundwater sections of the application or monitoring report shall be completed by competent professionals experienced in the fields of soil science and soil engineering, geology, air monitoring and groundwater, respectively, under the supervision of a Massachusetts registered professional engineer. All mapping and surveying shall be completed by a registered surveyor.

Ryan DaPonte

Print Name

[Signature]
 Authorized Signature

Project Manager

Position/Title

GZA

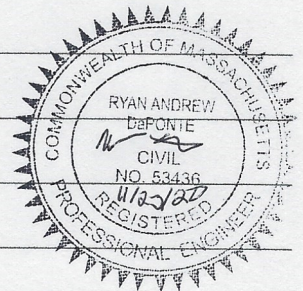
Company

53436

P.E. #

11/23/20

Date (MM/DD/YYYY)



Responsible Official Certification:

I attest under the pains and penalties of perjury that:

- a) I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this certification statement;
- b) Based on my inquiry of those persons responsible for obtaining the information, the information contained in this submittal is, to the best of my knowledge, true, accurate and complete;
- c) I am fully authorized to bind the entity required to submit these documents and to make this attestation on behalf of such entity; and
- d) I am aware that there are significant penalties including, but not limited to, administrative and civil penalties for submitting false, inaccurate or incomplete information, and possible fines and imprisonment for knowingly submitting false, inaccurate or incomplete information.

Richard Kuklewicz

Print Name

[Signature]
 Authorized Signature

Chairman

Position/Title

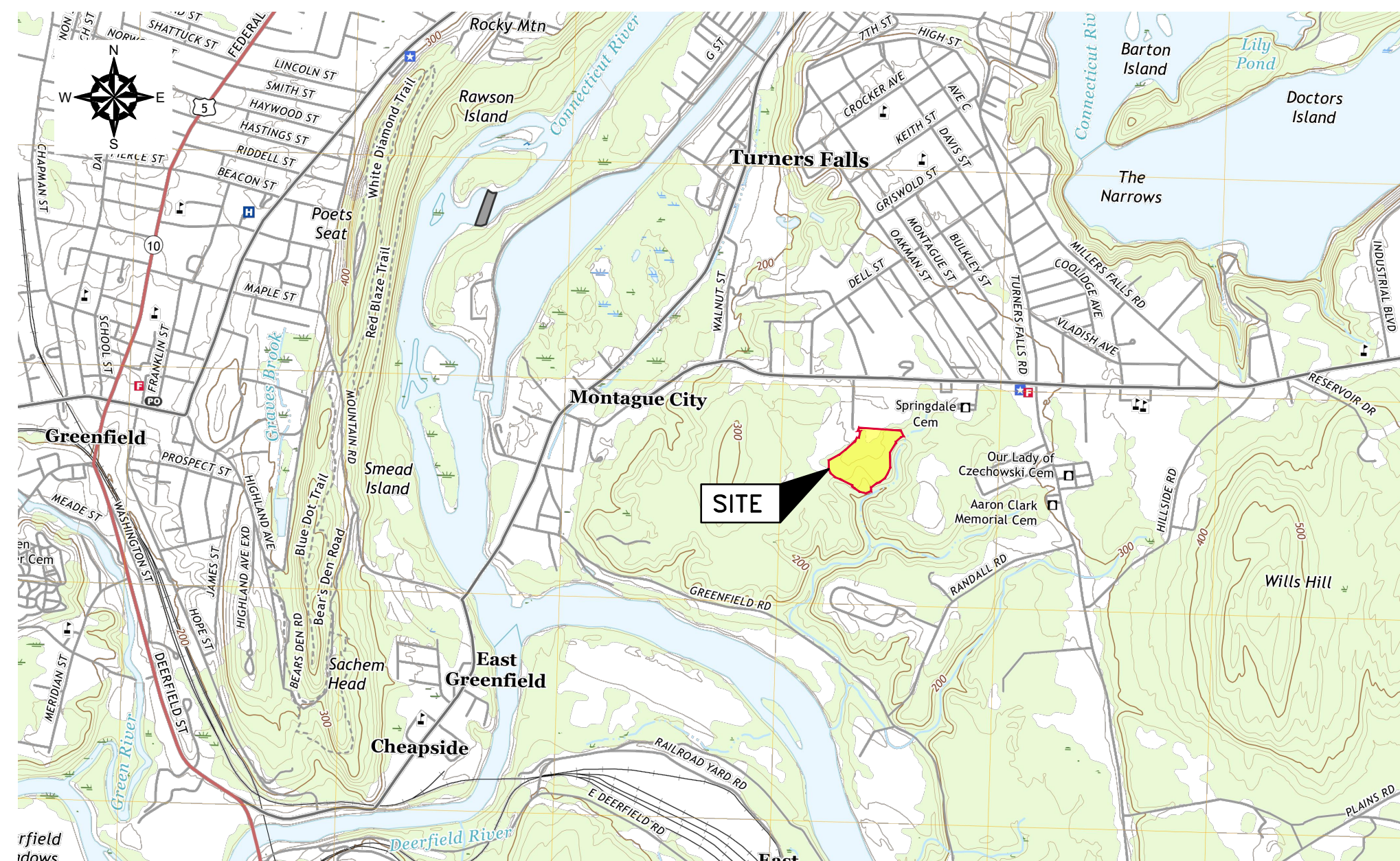
(MM/DD/YYYY)

MONTAGUE BURN DUMP ADDITIONAL WASTE AREA CAP DESIGN MONTAGUE , MASSACHUSETTS

PERMIT SET NOVEMBER 20, 2020

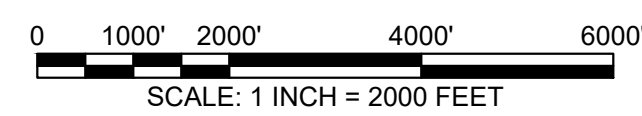
PREPARED FOR:
TOWN OF MONTAGUE
1 AVENUE A,
TURNER FALLS, MASSACHUSETTS

PREPARED BY:
 **GZA** GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com



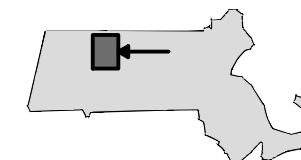
PROJECT LOCUS MAP

SOURCE: USGSSTORE.GOV



BASE MAP FROM THE FOLLOWING USGS QUADRANGLE MAP:
PROVIDENCE, RHODE ISLAND (2015)
DIGITAL TOPOGRAPHIC MAPS PROVIDED BY USGSSTORE.GOV.

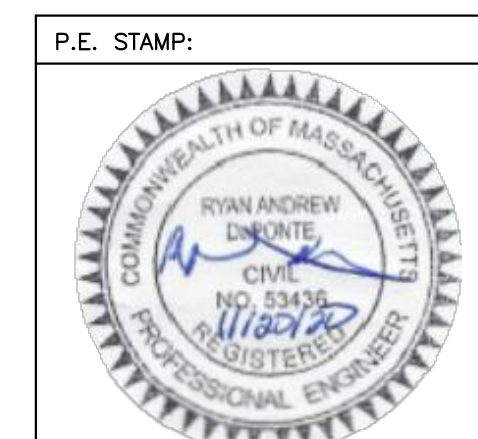
CONTOUR ELEVATIONS REFERENCE NAVD 88.
CONTOURS ARE SHOWN IN FEET AT 10 FOOT INTERVALS.
MASSACHUSETTS



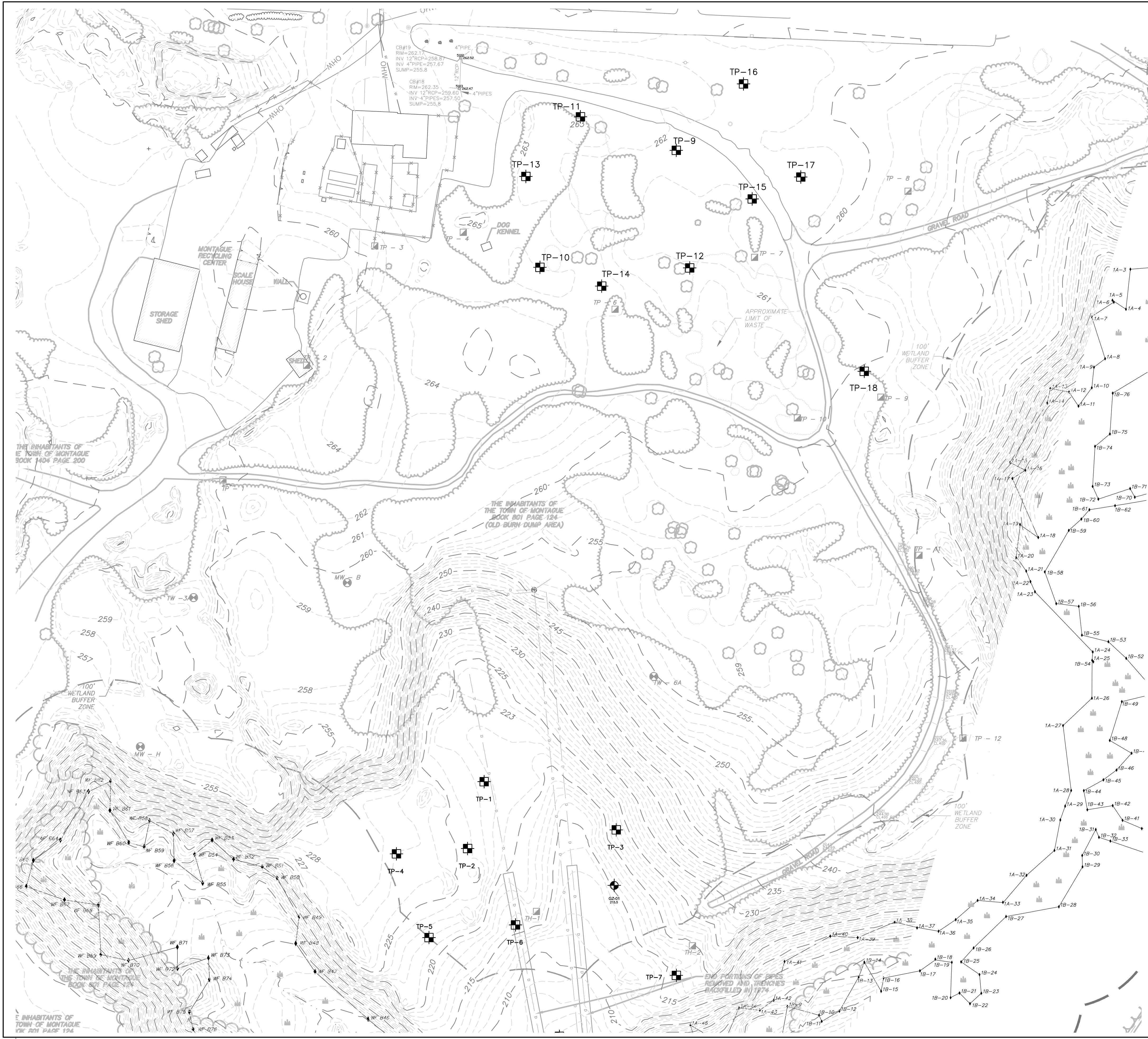
QUADRANGLE LOCATION

INDEX OF DRAWINGS	
SHEET #	SHEET TITLE
1	COVER
2	EXISTING CONDITIONS PLAN
3	EXISTING GROUND WATER CONTOURS
4	TIGHE AND BOND CAPPING FINISH GRADE PLAN
5	NEW WASTE LIMIT PLAN
6	NEW NORTH WASTE AREA CAP SUBGRADE GRADING PLAN
7	NEW NORTH WASTE AREA CAP FINISH GRADE GRADING PLAN
8	NEW SOUTH WASTE AREA CAP SUBGRADE GRADING PLAN
9	NEW SOUTH WASTE AREA CAP FINISH GRADE GRADING PLAN
10	DETAILS AND SECTIONS

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© 2020 - GZA GeoEnvironmental, Inc. GZA--\ENV--\CAD\CURRENT\PLANS\EXISTING CONDITIONS PLANDWG 2 EXISTING CONDITIONS PLAN NOVEMBER 20, 2020 1:07PM SCOTT BLIXTON

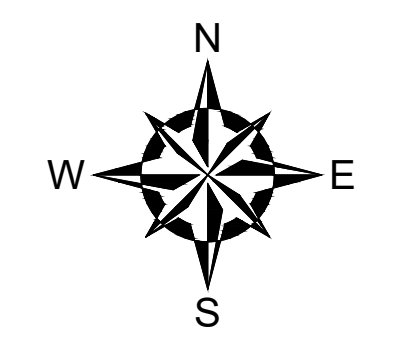


LEGEND

- NEW WELL LOCATION
- NEW TEST PIT LOCATION
- EXISTING CONTOUR 5 FOOT INTERVAL
- EXISTING CONTOUR 1 FOOT INTERVAL
- CATCH BASIN
- MANHOLE
- TEST PIT
- MONITOR WELL
- BUILDING
- TREE LINE
- FENCE LINE
- WETLAND BUFFER
- WETLAND LINE AND FLAG
- DRAIN LINE

NOTES:

1. BASE PLAN WAS DEVELOPED FROM "MONTAGUE BURN DUMP 100% CONSTRUCTION SET" PREPARED BY INDUSTRIA ENGINEERING DATED APRIL 2020.
2. TEST PIT EXPLORATIONS WERE EXCAVATED BY J. BATES AND SON, INC BETWEEN AUGUST 5 AND 6, 2020 AND OBSERVED BY GZA PERSONNEL. TEST PIT LOCATIONS WERE SURVEYED USING RTK GPS ON AUGUST 10, 2020.
3. LANDFILL CAP CROSS SECTION IS IN ACCORDANCE WITH THE CORRECTIVE ACTION DESIGN PREVIOUSLY APPROVED BY THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION ON APRIL 5, 2019 UNDER TRANSMITTAL NUMBER X272789.
4. LANDFILL FINAL COVER SYSTEM SHALL MEET THE SPECIFICATIONS INCLUDED IN "MONTAGUE BURN DUMP CLOSURE PROJECT: BMP SW25 - CORRECTIVE ACTION DESIGN" PREPARED BY TIGHE AND BOND REVISED JANUARY 2019.



**PERMITTING ONLY
NOT FOR CONSTRUCTION**

NO.	ISSUE/DESCRIPTION	BY	DATE

UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.

**MONTAGUE BURN DUMP ADDITIONAL
WASTE AREA CAP DESIGN
PERMIT SET**

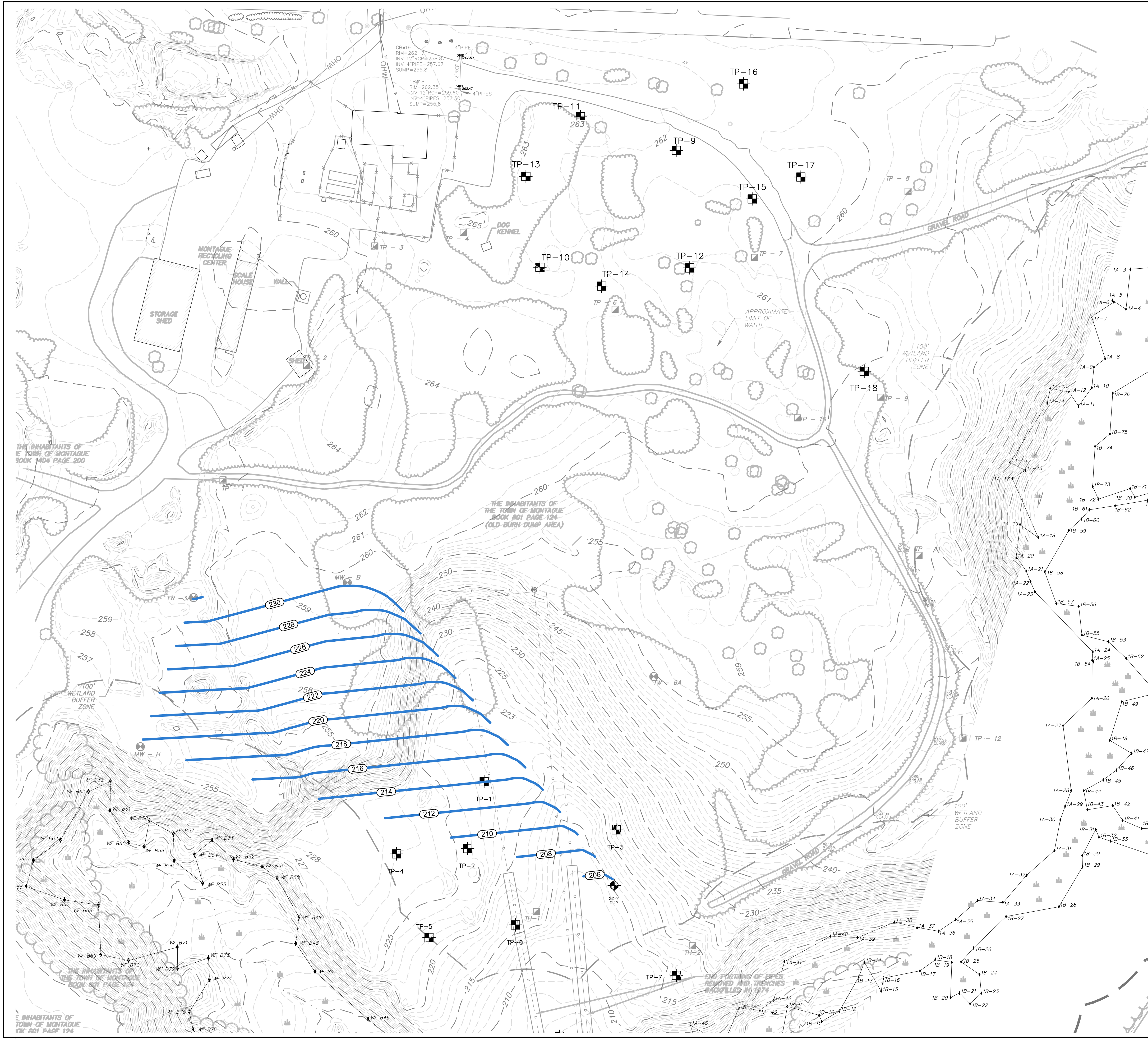
EXISTING CONDITIONS PLAN

P.E. STAMP:



PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: TOWN OF MONTAGUE 1 AVENUE A, TURNER FALLS, MASSACHUSETTS	
PROJ MGR: RAD	DESIGNED BY: RAD	REVIEWED BY: TRG	CHECKED BY: MS
DATE: NOVEMBER 20, 2020	PROJECT NO: 34676.01	DRAWN BY: SAB	SCALE: AS NOTED
		REVISION NO.	SHEET 2 SHEET NO. 2 OF 10

© 2020 - GZA GeoEnvironmental, Inc. GZA-1\ENV-1\34790.01.RD\CAD\CURRENT\PLANS\CAPPING EXPANSION PLANS\EXISTING GROUND WATER CONTOURS.DWG 3 EXISTING GROUND WATER CONTOURS NOVEMBER 20, 2020 1:11PM SCOTT BLIXTON



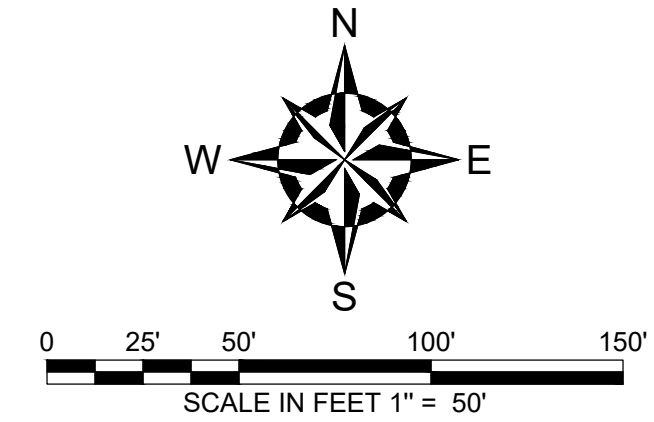
GROUNDWATER READINGS									
Location	Elevation	6/22/2020		8/26/2020		10/27/2020		GW Elevation	
		Depth to Water (feet)	GW Elevation	8/3/2020 Adjusted Elevation	Depth to Water (feet)	GW Elevation	10/1/2020 Adjusted Elevation		Depth to Water (feet)
MW-H	258.6931	37.3	221.3931	248.6531	19.12	229.53	238.6131	19.22	219.39
MW-B	261.4707	33.06	228.4107	263.7607	35.75	228.01	266.0507	35.95	230.1
MH	249.0652	28.51	220.5552	249.0652	43	206.07	249.0652	-	-
TW-3A	256.6404	N/A	-	261.6404	29.22	232.42	259.4354	27.3	232.14
GZ-1	215.5	N/A	-	-	11.74	203.76	215.5	10.43	205.07

LEGEND

- 100 --- NEW TEST PIT LOCATION
- 99 --- EXISTING CONTOUR 5 FOOT INTERVAL
- 45 --- EXISTING CONTOUR 1 FOOT INTERVAL
- ⊕ TP-9 NEW TEST PIT LOCATION
- ⊕ GZ-01 NEW MONITOR WELL LOCATION
- 45 --- GROUND WATER CONTOUR 1 FOOT INTERVAL
- CATCH BASIN
- ⊕ MANHOLE
- ⊕ TP-9 TEST PIT
- ⊕ TW-6A MONITOR WELL
- ▭ BUILDING
- TREE LINE
- FENCE LINE
- WETLAND BUFFER
- WETLAND LINE AND FLAG
- DRAIN LINE

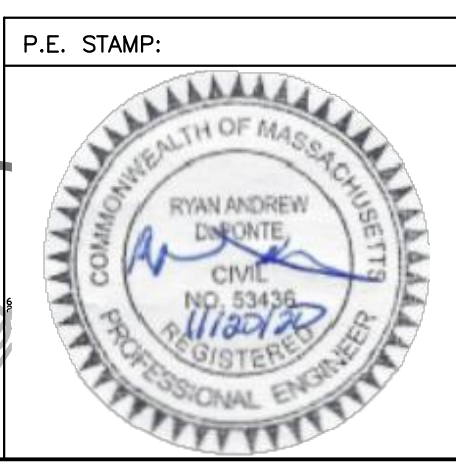
NOTES:

- BASE PLAN WAS DEVELOPED FROM "MONTAGUE BURN DUMP 100% CONSTRUCTION SET" PREPARED BY INDUSTRIA ENGINEERING DATED APRIL 2020.
- TEST PIT EXPLORATIONS WERE EXCAVATED BY J. BATES AND SON, INC BETWEEN AUGUST 5 AND 6, 2020 AND OBSERVED BY GZA PERSONNEL. TEST PIT LOCATIONS WERE SURVEYED USING RTK GPS ON AUGUST 10, 2020.
- LANDFILL CAP CROSS SECTION IS IN ACCORDANCE WITH THE CORRECTIVE ACTION DESIGN PREVIOUSLY APPROVED BY THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION ON APRIL 5, 2019 UNDER TRANSMITTAL NUMBER X272789.
- LANDFILL FINAL COVER SYSTEM SHALL MEET THE SPECIFICATIONS INCLUDED IN "MONTAGUE BURN DUMP CLOSURE PROJECT: BMP SW25 - CORRECTIVE ACTION DESIGN" PREPARED BY TIGHE AND BOND REVISED JANUARY 2019.
- GROUND WATER CONTOURS WHERE DEVELOPED FROM READINGS TAKEN OCTOBER 27, 2020

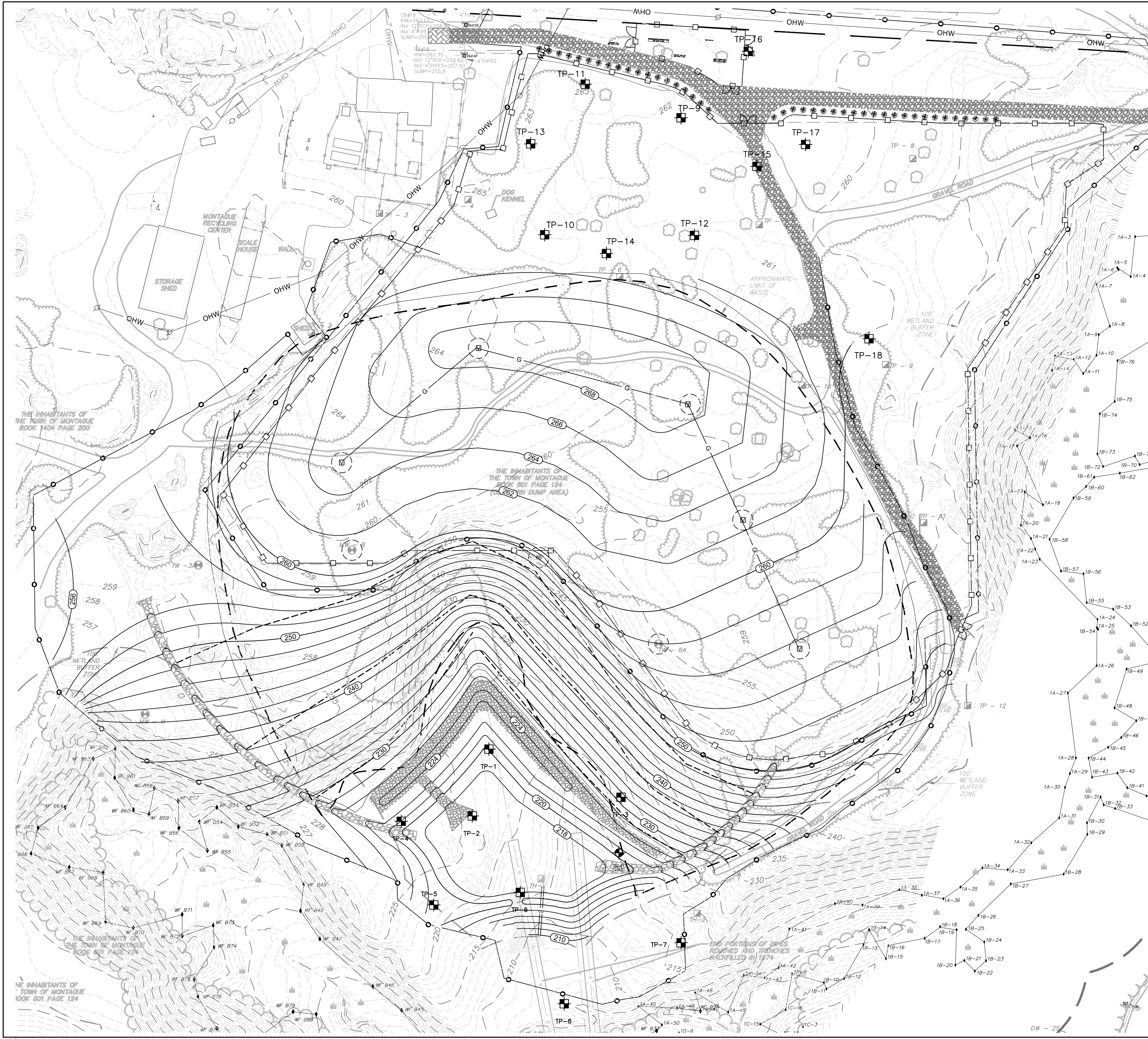


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NO.	ISSUE/DESCRIPTION	BY	DATE
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MONTAGUE BURN DUMP ADDITIONAL WASTE AREA CAP DESIGN PERMIT SET			
EXISTING GROUND WATER CONTOURS			
PREPARED BY:	GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR:	TOWN OF MONTAGUE 1 AVENUE A, TURNER FALLS, MASSACHUSETTS
PROJ MGR:	RAD	REVIEWED BY:	TRG
DESIGNED BY:	RAD	DRAWN BY:	SAB
DATE:	NOVEMBER 20, 2020	PROJECT NO.	34676.01
		CHECKED BY:	MS
		SCALE:	AS NOTED
		REVISION NO.	
			SHEET 3
			SHEET NO. 3 OF 10



© 2020 - GZA GeoEnvironmental, Inc. GZA--\A\ENV\34790.01.RD\CAD\CURRENT\PLANS\CAPPING FINISH GRADE PLANS\4 TIGHE AND BOND CAPPING FINISH GRADE PLAN NOVEMBER 20, 2020 1:28PM SCOTT BUXTON

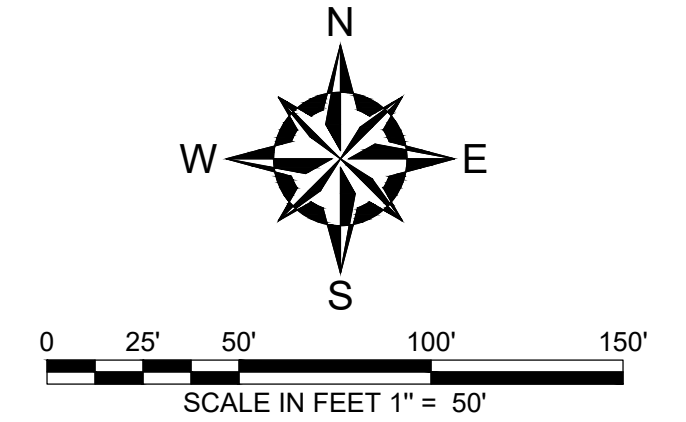


LEGEND

- NEW WELL LOCATION
- NEW TEST PIT LOCATION
- EXISTING CONTOUR 5 FOOT INTERVAL
- EXISTING CONTOUR 1 FOOT INTERVAL
- CATCH BASIN
- MANHOLE
- TEST PIT
- MONITOR WELL
- BUILDING
- TREE LINE
- FENCE LINE
- WETLAND BUFFER
- WETLAND LINE AND FLAG
- LIMITS OF WASTE SHOWN ON CORRECTIVE ACTION DESIGN
- OVERHEAD WIRE
- SILTY FENCE
- CHAIN LINK FENCE
- GAS VENT LINE
- RIPRAP SURFACE
- GAS VENT
- GATE
- LANDSCAPE PLANTING
- DIVERSION BERM

NOTES:

1. BASE PLAN WAS DEVELOPED FROM "MONTAGUE BURN DUMP 100% CONSTRUCTION SET" PREPARED BY INDUSTRIA ENGINEERING DATED APRIL 2020.
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4. LANDFILL FINAL COVER SYSTEM SHALL MEET THE SPECIFICATIONS INCLUDED IN "MONTAGUE BURN DUMP CLOSURE PROJECT: BMP SW25 - CORRECTIVE ACTION DESIGN" PREPARED BY TIGHE AND BOND REVISED JANUARY 2019.
5. PROPOSED FINISH CAP GRADING OBTAINED FROM "MONTAGUE BURN DUMP CLOSURE PROJECT: BWP SW25 - CORRECTIVE ACTION DESIGN" PRODUCED BY TIGHE AND BOND, REVISED JANUARY 2019.

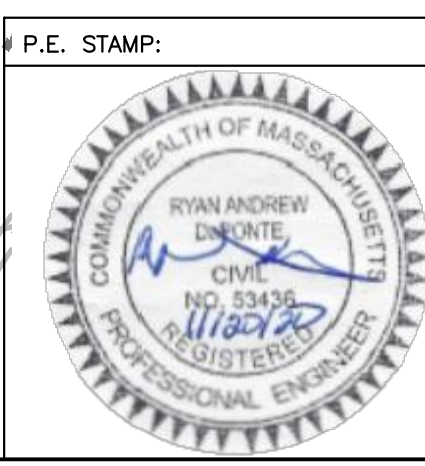


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NO.	ISSUE/DESCRIPTION	BY	DATE

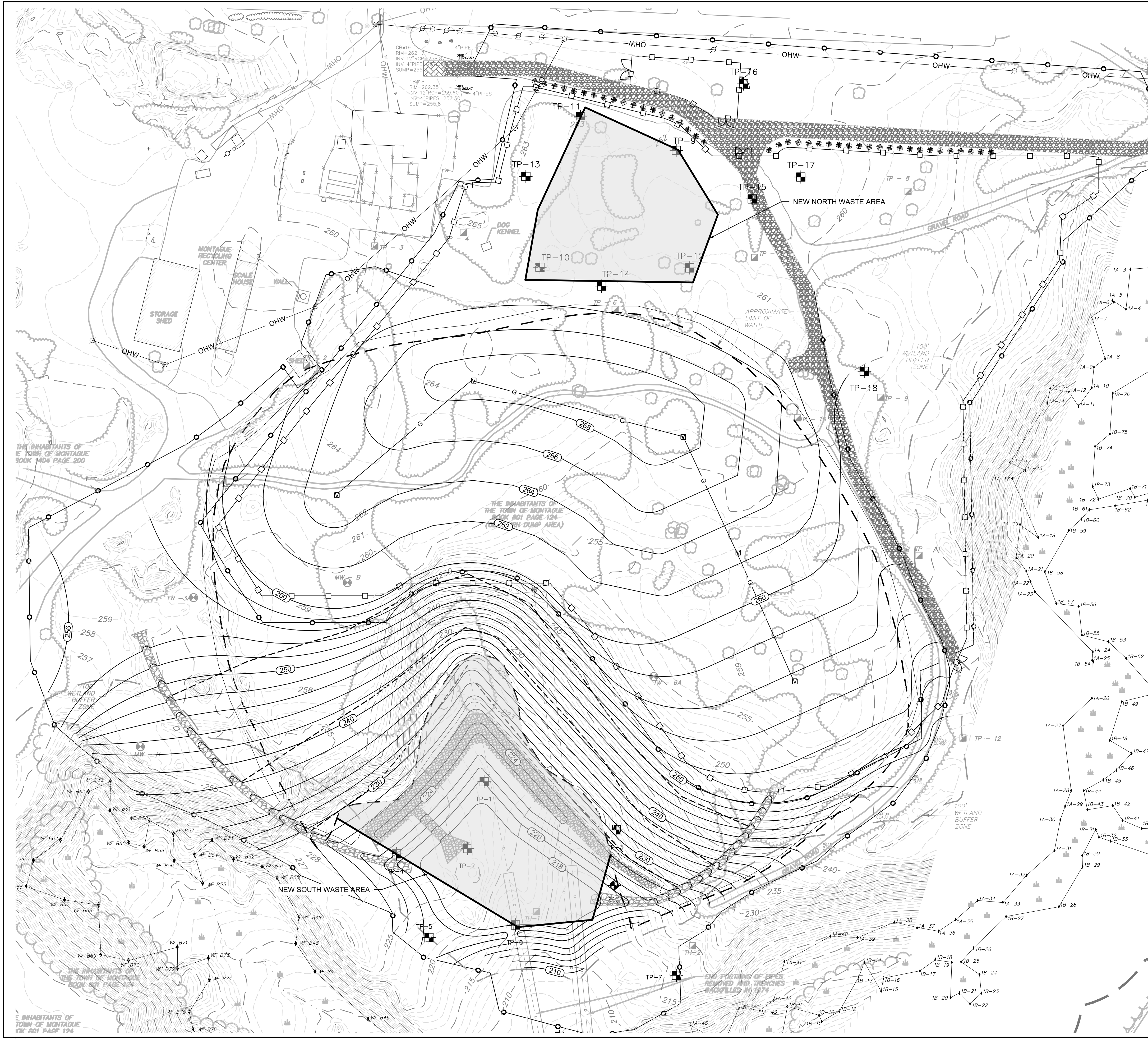
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**MONTAGUE BURN DUMP ADDITIONAL
WASTE AREA CAP DESIGN
PERMIT SET**



TIGHE AND BOND CAPPING FINISH GRADE PLAN		PREPARED FOR: TOWN OF MONTAGUE 1 AVENUE A, TURNER FALLS, MASSACHUSETTS	
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	REVIEWED BY: TRG	CHECKED BY: MS	SHEET
DESIGNED BY: RAD	DRAWN BY: SAB	SCALE: AS NOTED	4
DATE: NOVEMBER 20, 2020	PROJECT NO. 34676.01	REVISION NO.	
SHEET NO. 4 OF 10			

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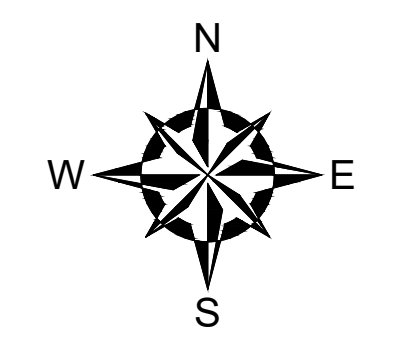


LEGEND

- NEW WELL LOCATION
- NEW TEST PIT LOCATION
- EXISTING CONTOUR 5 FOOT INTERVAL
- EXISTING CONTOUR 1 FOOT INTERVAL
- CATCH BASIN
- MANHOLE
- TEST PIT
- MONITOR WELL
- BUILDING
- TREE LINE
- FENCE LINE
- WETLAND BUFFER
- WETLAND LINE AND FLAG
- LIMITS OF WASTE SHOWN ON CORRECTIVE ACTION DESIGN
- OVERHEAD WIRE
- SILTY FENCE
- CHAIN LINK FENCE
- GAS VENT LINE
- RIPRAP SURFACE
- GAS VENT
- GATE
- LANDSCAPE PLANTING
- DIVERSION BERM
- NEW LIMITS OF WASTE

NOTES:

1. BASE PLAN WAS DEVELOPED FROM "MONTAGUE BURN DUMP 100% CONSTRUCTION SET" PREPARED BY INDUSTRIA ENGINEERING DATED APRIL 2020.
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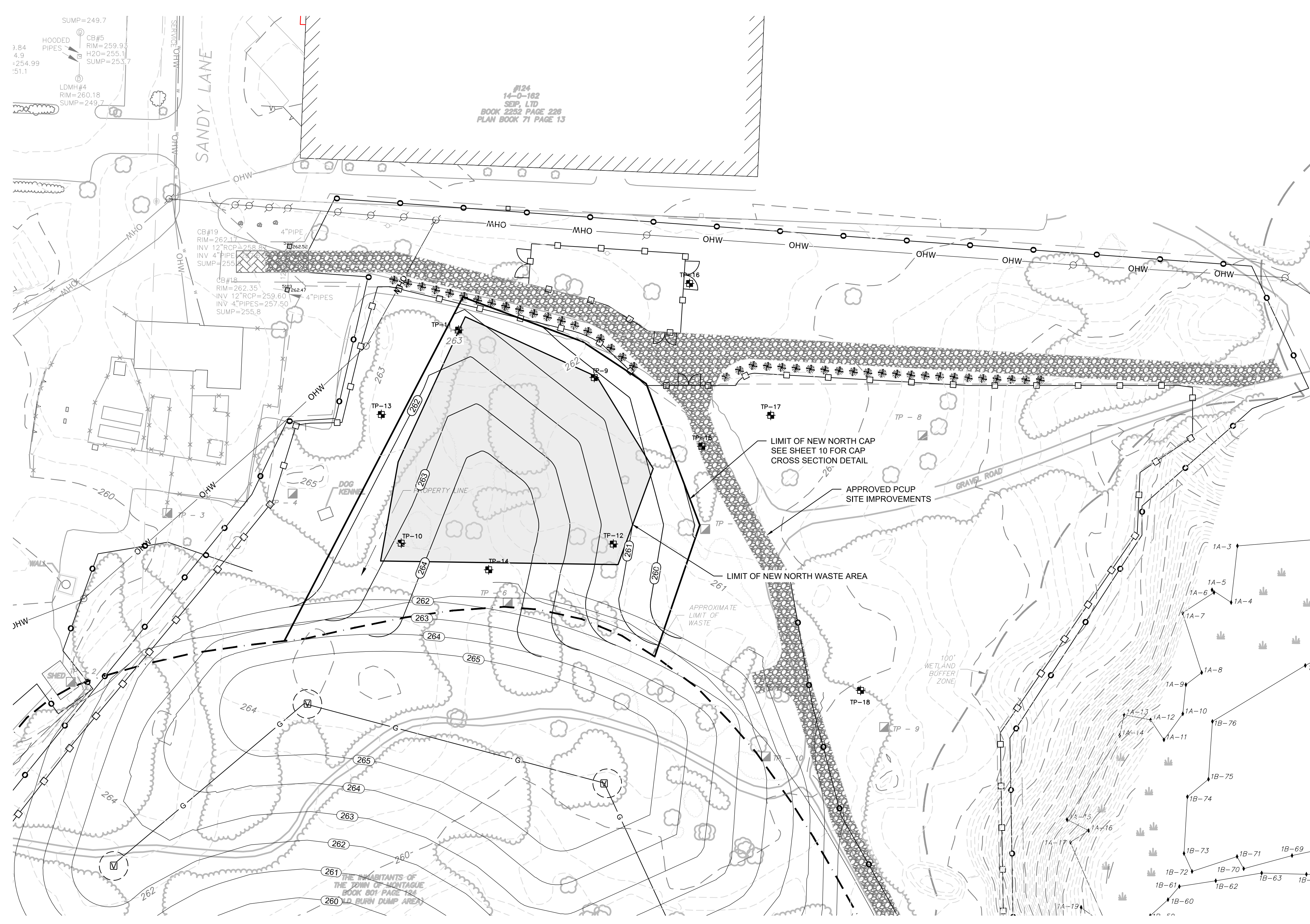
**MONTAGUE BURN DUMP ADDITIONAL
WASTE AREA CAP DESIGN
PERMIT SET**

P.E. STAMP:



NEW WASTE LIMIT PLAN		PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: TOWN OF MONTAGUE 1 AVENUE A, TURNER FALLS, MASSACHUSETTS	
PROJ MGR: RAD	DESIGNED BY: RAD	REVIEWED BY: TRG	DRAWN BY: SAB	CHECKED BY: MS	SHEET
DATE: NOVEMBER 20, 2020	PROJECT NO: 34676.01	SCALE: AS NOTED	REVISION NO.		5
					SHEET NO. 5 OF 10

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LEGEND

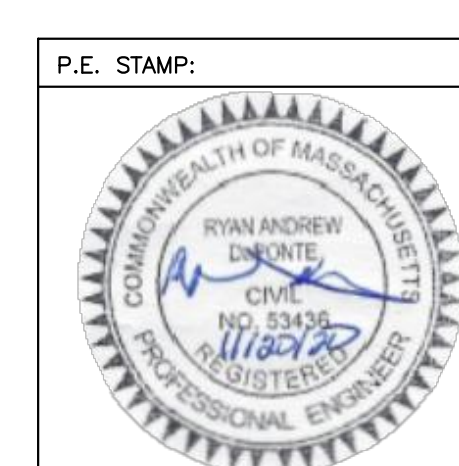
- NEW WELL LOCATION
- NEW TEST PIT LOCATION
- EXISTING CONTOUR 5 FOOT INTERVAL
- EXISTING CONTOUR 1 FOOT INTERVAL
- CATCH BASIN
- MANHOLE
- TEST PIT
- MONITOR WELL
- BUILDING
- TREE LINE
- FENCE LINE
- WETLAND BUFFER
- WETLAND LINE AND FLAG
- LIMITS OF WASTE SHOWN ON CORRECTIVE ACTION DESIGN
- OVERHEAD WIRE
- SILTY FENCE
- CHAIN LINK FENCE
- GAS VENT LINE
- RIPRAP SURFACE
- GAS VENT
- GATE
- LANDSCAPE PLANTING
- DIVERSION BERM
- CAP SUBGRADE TIGHE AND BOND DESIGN
- NEW LIMITS OF WASTE
- MAJOR SUBGRADE CONTOUR 5 FOOT INTERVAL
- MINOR SUBGRADE CONTOUR 1 FOOT INTERVAL

- ### NOTES:
- BASE PLAN WAS DEVELOPED FROM "MONTAGUE BURN DUMP 100% CONSTRUCTION SET" PREPARED BY INDUSTRIA ENGINEERING DATED APRIL 2020.
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SCALE IN FEET 1" = 40'

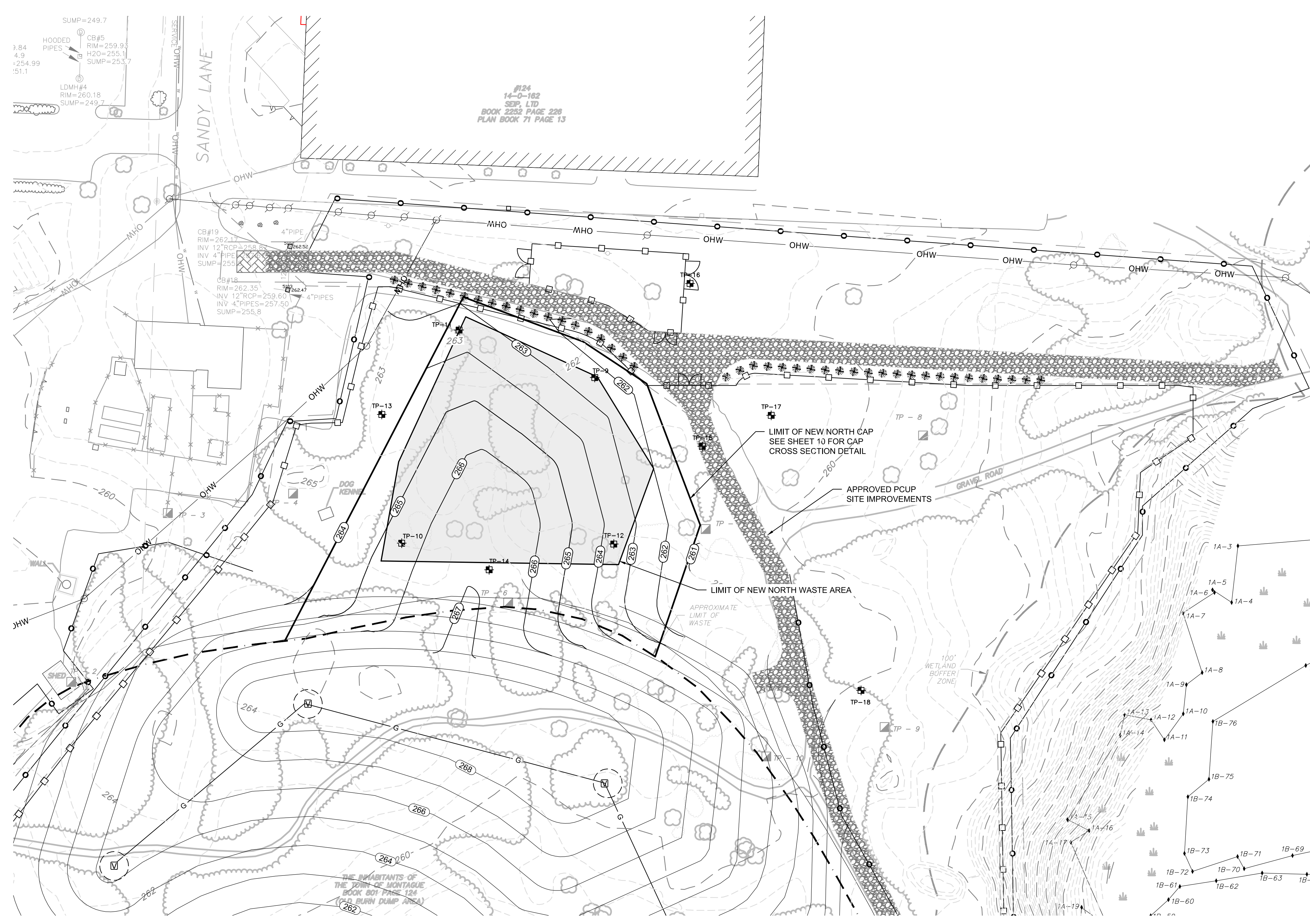
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NORTHERN CAP AREA CUT AND FILL				
2D AREA SQ. FT.	CUT VOLUME CU. YD.	FILL VOLUME CU. YD.	NET VOLUME CU. YD.	CUT / FILL
40271.14	919.01	918.76	0.25	CUT



NO.	ISSUE/DESCRIPTION	BY	DATE
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MONTAGUE BURN DUMP ADDITIONAL WASTE AREA CAP DESIGN PERMIT SET			
NEW NORTH WASTE AREA CAP SUBGRADE GRADING PLAN			
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: TOWN OF MONTAGUE 1 AVENUE A, TURNER FALLS, MASSACHUSETTS	
PROJ MGR: RAD	REVIEWED BY: TRG	CHECKED BY: MS	SHEET 6
DESIGNED BY: RAD	DRAWN BY: SAB	SCALE: AS NOTED	
DATE: NOVEMBER 20, 2020	PROJECT NO: 34676.01	REVISION NO:	SHEET NO. 6 OF 10

© 2020 - GZA GeoEnvironmental, Inc. GZA--A\ENV\34790.01.RD\CAD\CURRENT\PLANS\7 NEW NORTH WASTE AREA CAP FINISH GRADE GRADING PLAN NOVEMBER 20, 2020 3:10PM SCOTT BUXTON

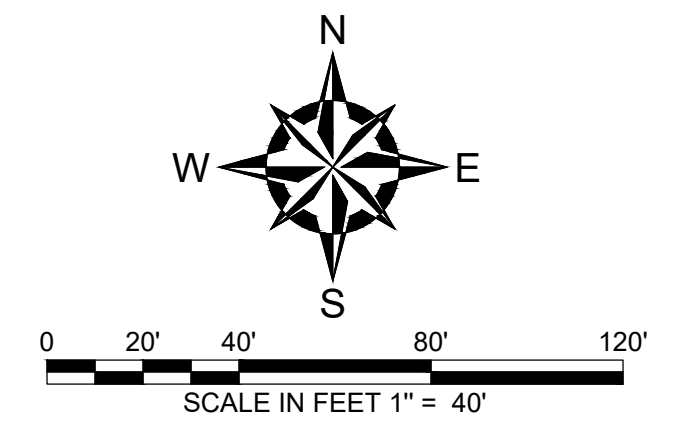


LEGEND

- NEW WELL LOCATION
- NEW TEST PIT LOCATION
- EXISTING CONTOUR 5 FOOT INTERVAL
- EXISTING CONTOUR 1 FOOT INTERVAL
- CATCH BASIN
- MANHOLE
- TEST PIT
- MONITOR WELL
- BUILDING
- TREE LINE
- FENCE LINE
- WETLAND BUFFER
- WETLAND LINE AND FLAG
- LIMITS OF WASTE SHOWN ON CORRECTIVE ACTION DESIGN
- OVERHEAD WIRE
- SILTY FENCE
- CHAIN LINK FENCE
- GAS VENT LINE
- RIPRAP SURFACE
- GAS VENT
- GATE
- LANDSCAPE PLANTING
- NEW LIMITS OF WASTE
- CAP FINISH GRADE TIGHE AND BOND DESIGN
- MAJOR FINISH GRADE CONTOUR 5 FOOT INTERVAL
- MINOR FINISH GRADE CONTOUR 1 FOOT INTERVAL

NOTES:

1. BASE PLAN WAS DEVELOPED FROM "MONTAGUE BURN DUMP 100% CONSTRUCTION SET" PREPARED BY INDUSTRIA ENGINEERING DATED APRIL 2020.
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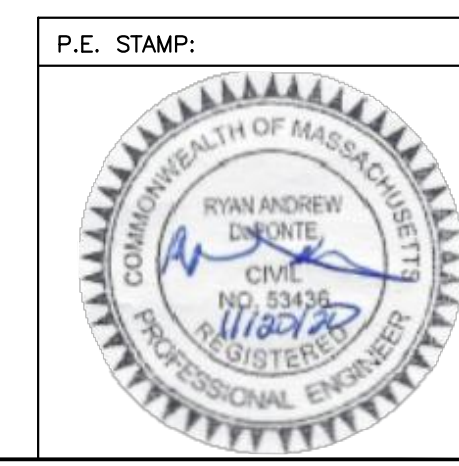
**PERMITTING ONLY
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NO.	ISSUE/DESCRIPTION	BY	DATE

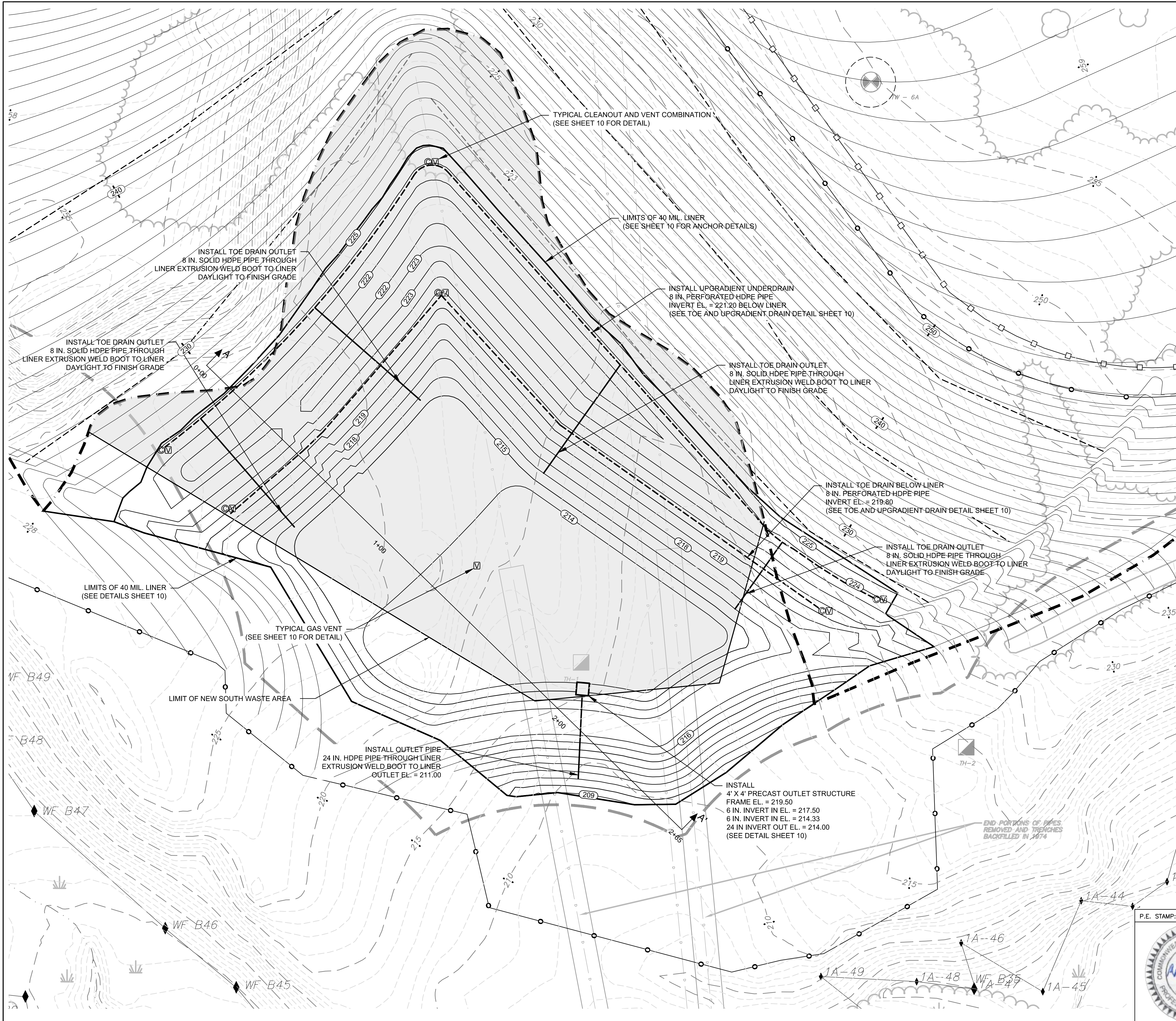
**MONTAGUE BURN DUMP ADDITIONAL
WASTE AREA CAP DESIGN
PERMIT SET**

**NEW NORTH WASTE AREA CAP
FINISH GRADE GRADING PLAN**

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR: TOWN OF MONTAGUE 1 AVENUE A. TURNER FALLS, MASSACHUSETTS		
PROJ MGR: RAD DESIGNED BY: RAD DATE: NOVEMBER 20, 2020	REVIEWED BY: TRG DRAWN BY: SAB PROJECT NO. 34676.01	CHECKED BY: MS SCALE: AS NOTED REVISION NO.	SHEET 7 SHEET NO. 7 OF 10



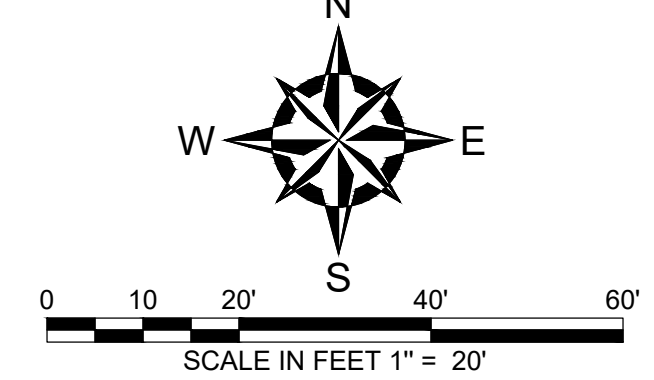
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LEGEND

	NEW WELL LOCATION
	NEW TEST PIT LOCATION
	EXISTING CONTOUR 5 FOOT INTERVAL
	EXISTING CONTOUR 1 FOOT INTERVAL
	CATCH BASIN
	MANHOLE
	TEST PIT
	MONITOR WELL
	BUILDING
	TREE LINE
	FENCE LINE
	WETLAND BUFFER
	WETLAND LINE AND FLAG
	LIMITS OF WASTE SHOWN ON CORRECTIVE ACTION DESIGN
	OHW
	SILT FENCE
	CHAIN LINK FENCE
	GAS VENT LINE
	RIPRAP SURFACE
	GAS VENT
	GATE
	LANDSCAPE PLANTING
	DIVERSION BERM
	NEW LIMITS OF WASTE
	268
	260
	259
	CM
	PERFORATED HDPE PIPE
	SOLID HDPE PIPE

- NOTES:**
- BASE PLAN WAS DEVELOPED FROM "MONTAGUE BURN DUMP 100% CONSTRUCTION SET" PREPARED BY INDUSTRIA ENGINEERING DATED APRIL 2020.
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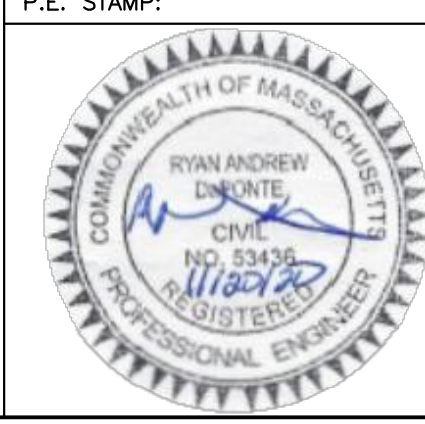
NO.	ISSUE/DESCRIPTION	BY	DATE

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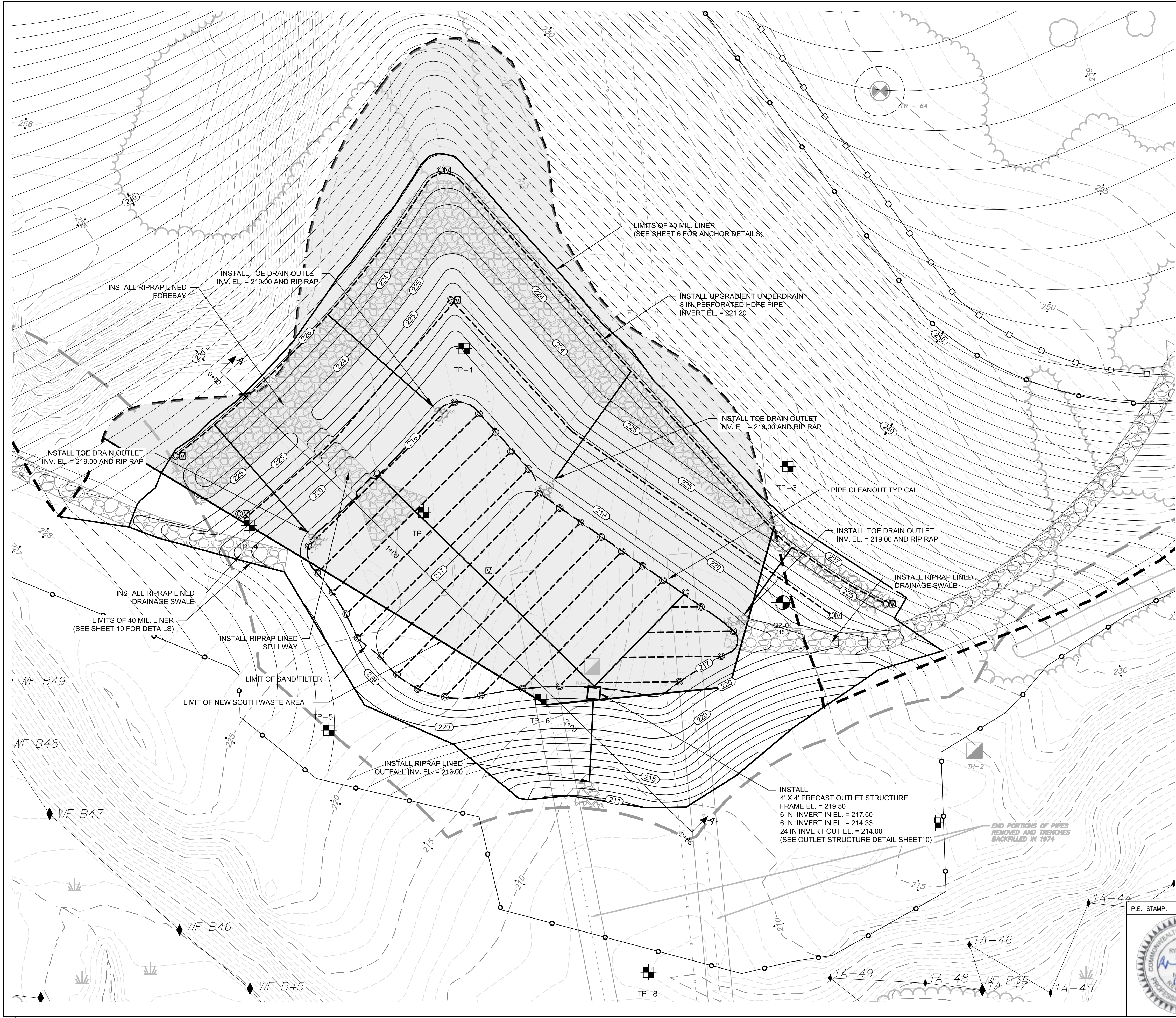
**MONTAGUE BURN DUMP ADDITIONAL
WASTE AREA CAP DESIGN
PERMIT SET**

**NEW SOUTH WASTE AREA CAP
SUBGRADE GRADING PLAN**

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR: TOWN OF MONTAGUE, 1 AVENUE A, TURNER FALLS, MASSACHUSETTS
PROJ MGR: RAD DESIGNED BY: RAD	REVIEWED BY: TRG DRAWN BY: SAB
DATE: NOVEMBER 20, 2020	PROJECT NO. 34676.01
CHECKED BY:	SCALE: AS NOTED
REVISION NO.	SHEET 8 SHEET NO. 8 OF 10

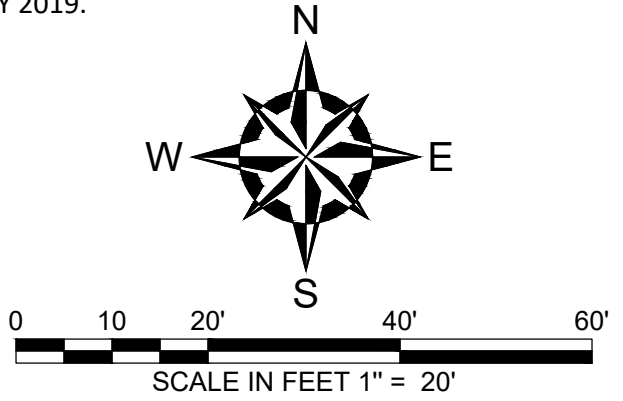


© 2020 - GZA GeoEnvironmental, Inc. GZA-A1100134790.01.RD (CURRENT PLANS) CAPPING EXPANSION PLANS 9 NEW SOUTH WASTE AREA CAP FINISH GRADE GRADING PLAN NOVEMBER 20, 2020 2:51PM SCOTT BUXTON



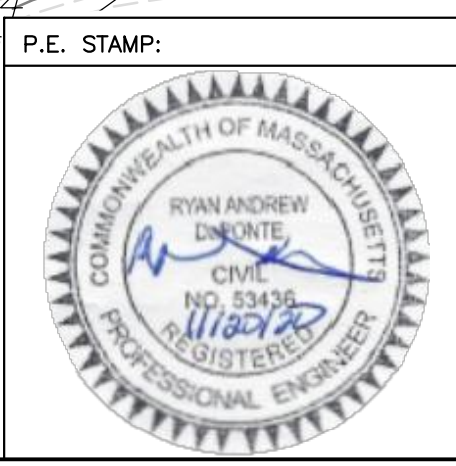
- ### LEGEND
- NEW WELL LOCATION
 - NEW TEST PIT LOCATION
 - EXISTING CONTOUR 5 FOOT INTERVAL
 - EXISTING CONTOUR 1 FOOT INTERVAL
 - CATCH BASIN
 - MANHOLE
 - TEST PIT
 - MONITOR WELL
 - BUILDING
 - TREE LINE
 - FENCE LINE
 - WETLAND BUFFER
 - WETLAND LINE AND FLAG
 - LIMITS OF WASTE SHOWN ON CORRECTIVE ACTION DESIGN
 - OVERHEAD WIRE
 - SILT FENCE
 - CHAIN LINK FENCE
 - GAS VENT LINE
 - RIPRAP SURFACE
 - GAS VENT
 - GATE
 - LANDSCAPE PLANTING
 - NEW LIMITS OF WASTE
 - CAP FINISH GRADE TIGHE AND BOND DESIGN
 - MAJOR FINISH GRADE CONTOUR 5 FOOT INTERVAL
 - MINOR FINISH GRADE CONTOUR 1 FOOT INTERVAL
 - PIPE CLEANOUT
 - PIPE CLEANOUT AND VENT COMBINATION
 - PERFORATED HDPE PIPE
 - SOLID HDPE PIPE

- ### NOTES:
- BASE PLAN WAS DEVELOPED FROM "MONTAGUE BURN DUMP 100% CONSTRUCTION SET" PREPARED BY INDUSTRIA ENGINEERING DATED APRIL 2020.
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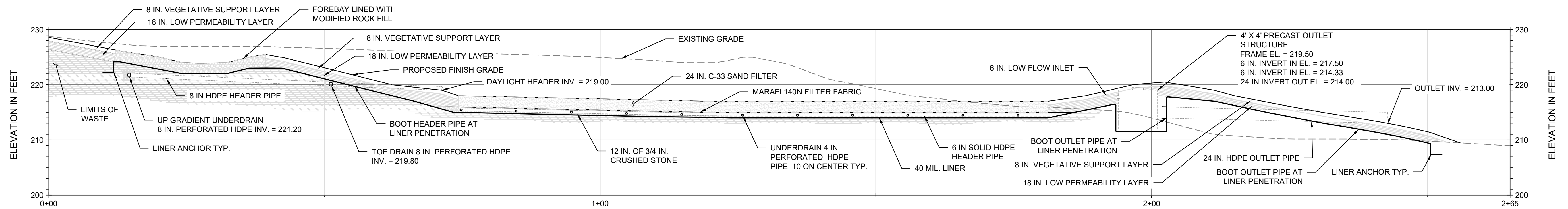


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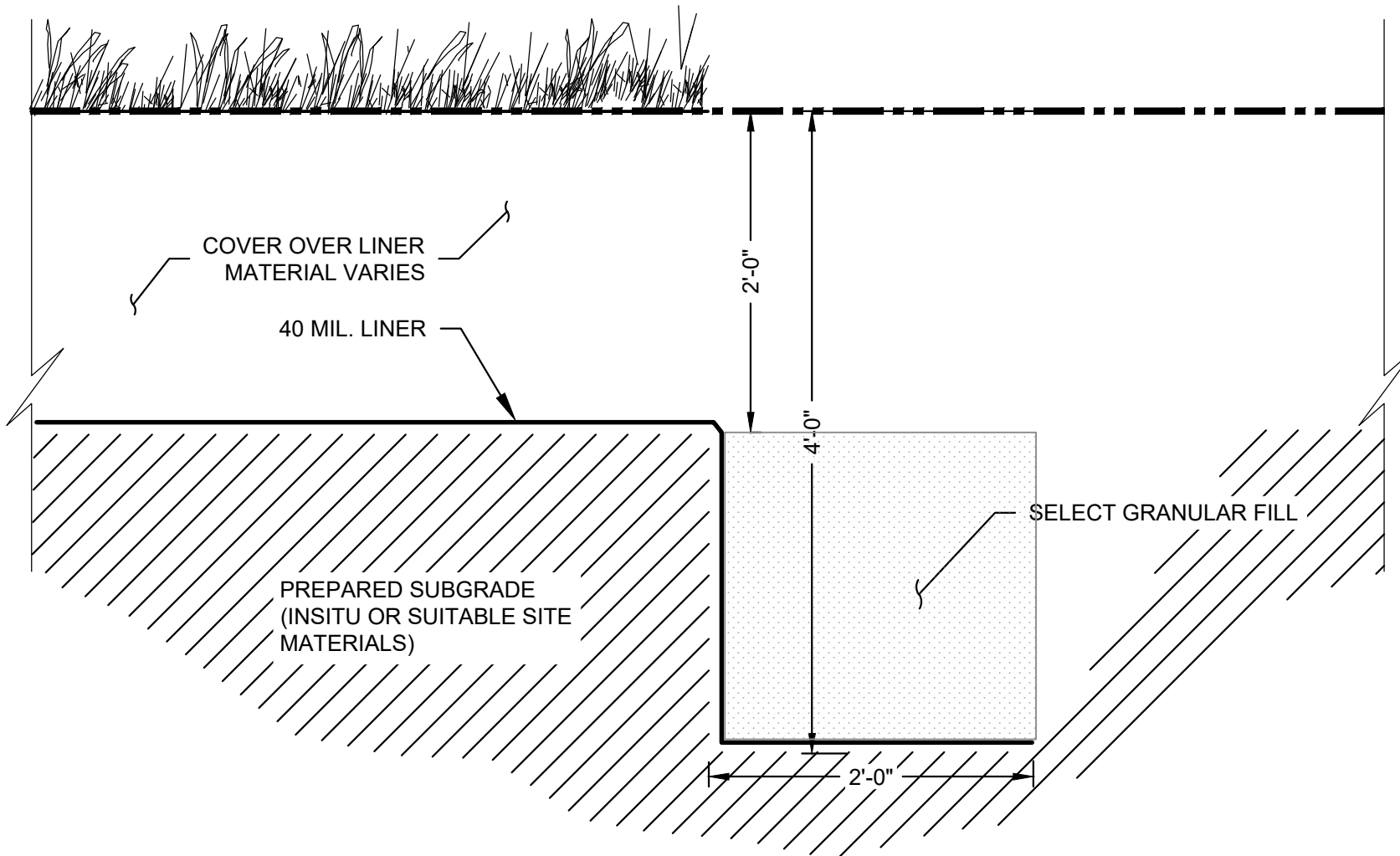
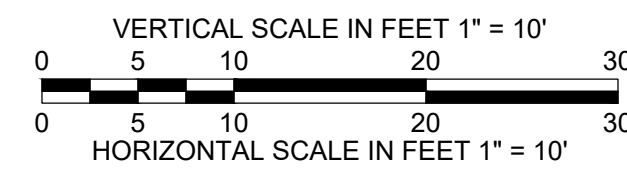
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MONTAGUE BURN DUMP ADDITIONAL WASTE AREA CAP DESIGN PERMIT SET			
NEW SOUTH WASTE AREA CAP FINISH GRADE GRADING PLAN			
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: TOWN OF MONTAGUE, 1 AVENUE A, TURNER FALLS, MASSACHUSETTS	
PROJ MGR: RAD	DESIGNED BY: RAD	REVIEWED BY: TRG	CHECKED BY: MS
DATE: NOVEMBER 20, 2020	DRAWN BY: SAB	PROJECT NO: 34676.01	SCALE: AS NOTED
			SHEET 9 SHEET NO. 9 OF 10



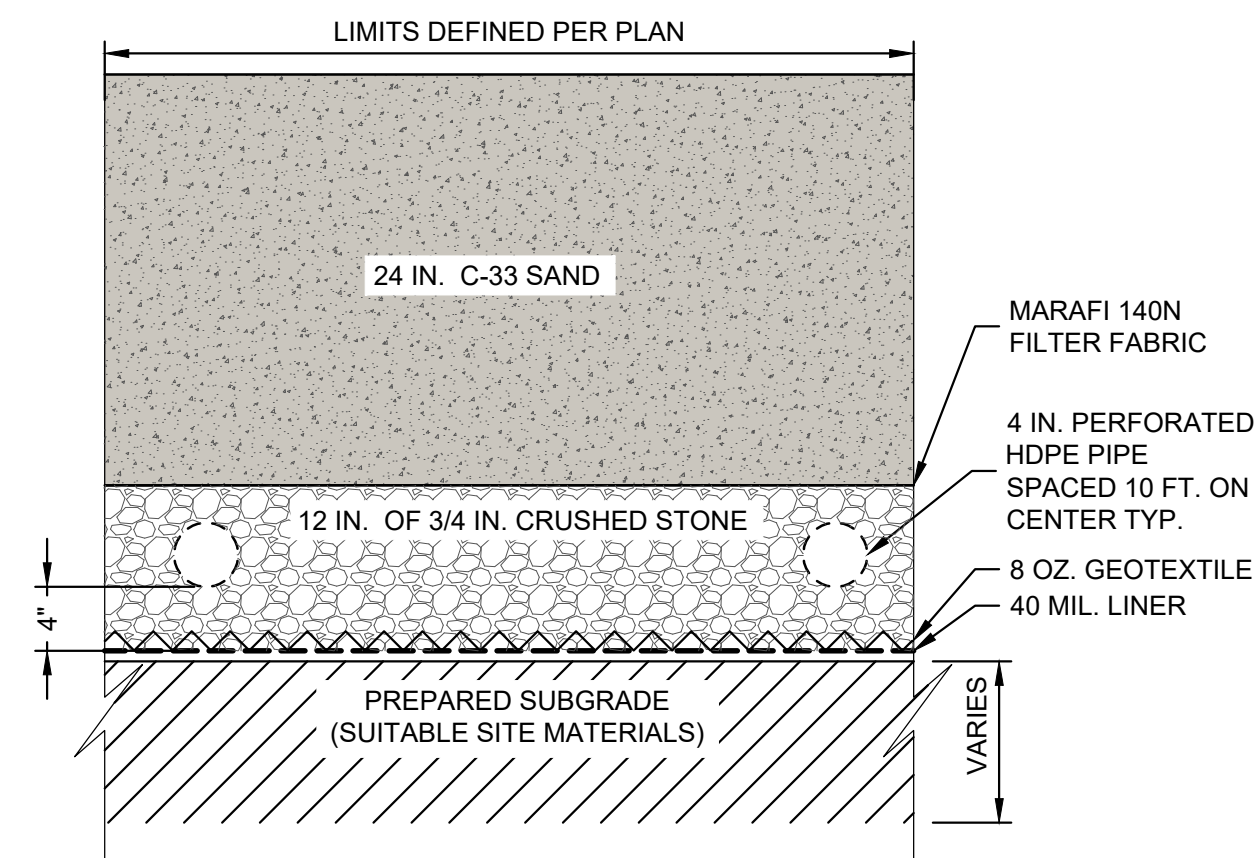
© 2020 - GZA GeoEnvironmental, Inc. GZA--\ENV--\34790.01 RD\CAD\CURRENT\PLANS\CAPPING EXPANSION PLANS\10 DETAILS AND SECTIONS.DWG 10 DETAILS AND SECTIONS NOVEMBER 20, 2020 2:53PM SCOTT BLIXTON



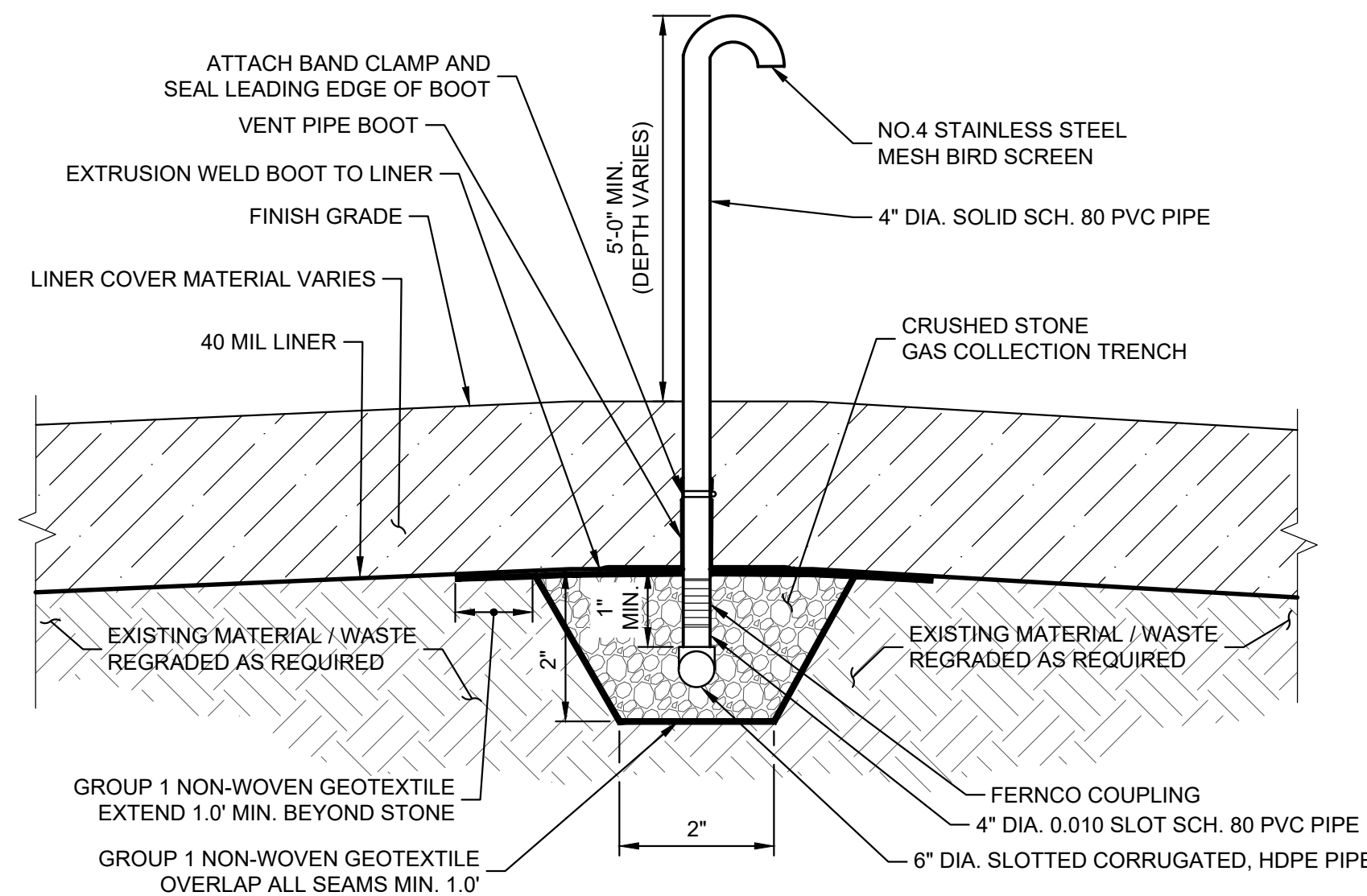
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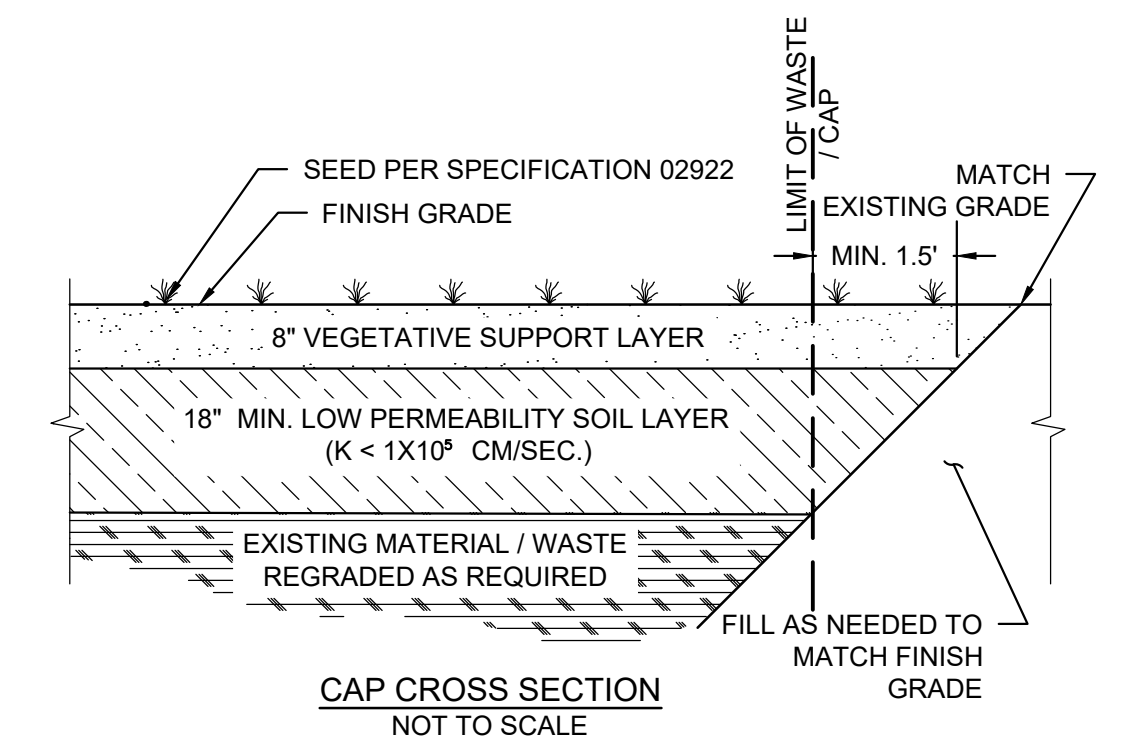
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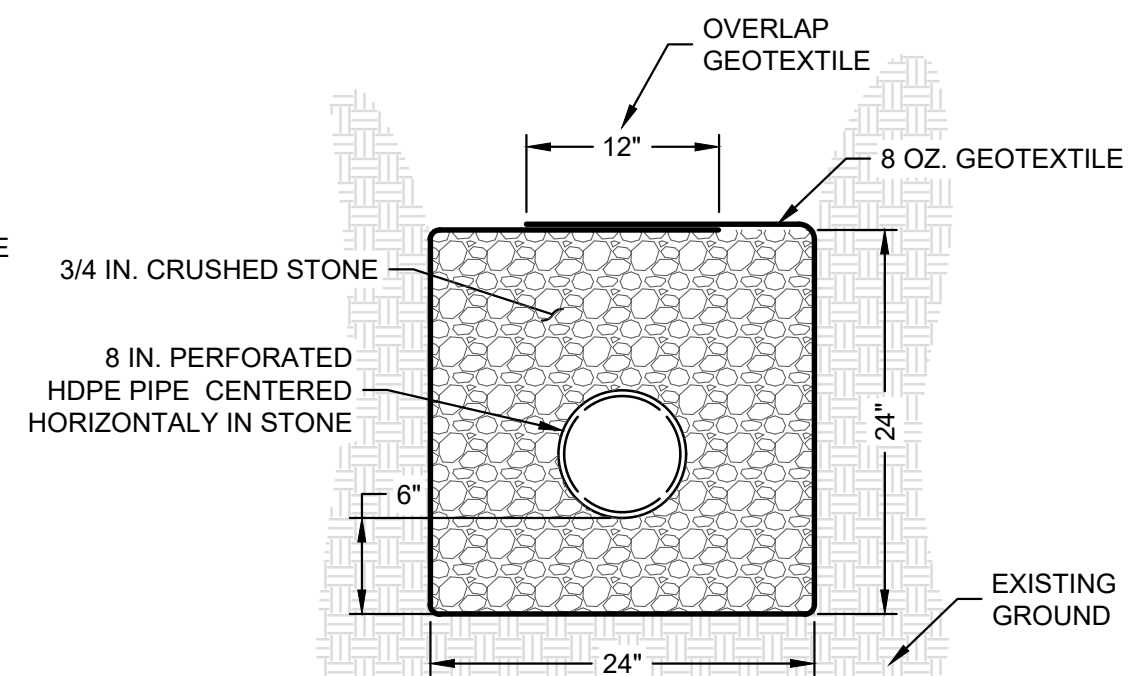
POND SAND FILTER DETAIL
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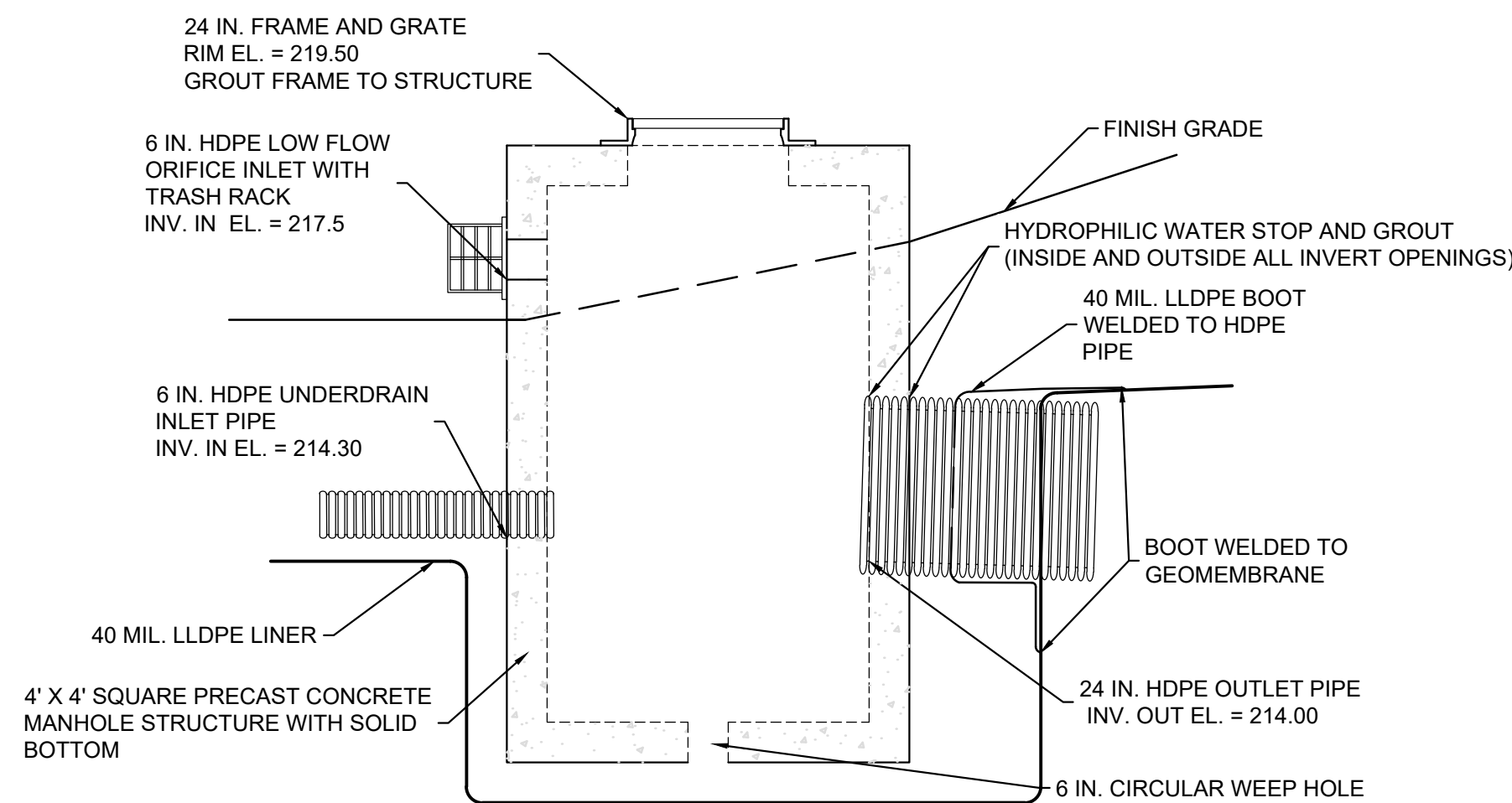
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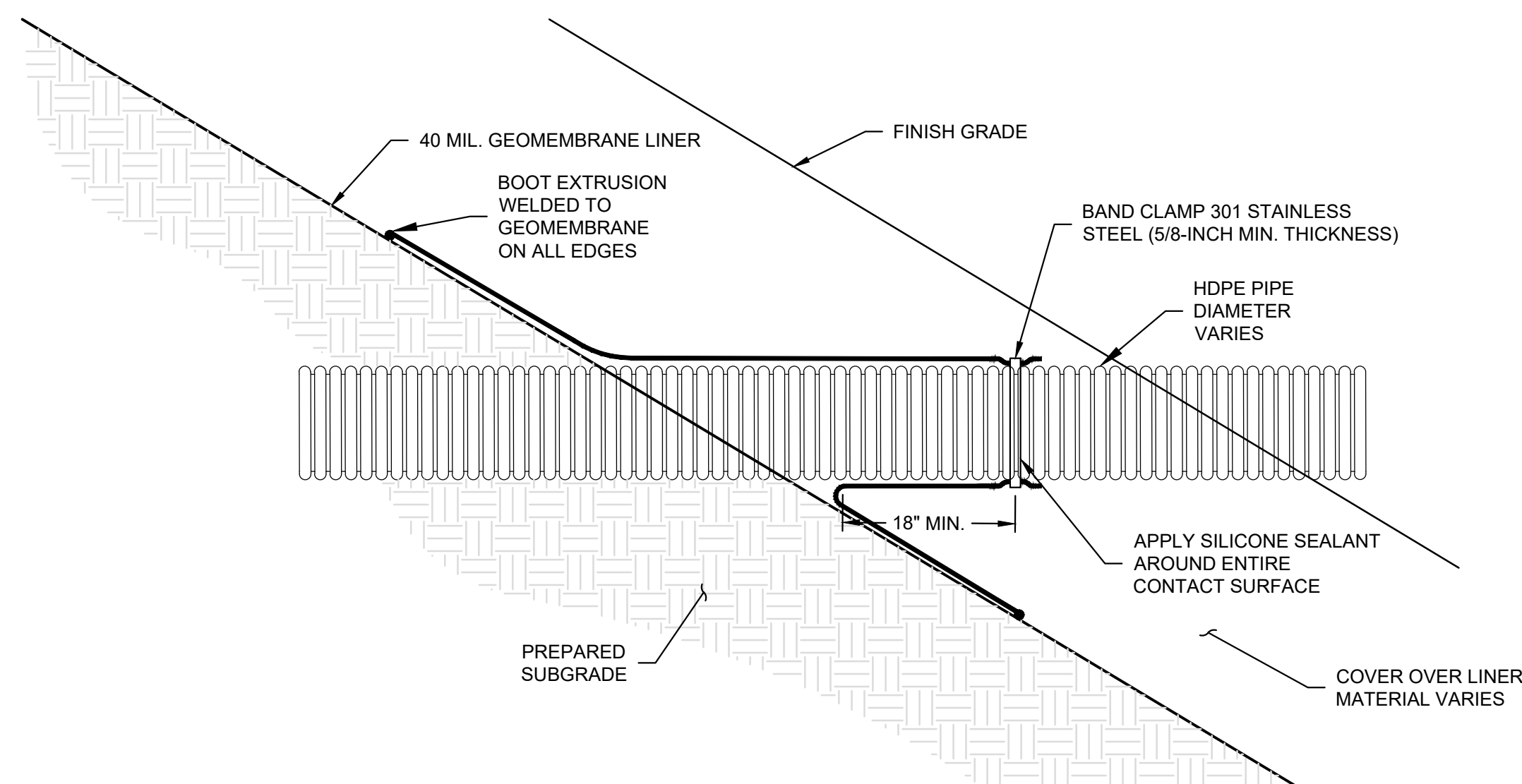
CAP CROSS SECTION
NOT TO SCALE



TOE AND UP GRADIENT DRAIN DETAIL
NOT TO SCALE



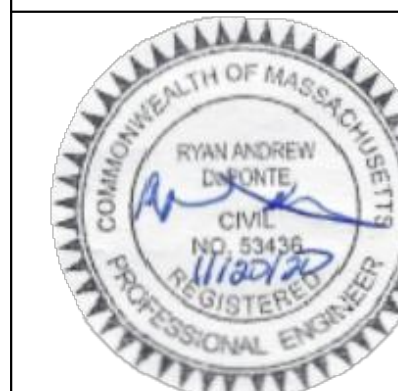
OUTLET STRUCTURE DETAIL
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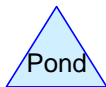
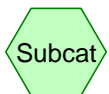
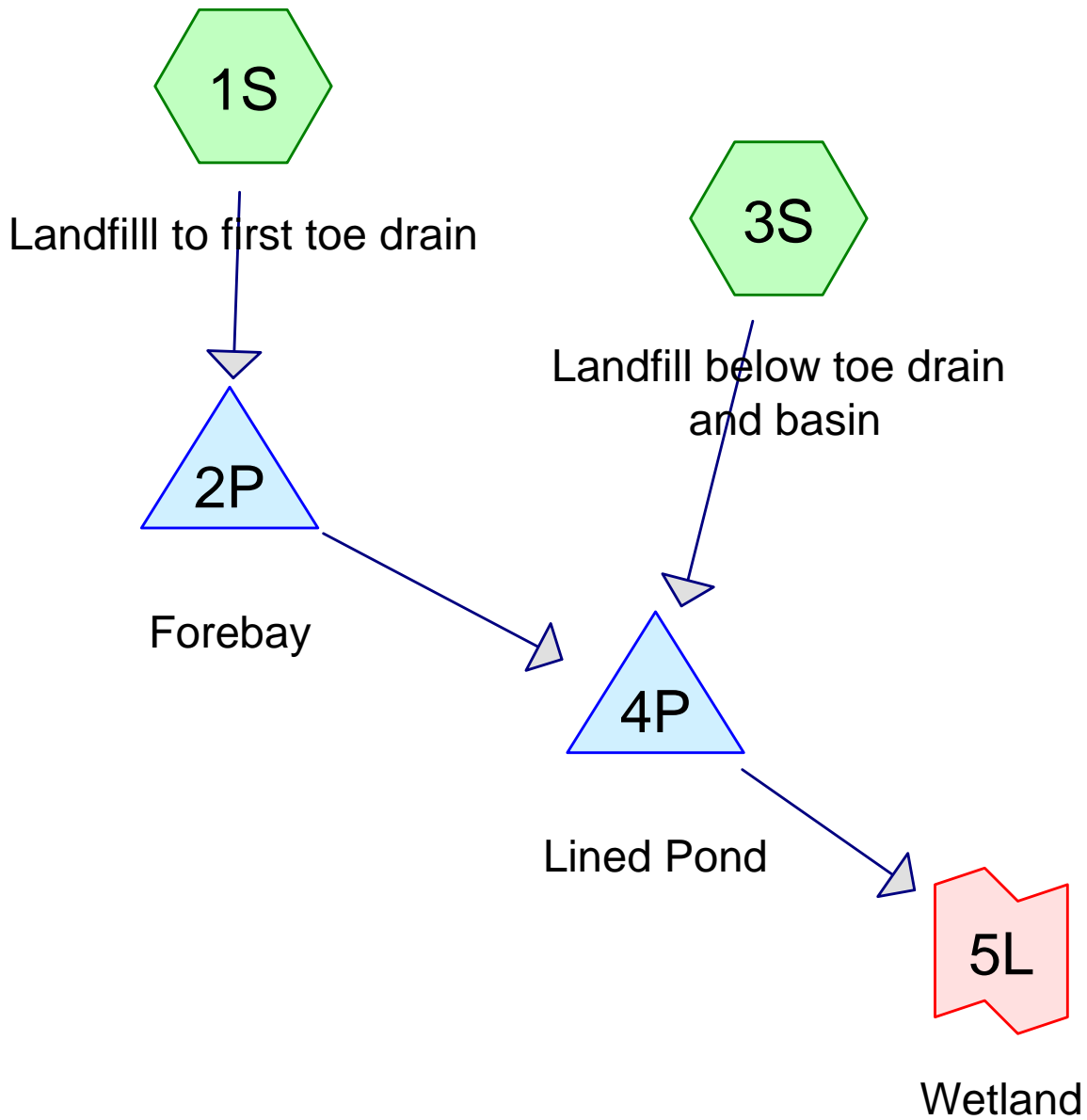
PIPE GEOMEMBRANE PENETRATION BOOT DETAIL
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P.E. STAMP:



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MONTAGUE BURN DUMP ADDITIONAL WASTE AREA CAP DESIGN PERMIT SET			
DETAILS AND SECTIONS			
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR: TOWN OF MONTAGUE, 1 AVENUE A, TURNER FALLS, MASSACHUSETTS		
PROJ MGR: RAD DESIGNED BY: RAD DATE: NOVEMBER 20, 2020	REVIEWED BY: TRG DRAWN BY: SAB PROJECT NO. 34676.01	CHECKED BY: MS SCALE: AS NOTED REVISION NO.	SHEET 10 SHEET NO. 10 OF 10



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Project Notes

Rainfall events imported from "Atlas-14-Rain.txt" for 441 MA Franklin

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Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-Year	Type III 24-hr		Default	24.00	1	3.02	2
2	10-Year	Type III 24-hr		Default	24.00	1	4.33	2
3	25-Year	Type III 24-hr		Default	24.00	1	5.32	2
4	100-Year	Type III 24-hr		Default	24.00	1	7.29	2

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.949	39	>75% Grass cover, Good, HSG A (1S)
0.170	61	>75% Grass cover, Good, HSG B (1S)
5.721	98	Landfill Cap, HSG A (1S)
0.680	98	Landfill cap, HSG A (3S)
7.519	90	TOTAL AREA

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
7.349	HSG A	1S, 3S
0.170	HSG B	1S
0.000	HSG C	
0.000	HSG D	
0.000	Other	
7.519		TOTAL AREA

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.949	0.170	0.000	0.000	0.000	1.119	>75% Grass cover, Good	1S
5.721	0.000	0.000	0.000	0.000	5.721	Landfill Cap	1S
0.680	0.000	0.000	0.000	0.000	0.680	Landfill cap	3S
7.349	0.170	0.000	0.000	0.000	7.519	TOTAL AREA	

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Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	2P	223.00	219.50	50.0	0.0700	0.013	6.0	0.0	0.0
2	4P	214.00	210.00	48.0	0.0833	0.013	24.0	0.0	0.0

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Montague Burn Dump SW-45
Type III 24-hr 2-Year Rainfall=3.02"

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Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Landfill to first toe Runoff Area=297,933 sf 83.64% Impervious Runoff Depth=1.92"
Flow Length=802' Tc=12.9 min CN=89 Runoff=12.29 cfs 1.093 af

Subcatchment 3S: Landfill below toe Runoff Area=29,600 sf 100.00% Impervious Runoff Depth=2.79"
Flow Length=37' Slope=0.3300 '/' Tc=2.2 min CN=98 Runoff=2.28 cfs 0.158 af

Pond 2P: Forebay Peak Elev=225.99' Storage=0.298 af Inflow=12.29 cfs 1.093 af
Outflow=4.84 cfs 1.055 af

Pond 4P: Lined Pond Peak Elev=216.19' Storage=5,564 cf Inflow=5.27 cfs 1.213 af
Outflow=4.55 cfs 1.213 af

Link 5L: Wetland Inflow=4.55 cfs 1.213 af
Primary=4.55 cfs 1.213 af

Total Runoff Area = 7.519 ac Runoff Volume = 1.251 af Average Runoff Depth = 2.00"
14.88% Pervious = 1.119 ac 85.12% Impervious = 6.400 ac

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Montague Burn Dump SW-45
 Type III 24-hr 2-Year Rainfall=3.02"

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Summary for Subcatchment 1S: Landfill to first toe drain

Runoff = 12.29 cfs @ 12.17 hrs, Volume= 1.093 af, Depth= 1.92"

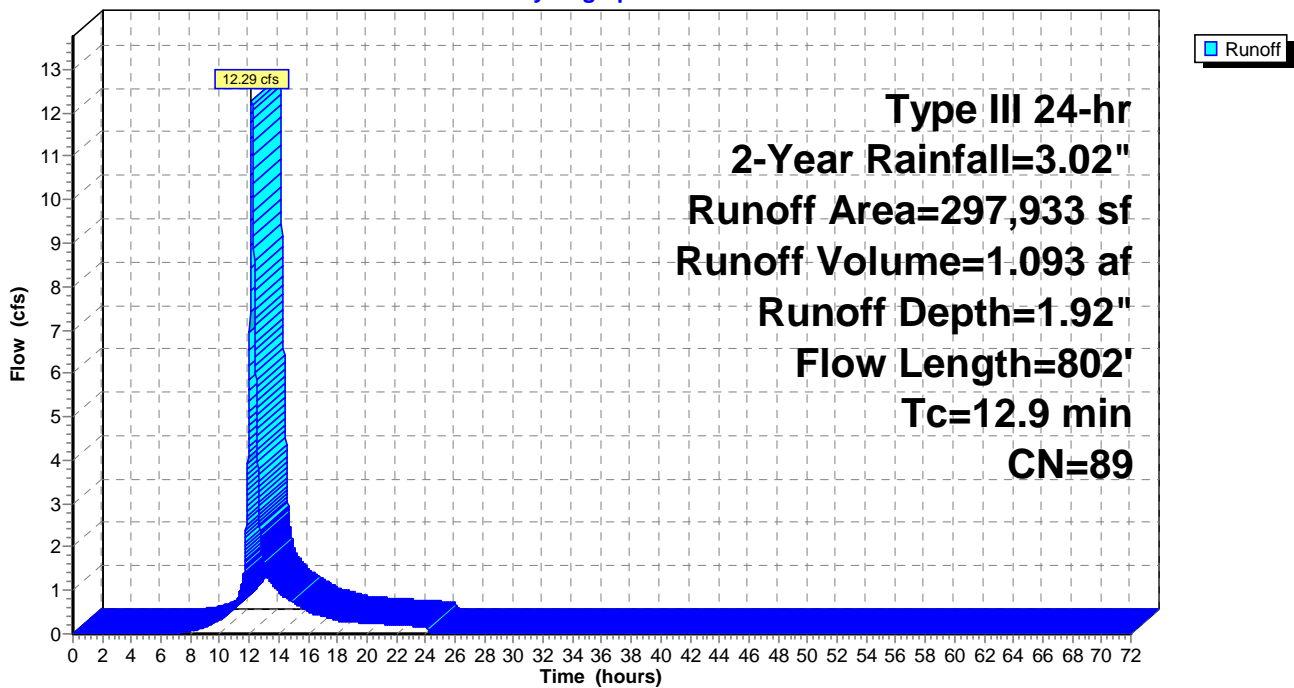
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 2-Year Rainfall=3.02"

Area (sf)	CN	Description
41,357	39	>75% Grass cover, Good, HSG A
7,389	61	>75% Grass cover, Good, HSG B
* 249,187	98	Landfill Cap, HSG A
297,933	89	Weighted Average
48,746		16.36% Pervious Area
249,187		83.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.9	802		1.04		Direct Entry, From Tighe and Bond

Subcatchment 1S: Landfill to first toe drain

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Montague Burn Dump SW-45
Type III 24-hr 2-Year Rainfall=3.02"

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Summary for Subcatchment 3S: Landfill below toe drain and basin

Runoff = 2.28 cfs @ 12.03 hrs, Volume= 0.158 af, Depth= 2.79"

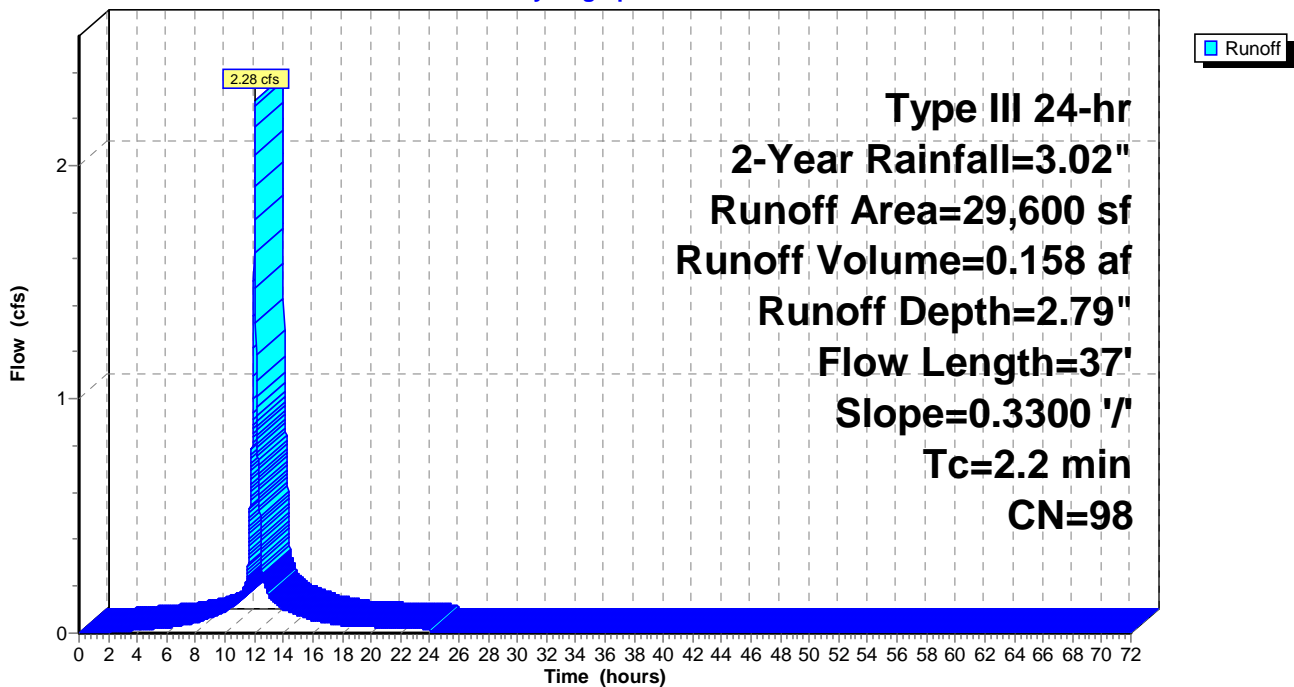
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.02"

Area (sf)	CN	Description
* 29,600	98	Landfill cap, HSG A
29,600		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.2	37	0.3300	0.28		Sheet Flow, sheet flow Grass: Dense n= 0.240 P2= 2.96"

Subcatchment 3S: Landfill below toe drain and basin

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Montague Burn Dump SW-45
Type III 24-hr 2-Year Rainfall=3.02"

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Summary for Pond 2P: Forebay

Inflow Area = 6.840 ac, 83.64% Impervious, Inflow Depth = 1.92" for 2-Year event
Inflow = 12.29 cfs @ 12.17 hrs, Volume= 1.093 af
Outflow = 4.84 cfs @ 12.52 hrs, Volume= 1.055 af, Atten= 61%, Lag= 20.9 min
Primary = 4.84 cfs @ 12.52 hrs, Volume= 1.055 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 225.99' @ 12.52 hrs Surf.Area= 0.415 ac Storage= 0.298 af

Plug-Flow detention time= 54.8 min calculated for 1.055 af (97% of inflow)
Center-of-Mass det. time= 35.1 min (854.9 - 819.8)

Volume	Invert	Avail.Storage	Storage Description
#1	222.00'	0.169 af	10.00'W x 380.00'L x 3.00'H Engineered Planting Mix Z=3.0 0.511 af Overall x 33.0% Voids
#2	225.00'	0.165 af	12.00'W x 380.00'L x 1.20'H Free Board Z=3.0
		0.334 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	223.00'	6.0" Round 6-inch HDPE X 4.00 L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 223.00' / 219.50' S= 0.0700 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Device 1	222.00'	8.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 218.00'
#3	Primary	226.00'	380.0' long x 1.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=4.84 cfs @ 12.52 hrs HW=225.99' (Free Discharge)

- 1=6-inch HDPE (Passes 4.84 cfs of 4.94 cfs potential flow)
- 2=Exfiltration (Controls 4.84 cfs)
- 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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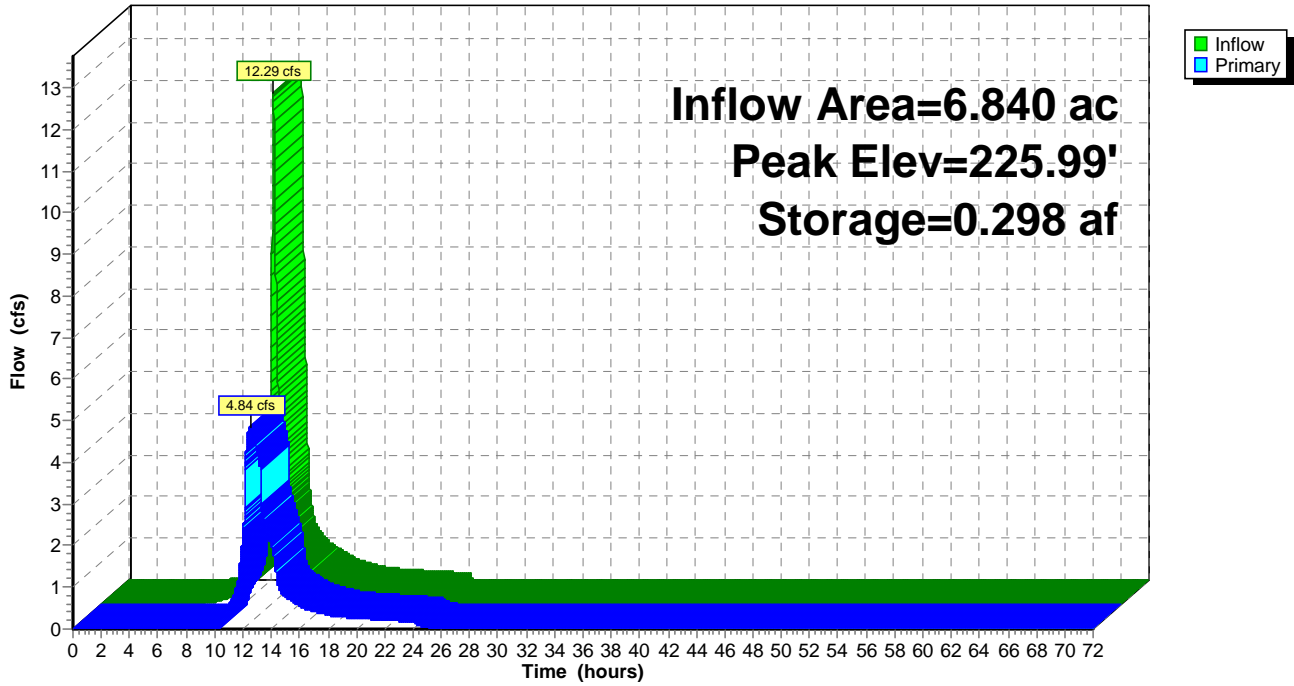
Montague Burn Dump SW-45
Type III 24-hr 2-Year Rainfall=3.02"

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Pond 2P: Forebay

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Montague Burn Dump SW-45
Type III 24-hr 2-Year Rainfall=3.02"

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Summary for Pond 4P: Lined Pond

Inflow Area = 7.519 ac, 85.12% Impervious, Inflow Depth = 1.94" for 2-Year event
 Inflow = 5.27 cfs @ 12.35 hrs, Volume= 1.213 af
 Outflow = 4.55 cfs @ 12.93 hrs, Volume= 1.213 af, Atten= 14%, Lag= 34.6 min
 Primary = 4.55 cfs @ 12.93 hrs, Volume= 1.213 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 216.19' @ 12.93 hrs Surf.Area= 7,710 sf Storage= 5,564 cf

Plug-Flow detention time= 23.2 min calculated for 1.213 af (100% of inflow)
 Center-of-Mass det. time= 23.2 min (865.0 - 841.8)

Volume	Invert	Avail.Storage	Storage Description			
#1	214.00'	50,390 cf	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
214.00	7,710	366.8	0.0	0	0	7,710
217.00	7,710	366.8	33.0	7,633	7,633	8,810
218.00	13,909	494.0	100.0	10,658	18,291	17,534
219.00	16,023	531.5	100.0	14,954	33,245	20,637
220.00	18,293	571.4	100.0	17,145	50,390	24,182

Device	Routing	Invert	Outlet Devices
#1	Primary	219.50'	8.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#2	Primary	214.00'	24.0" Round Culvert L= 48.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 214.00' / 210.00' S= 0.0833 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#3	Device 2	214.00'	8.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 213.00'
#4	Device 2	217.50'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Device 2	219.00'	1.5" x 1.5" Horiz. Orifice/Grate X 10.00 columns X 10 rows C= 0.600 in 24.0" x 24.0" Grate (39% open area) Limited to weir flow at low heads

Primary OutFlow Max=4.55 cfs @ 12.93 hrs HW=216.19' (Free Discharge)

- 1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)
- 2=Culvert (Passes 4.55 cfs of 13.01 cfs potential flow)
- 3=Exfiltration (Controls 4.55 cfs)
- 4=Orifice/Grate (Controls 0.00 cfs)
- 5=Orifice/Grate (Controls 0.00 cfs)

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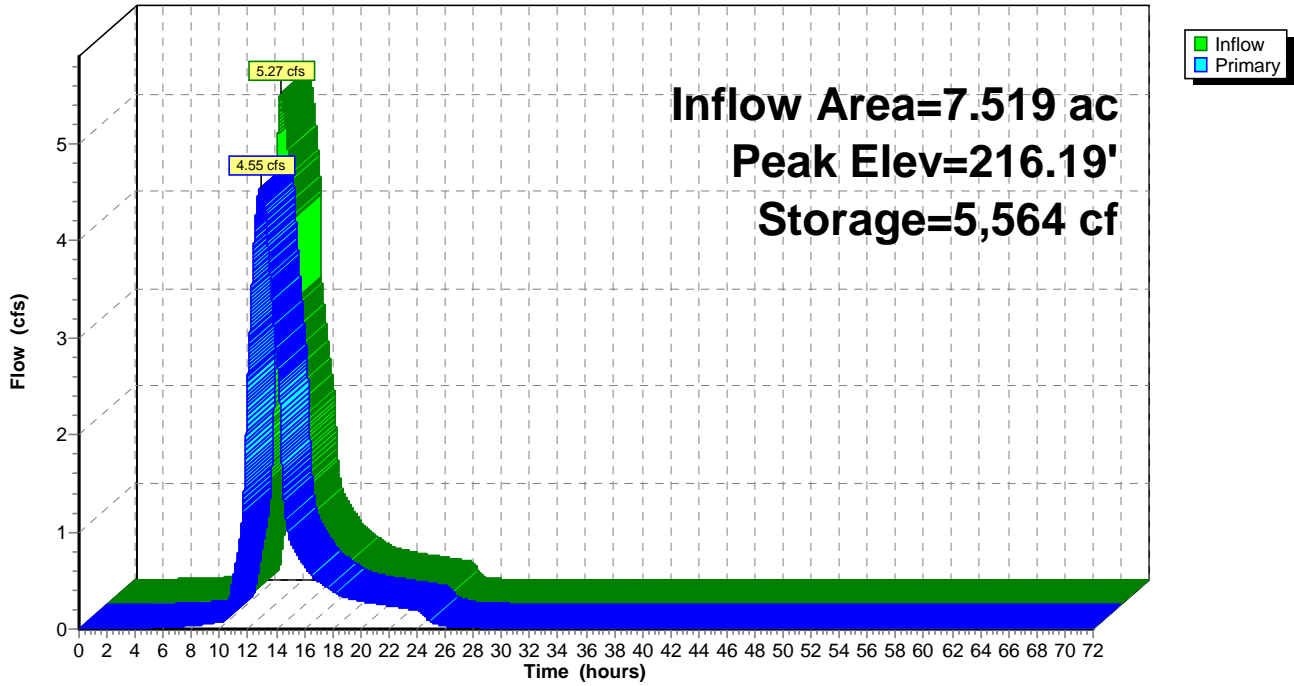
Montague Burn Dump SW-45
Type III 24-hr 2-Year Rainfall=3.02"

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Pond 4P: Lined Pond

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Type III 24-hr 2-Year Rainfall=3.02"

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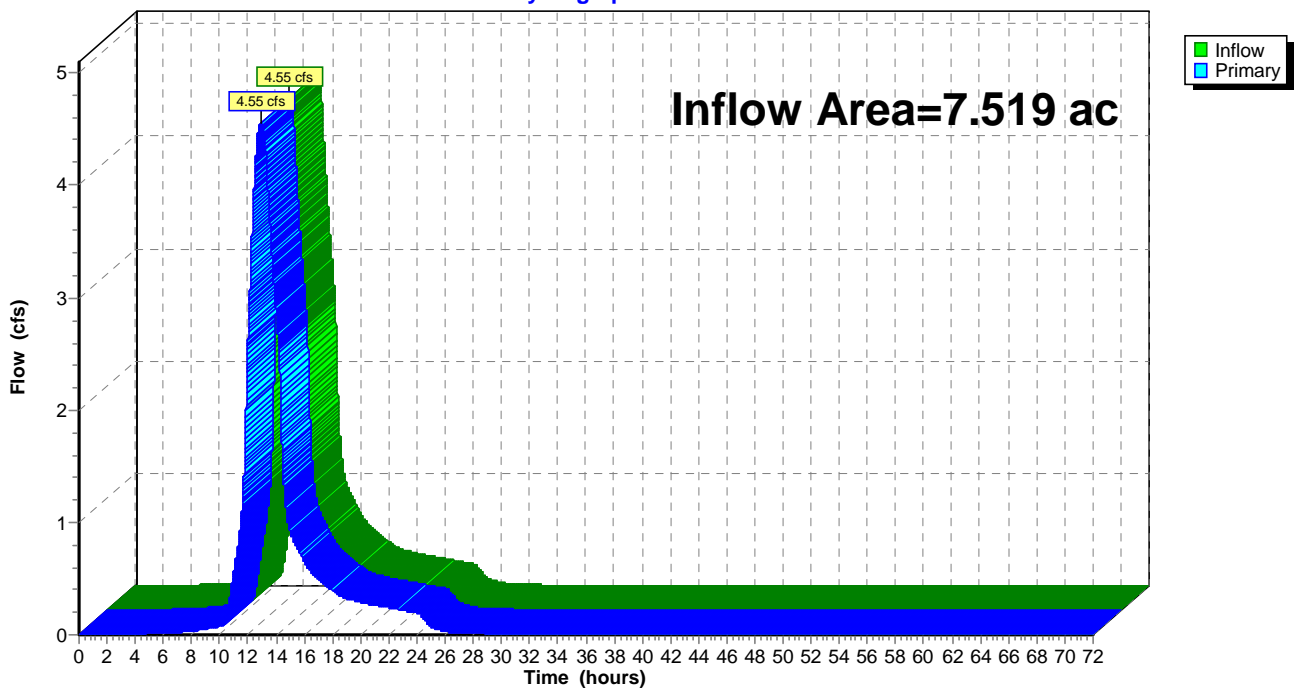
Summary for Link 5L: Wetland

Inflow Area = 7.519 ac, 85.12% Impervious, Inflow Depth = 1.94" for 2-Year event
Inflow = 4.55 cfs @ 12.93 hrs, Volume= 1.213 af
Primary = 4.55 cfs @ 12.93 hrs, Volume= 1.213 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link 5L: Wetland

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Montague Burn Dump SW-45
Type III 24-hr 10-Year Rainfall=4.33"

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Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Landfill to first toe Runoff Area=297,933 sf 83.64% Impervious Runoff Depth=3.13"
Flow Length=802' Tc=12.9 min CN=89 Runoff=19.80 cfs 1.786 af

Subcatchment 3S: Landfill below toe Runoff Area=29,600 sf 100.00% Impervious Runoff Depth=4.09"
Flow Length=37' Slope=0.3300 '/' Tc=2.2 min CN=98 Runoff=3.29 cfs 0.232 af

Pond 2P: Forebay Peak Elev=226.06' Storage=0.310 af Inflow=19.80 cfs 1.786 af
Outflow=19.67 cfs 1.749 af

Pond 4P: Lined Pond Peak Elev=217.71' Storage=14,515 cf Inflow=20.93 cfs 1.980 af
Outflow=7.67 cfs 1.980 af

Link 5L: Wetland Inflow=7.67 cfs 1.980 af
Primary=7.67 cfs 1.980 af

Total Runoff Area = 7.519 ac Runoff Volume = 2.018 af Average Runoff Depth = 3.22"
14.88% Pervious = 1.119 ac 85.12% Impervious = 6.400 ac

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Montague Burn Dump SW-45
Type III 24-hr 10-Year Rainfall=4.33"

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Summary for Subcatchment 1S: Landfill to first toe drain

Runoff = 19.80 cfs @ 12.17 hrs, Volume= 1.786 af, Depth= 3.13"

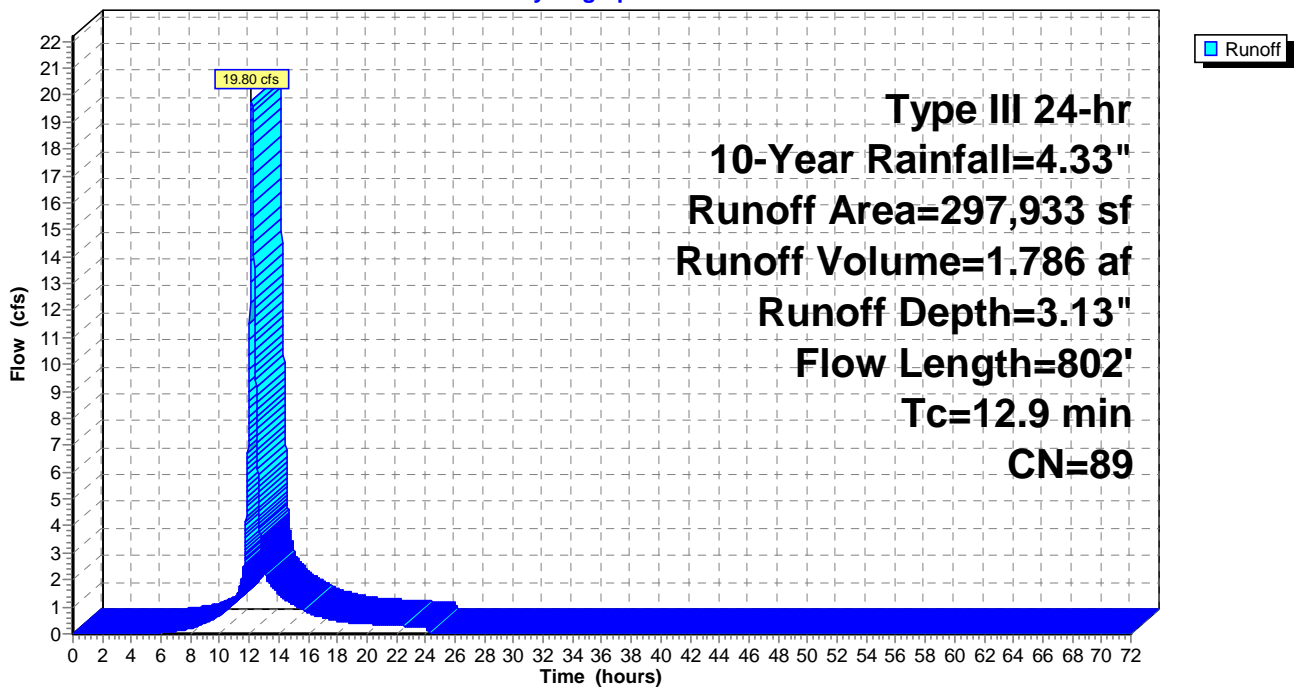
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.33"

Area (sf)	CN	Description
41,357	39	>75% Grass cover, Good, HSG A
7,389	61	>75% Grass cover, Good, HSG B
* 249,187	98	Landfill Cap, HSG A
297,933	89	Weighted Average
48,746		16.36% Pervious Area
249,187		83.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.9	802		1.04		Direct Entry, From Tighe and Bond

Subcatchment 1S: Landfill to first toe drain

Hydrograph



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Summary for Subcatchment 3S: Landfill below toe drain and basin

Runoff = 3.29 cfs @ 12.03 hrs, Volume= 0.232 af, Depth= 4.09"

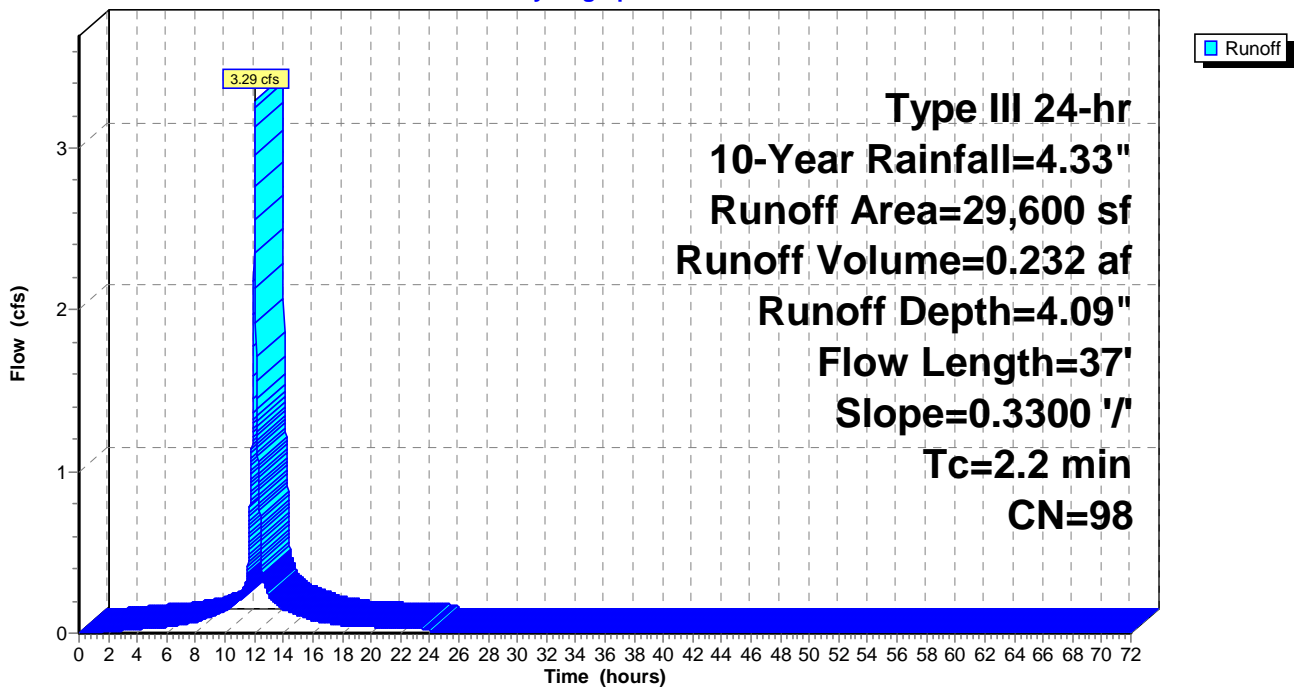
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 10-Year Rainfall=4.33"

Area (sf)	CN	Description
* 29,600	98	Landfill cap, HSG A
29,600		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.2	37	0.3300	0.28		Sheet Flow, sheet flow Grass: Dense n= 0.240 P2= 2.96"

Subcatchment 3S: Landfill below toe drain and basin

Hydrograph



basin outfall design

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Summary for Pond 2P: Forebay

Inflow Area = 6.840 ac, 83.64% Impervious, Inflow Depth = 3.13" for 10-Year event
Inflow = 19.80 cfs @ 12.17 hrs, Volume= 1.786 af
Outflow = 19.67 cfs @ 12.19 hrs, Volume= 1.749 af, Atten= 1%, Lag= 0.9 min
Primary = 19.67 cfs @ 12.19 hrs, Volume= 1.749 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 226.06' @ 12.19 hrs Surf.Area= 0.419 ac Storage= 0.310 af

Plug-Flow detention time= 41.6 min calculated for 1.749 af (98% of inflow)
Center-of-Mass det. time= 28.7 min (834.6 - 805.9)

Volume	Invert	Avail.Storage	Storage Description
#1	222.00'	0.169 af	10.00'W x 380.00'L x 3.00'H Engineered Planting Mix Z=3.0 0.511 af Overall x 33.0% Voids
#2	225.00'	0.165 af	12.00'W x 380.00'L x 1.20'H Free Board Z=3.0
		0.334 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	223.00'	6.0" Round 6-inch HDPE X 4.00 L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 223.00' / 219.50' S= 0.0700 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Device 1	222.00'	8.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 218.00'
#3	Primary	226.00'	380.0' long x 1.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=18.95 cfs @ 12.19 hrs HW=226.06' (Free Discharge)

- 1=6-inch HDPE (Passes 4.91 cfs of 5.00 cfs potential flow)
- 2=Exfiltration (Controls 4.91 cfs)
- 3=Broad-Crested Rectangular Weir (Weir Controls 14.04 cfs @ 0.64 fps)

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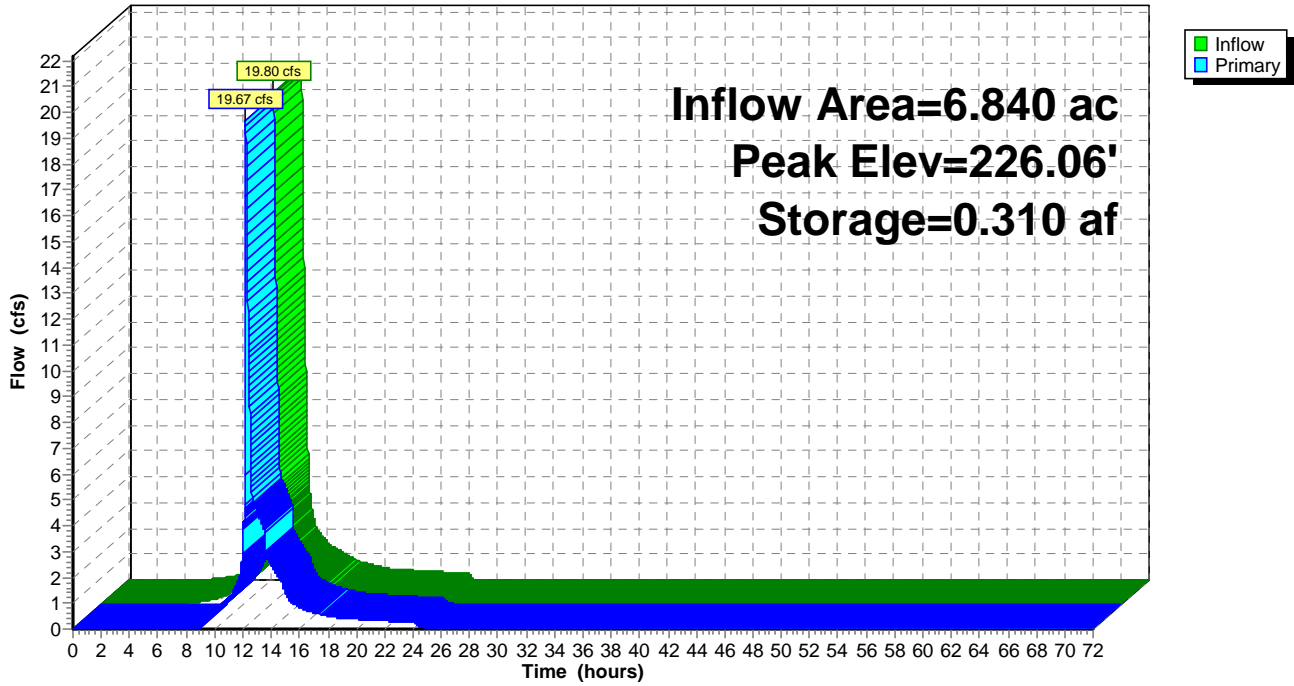
Montague Burn Dump SW-45
Type III 24-hr 10-Year Rainfall=4.33"

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Pond 2P: Forebay

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Type III 24-hr 10-Year Rainfall=4.33"

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Summary for Pond 4P: Lined Pond

Inflow Area = 7.519 ac, 85.12% Impervious, Inflow Depth = 3.16" for 10-Year event
 Inflow = 20.93 cfs @ 12.19 hrs, Volume= 1.980 af
 Outflow = 7.67 cfs @ 12.54 hrs, Volume= 1.980 af, Atten= 63%, Lag= 21.3 min
 Primary = 7.67 cfs @ 12.54 hrs, Volume= 1.980 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 217.71' @ 12.54 hrs Surf.Area= 11,906 sf Storage= 14,515 cf

Plug-Flow detention time= 24.6 min calculated for 1.980 af (100% of inflow)
 Center-of-Mass det. time= 24.6 min (848.9 - 824.3)

Volume	Invert	Avail.Storage	Storage Description			
#1	214.00'	50,390 cf	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
214.00	7,710	366.8	0.0	0	0	7,710
217.00	7,710	366.8	33.0	7,633	7,633	8,810
218.00	13,909	494.0	100.0	10,658	18,291	17,534
219.00	16,023	531.5	100.0	14,954	33,245	20,637
220.00	18,293	571.4	100.0	17,145	50,390	24,182

Device	Routing	Invert	Outlet Devices
#1	Primary	219.50'	8.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#2	Primary	214.00'	24.0" Round Culvert L= 48.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 214.00' / 210.00' S= 0.0833 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#3	Device 2	214.00'	8.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 213.00'
#4	Device 2	217.50'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Device 2	219.00'	1.5" x 1.5" Horiz. Orifice/Grate X 10.00 columns X 10 rows C= 0.600 in 24.0" x 24.0" Grate (39% open area) Limited to weir flow at low heads

Primary OutFlow Max=7.67 cfs @ 12.54 hrs HW=217.71' (Free Discharge)

- 1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)
- 2=Culvert (Passes 7.67 cfs of 19.65 cfs potential flow)
- 3=Exfiltration (Controls 7.55 cfs)
- 4=Orifice/Grate (Orifice Controls 0.12 cfs @ 1.55 fps)
- 5=Orifice/Grate (Controls 0.00 cfs)

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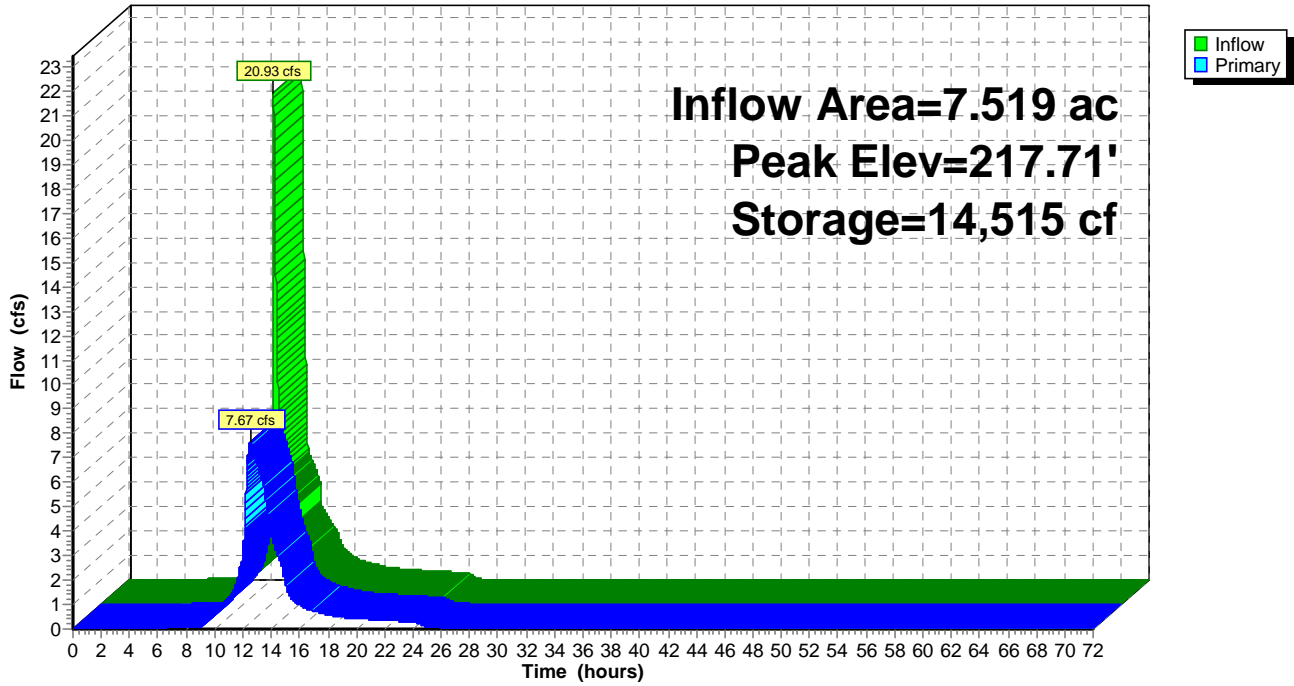
Montague Burn Dump SW-45
Type III 24-hr 10-Year Rainfall=4.33"

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Pond 4P: Lined Pond

Hydrograph



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Type III 24-hr 10-Year Rainfall=4.33"

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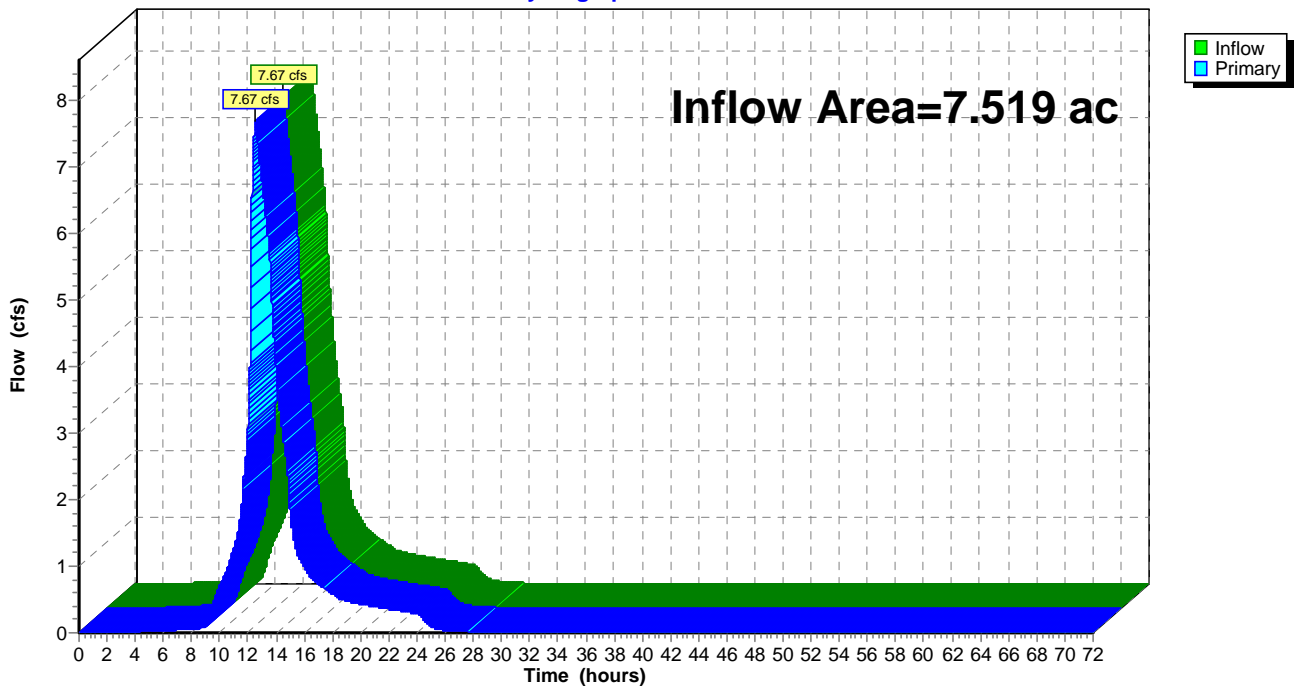
Summary for Link 5L: Wetland

Inflow Area = 7.519 ac, 85.12% Impervious, Inflow Depth = 3.16" for 10-Year event
Inflow = 7.67 cfs @ 12.54 hrs, Volume= 1.980 af
Primary = 7.67 cfs @ 12.54 hrs, Volume= 1.980 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link 5L: Wetland

Hydrograph



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Type III 24-hr 25-Year Rainfall=5.32"

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Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Landfill to first toe Runoff Area=297,933 sf 83.64% Impervious Runoff Depth=4.08"
Flow Length=802' Tc=12.9 min CN=89 Runoff=25.48 cfs 2.325 af

Subcatchment 3S: Landfill below toe Runoff Area=29,600 sf 100.00% Impervious Runoff Depth=5.08"
Flow Length=37' Slope=0.3300 '/' Tc=2.2 min CN=98 Runoff=4.06 cfs 0.288 af

Pond 2P: Forebay Peak Elev=226.07' Storage=0.312 af Inflow=25.48 cfs 2.325 af
Outflow=25.44 cfs 2.287 af

Pond 4P: Lined Pond Peak Elev=218.29' Storage=22,391 cf Inflow=27.02 cfs 2.575 af
Outflow=9.70 cfs 2.575 af

Link 5L: Wetland Inflow=9.70 cfs 2.575 af
Primary=9.70 cfs 2.575 af

Total Runoff Area = 7.519 ac Runoff Volume = 2.613 af Average Runoff Depth = 4.17"
14.88% Pervious = 1.119 ac 85.12% Impervious = 6.400 ac

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 Type III 24-hr 25-Year Rainfall=5.32"

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Summary for Subcatchment 1S: Landfill to first toe drain

Runoff = 25.48 cfs @ 12.17 hrs, Volume= 2.325 af, Depth= 4.08"

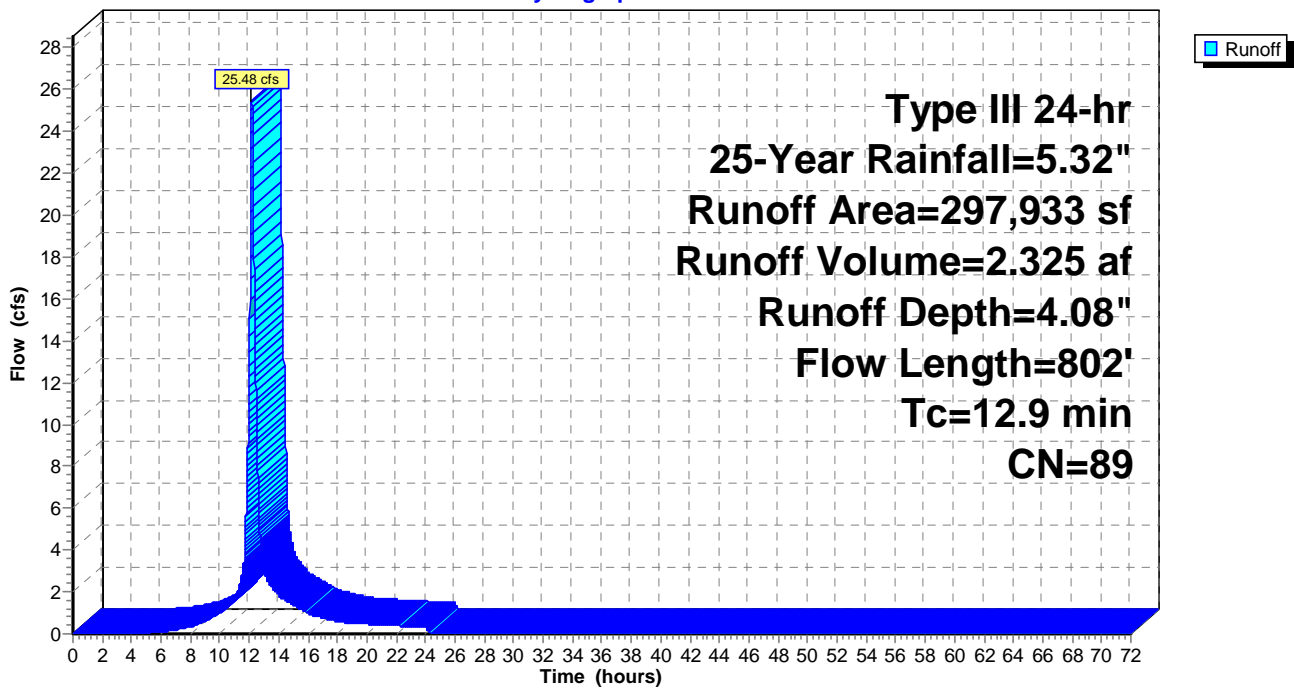
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-Year Rainfall=5.32"

Area (sf)	CN	Description
41,357	39	>75% Grass cover, Good, HSG A
7,389	61	>75% Grass cover, Good, HSG B
* 249,187	98	Landfill Cap, HSG A
297,933	89	Weighted Average
48,746		16.36% Pervious Area
249,187		83.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.9	802		1.04		Direct Entry, From Tighe and Bond

Subcatchment 1S: Landfill to first toe drain

Hydrograph



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Type III 24-hr 25-Year Rainfall=5.32"

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Summary for Subcatchment 3S: Landfill below toe drain and basin

Runoff = 4.06 cfs @ 12.03 hrs, Volume= 0.288 af, Depth= 5.08"

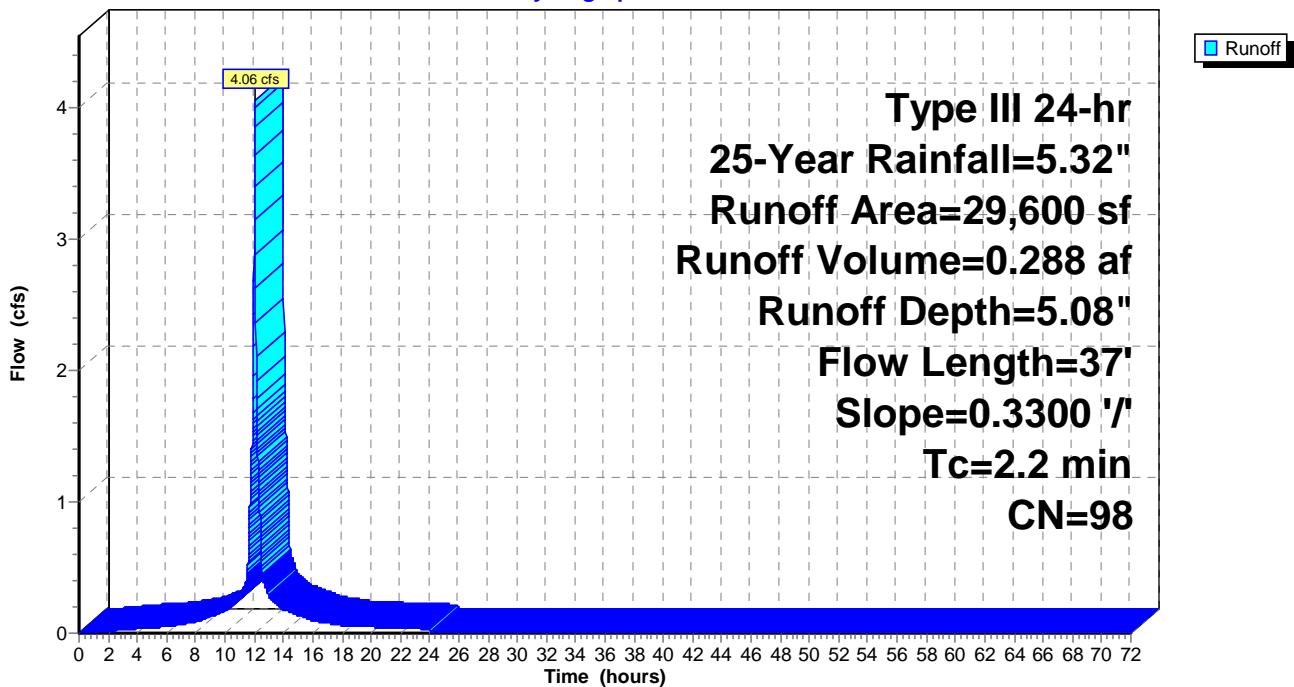
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.32"

Area (sf)	CN	Description
* 29,600	98	Landfill cap, HSG A
29,600		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.2	37	0.3300	0.28		Sheet Flow, sheet flow Grass: Dense n= 0.240 P2= 2.96"

Subcatchment 3S: Landfill below toe drain and basin

Hydrograph



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Type III 24-hr 25-Year Rainfall=5.32"

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Summary for Pond 2P: Forebay

Inflow Area = 6.840 ac, 83.64% Impervious, Inflow Depth = 4.08" for 25-Year event
 Inflow = 25.48 cfs @ 12.17 hrs, Volume= 2.325 af
 Outflow = 25.44 cfs @ 12.18 hrs, Volume= 2.287 af, Atten= 0%, Lag= 0.4 min
 Primary = 25.44 cfs @ 12.18 hrs, Volume= 2.287 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 226.07' @ 12.18 hrs Surf.Area= 0.419 ac Storage= 0.312 af

Plug-Flow detention time= 35.9 min calculated for 2.287 af (98% of inflow)
 Center-of-Mass det. time= 25.9 min (824.6 - 798.6)

Volume	Invert	Avail.Storage	Storage Description
#1	222.00'	0.169 af	10.00'W x 380.00'L x 3.00'H Engineered Planting Mix Z=3.0 0.511 af Overall x 33.0% Voids
#2	225.00'	0.165 af	12.00'W x 380.00'L x 1.20'H Free Board Z=3.0
		0.334 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	223.00'	6.0" Round 6-inch HDPE X 4.00 L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 223.00' / 219.50' S= 0.0700 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Device 1	222.00'	8.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 218.00'
#3	Primary	226.00'	380.0' long x 1.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=25.41 cfs @ 12.18 hrs HW=226.07' (Free Discharge)

- 1=6-inch HDPE (Passes 4.93 cfs of 5.02 cfs potential flow)
- 2=Exfiltration (Controls 4.93 cfs)
- 3=Broad-Crested Rectangular Weir (Weir Controls 20.47 cfs @ 0.73 fps)

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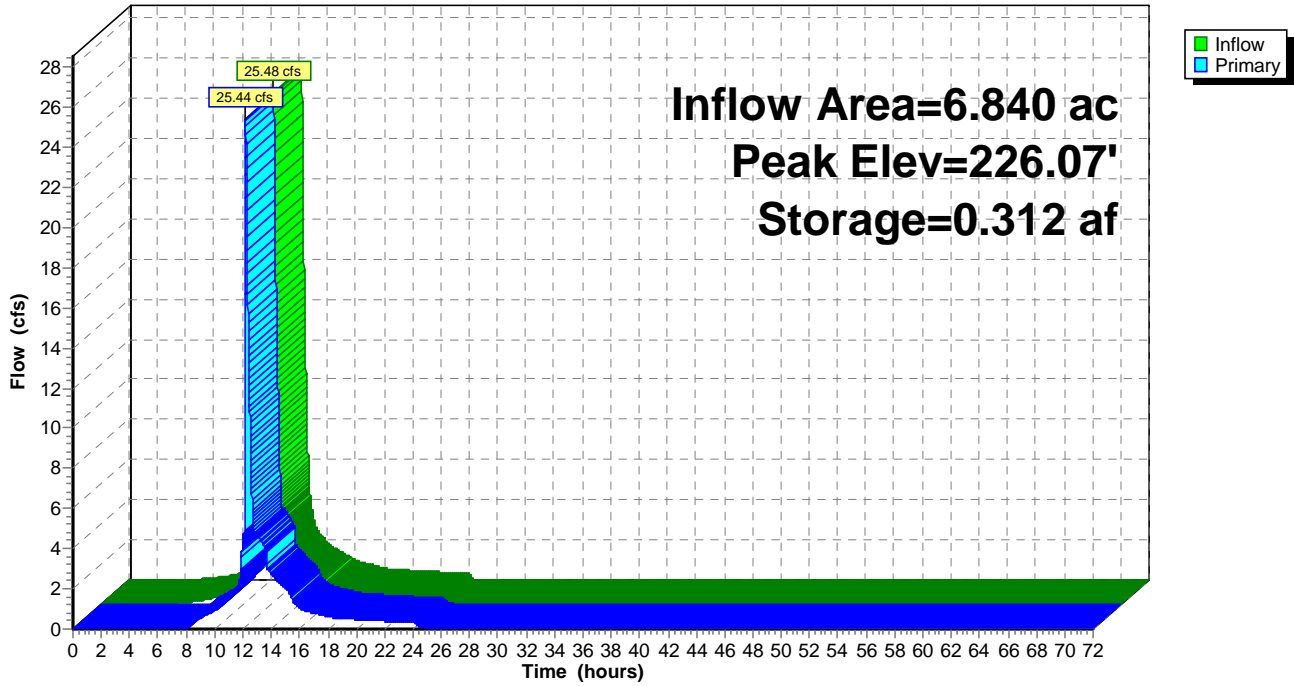
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Type III 24-hr 25-Year Rainfall=5.32"

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Pond 2P: Forebay

Hydrograph



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Type III 24-hr 25-Year Rainfall=5.32"

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Summary for Pond 4P: Lined Pond

Inflow Area = 7.519 ac, 85.12% Impervious, Inflow Depth = 4.11" for 25-Year event
 Inflow = 27.02 cfs @ 12.18 hrs, Volume= 2.575 af
 Outflow = 9.70 cfs @ 12.54 hrs, Volume= 2.575 af, Atten= 64%, Lag= 22.0 min
 Primary = 9.70 cfs @ 12.54 hrs, Volume= 2.575 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 218.29' @ 12.54 hrs Surf.Area= 14,504 sf Storage= 22,391 cf

Plug-Flow detention time= 26.5 min calculated for 2.575 af (100% of inflow)
 Center-of-Mass det. time= 26.5 min (842.0 - 815.5)

Volume	Invert	Avail.Storage	Storage Description			
#1	214.00'	50,390 cf	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
214.00	7,710	366.8	0.0	0	0	7,710
217.00	7,710	366.8	33.0	7,633	7,633	8,810
218.00	13,909	494.0	100.0	10,658	18,291	17,534
219.00	16,023	531.5	100.0	14,954	33,245	20,637
220.00	18,293	571.4	100.0	17,145	50,390	24,182

Device	Routing	Invert	Outlet Devices
#1	Primary	219.50'	8.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#2	Primary	214.00'	24.0" Round Culvert L= 48.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 214.00' / 210.00' S= 0.0833 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#3	Device 2	214.00'	8.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 213.00'
#4	Device 2	217.50'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Device 2	219.00'	1.5" x 1.5" Horiz. Orifice/Grate X 10.00 columns X 10 rows C= 0.600 in 24.0" x 24.0" Grate (39% open area) Limited to weir flow at low heads

Primary OutFlow Max=9.70 cfs @ 12.54 hrs HW=218.29' (Free Discharge)

- 1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)
- 2=Culvert (Passes 9.70 cfs of 21.66 cfs potential flow)
- 3=Exfiltration (Controls 9.00 cfs)
- 4=Orifice/Grate (Orifice Controls 0.69 cfs @ 3.53 fps)
- 5=Orifice/Grate (Controls 0.00 cfs)

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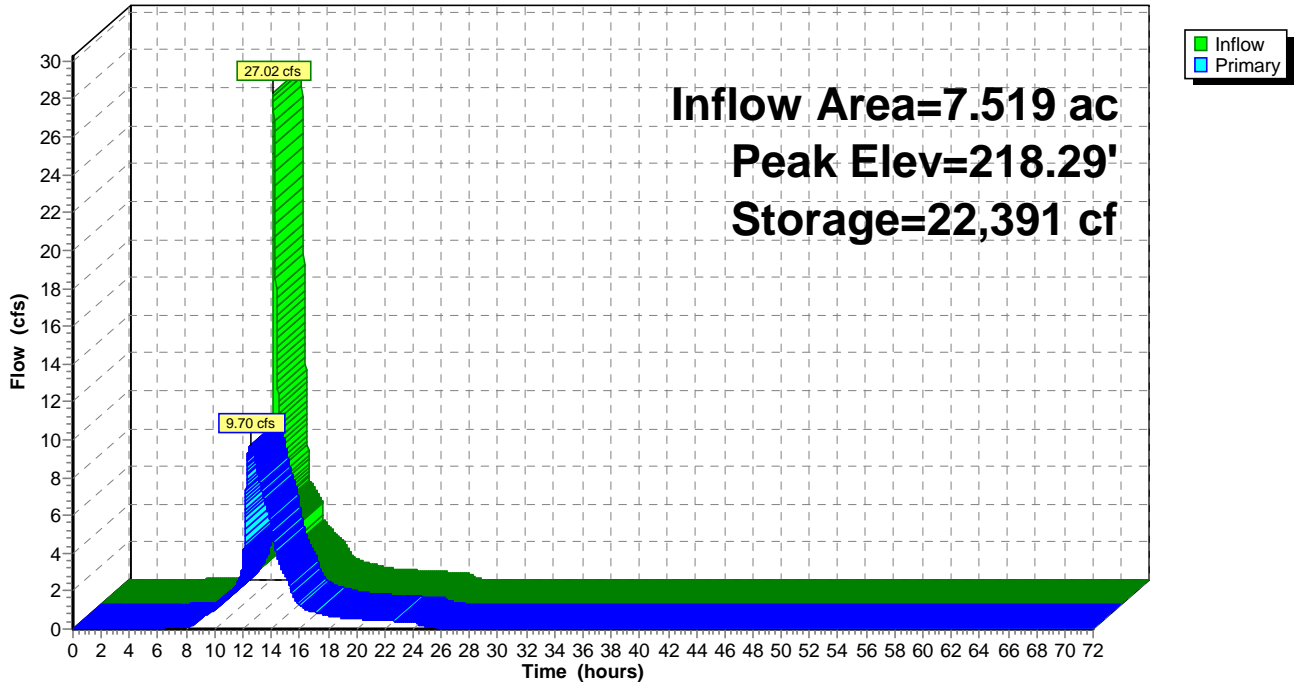
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Pond 4P: Lined Pond

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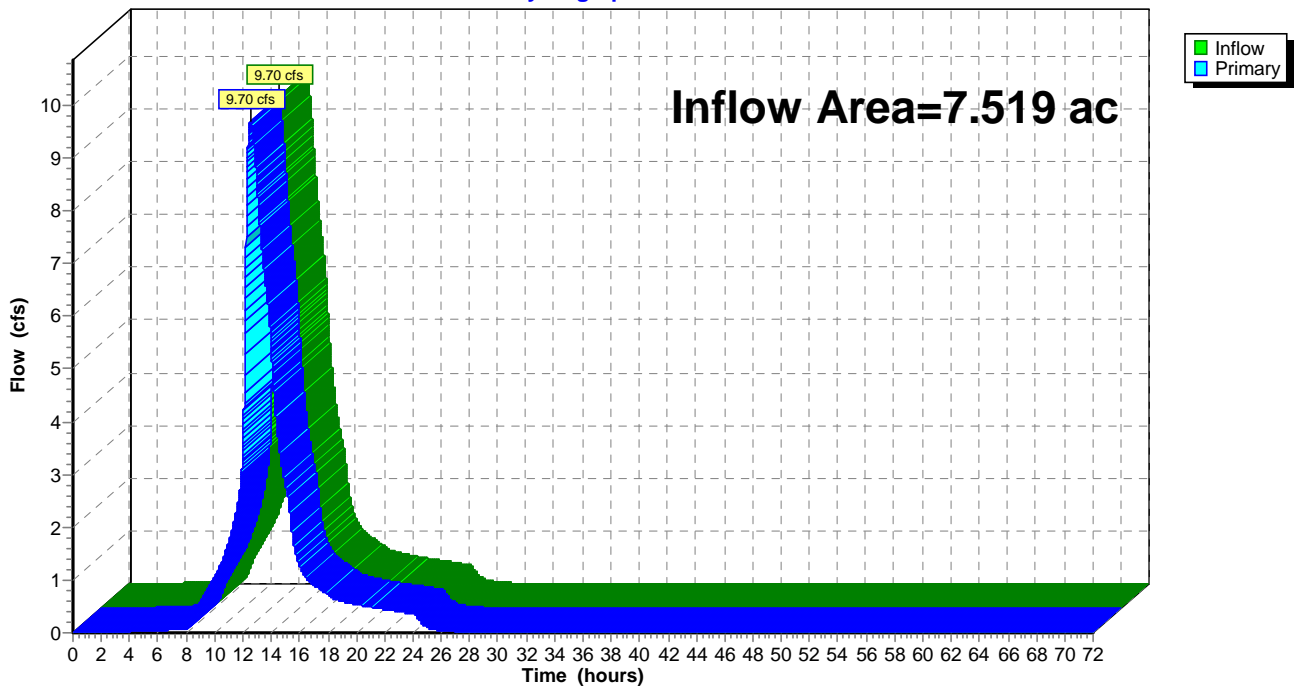
Summary for Link 5L: Wetland

Inflow Area = 7.519 ac, 85.12% Impervious, Inflow Depth = 4.11" for 25-Year event
Inflow = 9.70 cfs @ 12.54 hrs, Volume= 2.575 af
Primary = 9.70 cfs @ 12.54 hrs, Volume= 2.575 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link 5L: Wetland

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Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Landfill to first toe Runoff Area=297,933 sf 83.64% Impervious Runoff Depth=5.99"
Flow Length=802' Tc=12.9 min CN=89 Runoff=36.71 cfs 3.415 af

Subcatchment 3S: Landfill below toe Runoff Area=29,600 sf 100.00% Impervious Runoff Depth=7.05"
Flow Length=37' Slope=0.3300 '/' Tc=2.2 min CN=98 Runoff=5.57 cfs 0.399 af

Pond 2P: Forebay Peak Elev=226.10' Storage=0.316 af Inflow=36.71 cfs 3.415 af
Outflow=36.66 cfs 3.377 af

Pond 4P: Lined Pond Peak Elev=219.29' Storage=38,036 cf Inflow=38.85 cfs 3.776 af
Outflow=16.31 cfs 3.776 af

Link 5L: Wetland Inflow=16.31 cfs 3.776 af
Primary=16.31 cfs 3.776 af

Total Runoff Area = 7.519 ac Runoff Volume = 3.814 af Average Runoff Depth = 6.09"
14.88% Pervious = 1.119 ac 85.12% Impervious = 6.400 ac

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Type III 24-hr 100-Year Rainfall=7.29"

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Summary for Subcatchment 1S: Landfill to first toe drain

Runoff = 36.71 cfs @ 12.17 hrs, Volume= 3.415 af, Depth= 5.99"

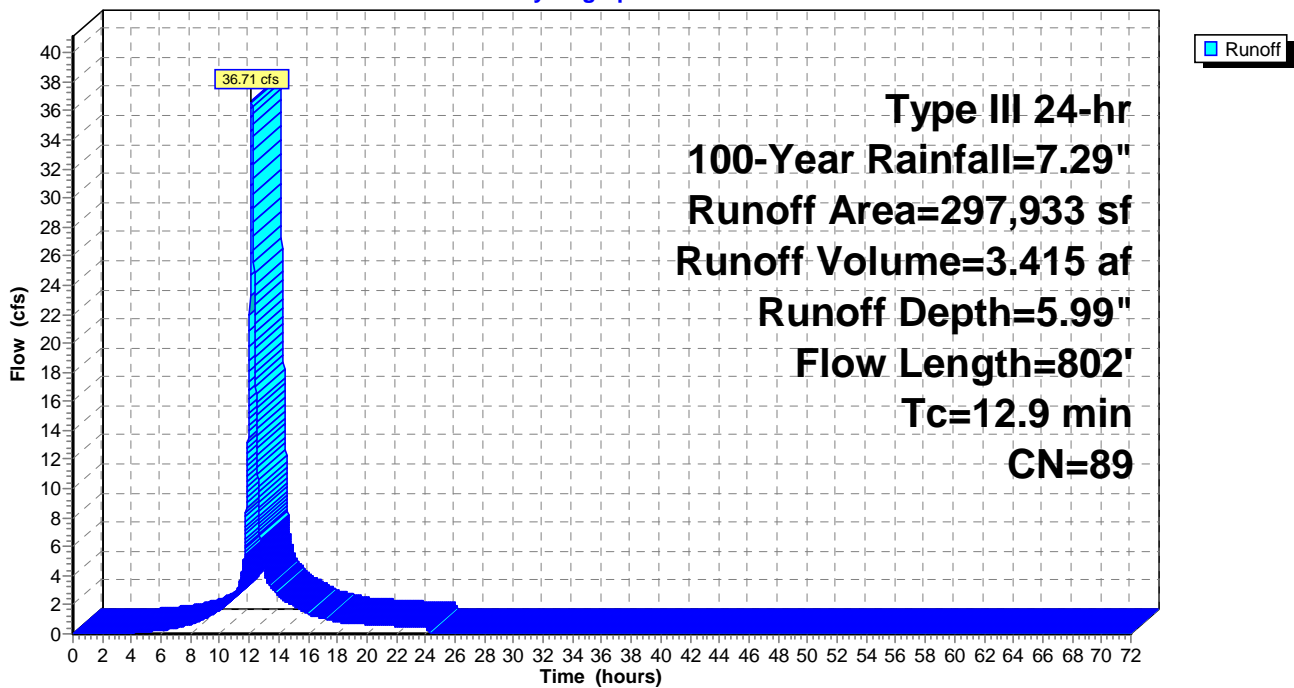
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=7.29"

Area (sf)	CN	Description
41,357	39	>75% Grass cover, Good, HSG A
7,389	61	>75% Grass cover, Good, HSG B
* 249,187	98	Landfill Cap, HSG A
297,933	89	Weighted Average
48,746		16.36% Pervious Area
249,187		83.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.9	802		1.04		Direct Entry, From Tighe and Bond

Subcatchment 1S: Landfill to first toe drain

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Summary for Subcatchment 3S: Landfill below toe drain and basin

Runoff = 5.57 cfs @ 12.03 hrs, Volume= 0.399 af, Depth= 7.05"

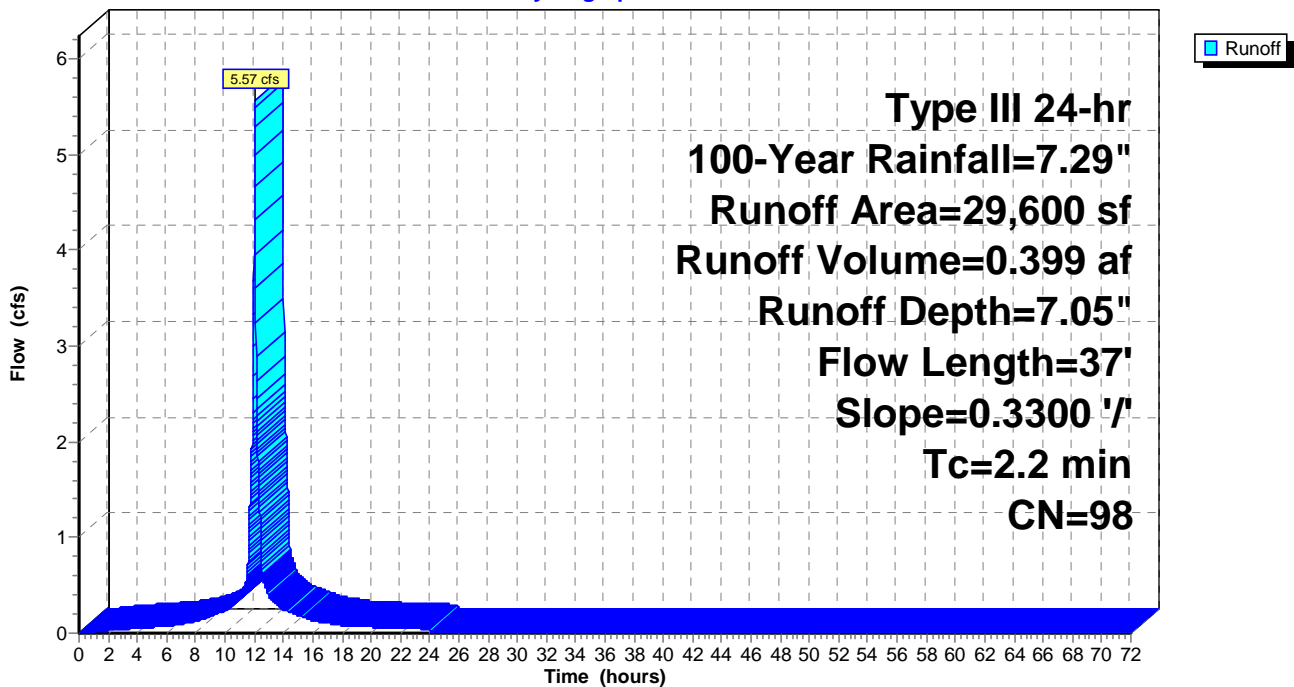
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=7.29"

Area (sf)	CN	Description
* 29,600	98	Landfill cap, HSG A
29,600		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.2	37	0.3300	0.28		Sheet Flow, sheet flow Grass: Dense n= 0.240 P2= 2.96"

Subcatchment 3S: Landfill below toe drain and basin

Hydrograph



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Summary for Pond 2P: Forebay

Inflow Area = 6.840 ac, 83.64% Impervious, Inflow Depth = 5.99" for 100-Year event
Inflow = 36.71 cfs @ 12.17 hrs, Volume= 3.415 af
Outflow = 36.66 cfs @ 12.17 hrs, Volume= 3.377 af, Atten= 0%, Lag= 0.3 min
Primary = 36.66 cfs @ 12.17 hrs, Volume= 3.377 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 226.10' @ 12.17 hrs Surf.Area= 0.421 ac Storage= 0.316 af

Plug-Flow detention time= 30.2 min calculated for 3.377 af (99% of inflow)
Center-of-Mass det. time= 23.0 min (811.3 - 788.3)

Volume	Invert	Avail.Storage	Storage Description
#1	222.00'	0.169 af	10.00'W x 380.00'L x 3.00'H Engineered Planting Mix Z=3.0 0.511 af Overall x 33.0% Voids
#2	225.00'	0.165 af	12.00'W x 380.00'L x 1.20'H Free Board Z=3.0
		0.334 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	223.00'	6.0" Round 6-inch HDPE X 4.00 L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 223.00' / 219.50' S= 0.0700 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Device 1	222.00'	8.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 218.00'
#3	Primary	226.00'	380.0' long x 1.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=36.09 cfs @ 12.17 hrs HW=226.10' (Free Discharge)

- 1=6-inch HDPE (Passes 4.96 cfs of 5.04 cfs potential flow)
- 2=Exfiltration (Controls 4.96 cfs)
- 3=Broad-Crested Rectangular Weir (Weir Controls 31.13 cfs @ 0.84 fps)

basin outfall design

Prepared by GZA

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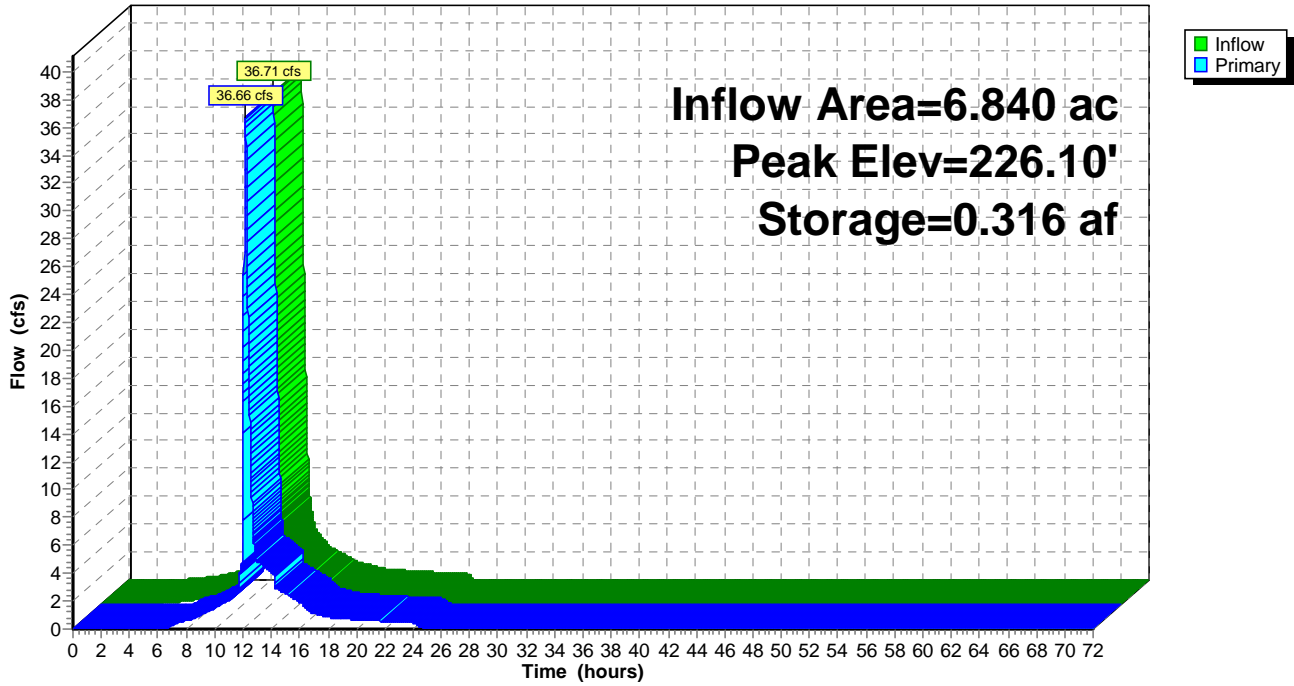
Montague Burn Dump SW-45
Type III 24-hr 100-Year Rainfall=7.29"

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Pond 2P: Forebay

Hydrograph



basin outfall design

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Montague Burn Dump SW-45
Type III 24-hr 100-Year Rainfall=7.29"

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Summary for Pond 4P: Lined Pond

Inflow Area = 7.519 ac, 85.12% Impervious, Inflow Depth = 6.03" for 100-Year event
 Inflow = 38.85 cfs @ 12.17 hrs, Volume= 3.776 af
 Outflow = 16.31 cfs @ 12.49 hrs, Volume= 3.776 af, Atten= 58%, Lag= 18.8 min
 Primary = 16.31 cfs @ 12.49 hrs, Volume= 3.776 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 219.29' @ 12.49 hrs Surf.Area= 16,673 sf Storage= 38,036 cf

Plug-Flow detention time= 29.8 min calculated for 3.776 af (100% of inflow)
 Center-of-Mass det. time= 29.8 min (833.5 - 803.7)

Volume	Invert	Avail.Storage	Storage Description			
#1	214.00'	50,390 cf	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
214.00	7,710	366.8	0.0	0	0	7,710
217.00	7,710	366.8	33.0	7,633	7,633	8,810
218.00	13,909	494.0	100.0	10,658	18,291	17,534
219.00	16,023	531.5	100.0	14,954	33,245	20,637
220.00	18,293	571.4	100.0	17,145	50,390	24,182

Device	Routing	Invert	Outlet Devices
#1	Primary	219.50'	8.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#2	Primary	214.00'	24.0" Round Culvert L= 48.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 214.00' / 210.00' S= 0.0833 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#3	Device 2	214.00'	8.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 213.00'
#4	Device 2	217.50'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Device 2	219.00'	1.5" x 1.5" Horiz. Orifice/Grate X 10.00 columns X 10 rows C= 0.600 in 24.0" x 24.0" Grate (39% open area) Limited to weir flow at low heads

Primary OutFlow Max=16.39 cfs @ 12.49 hrs HW=219.29' (Free Discharge)

- 1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)
- 2=Culvert (Passes 16.39 cfs of 24.74 cfs potential flow)
- 3=Exfiltration (Controls 11.15 cfs)
- 4=Orifice/Grate (Orifice Controls 1.17 cfs @ 5.98 fps)
- 5=Orifice/Grate (Orifice Controls 4.07 cfs @ 2.61 fps)

basin outfall design

Prepared by GZA

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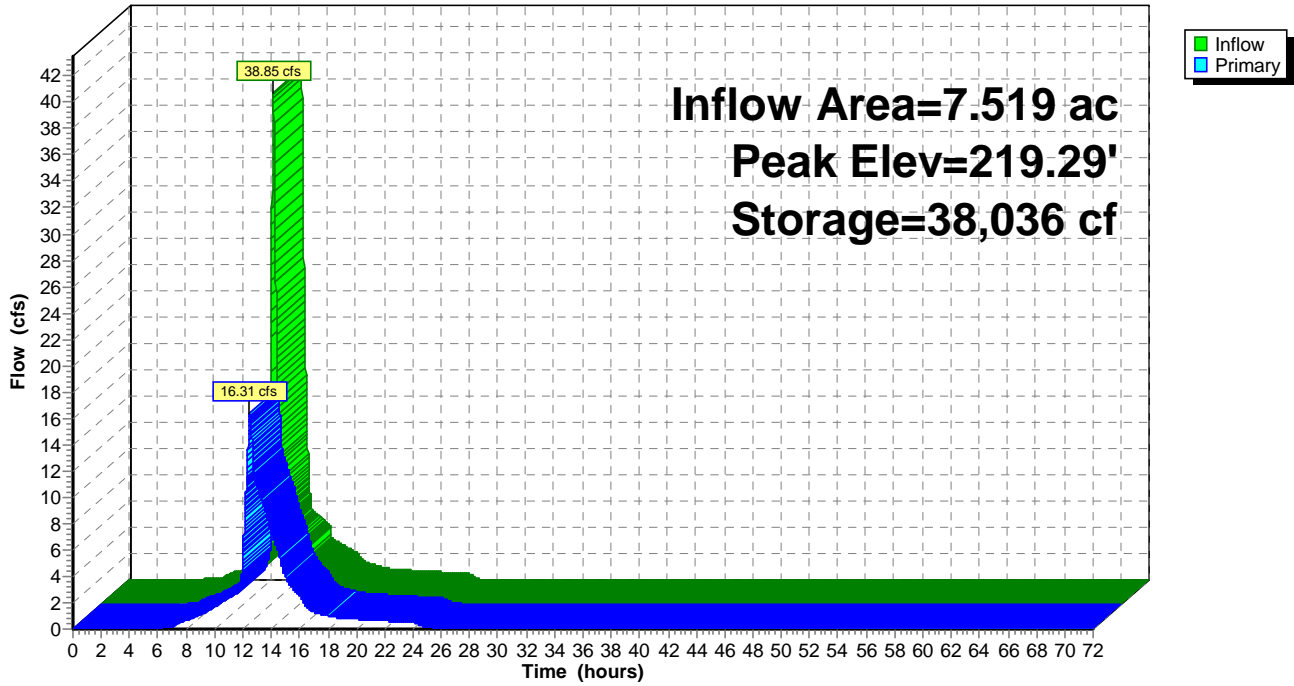
Montague Burn Dump SW-45
Type III 24-hr 100-Year Rainfall=7.29"

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Pond 4P: Lined Pond

Hydrograph



basin outfall design

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Montague Burn Dump SW-45
Type III 24-hr 100-Year Rainfall=7.29"

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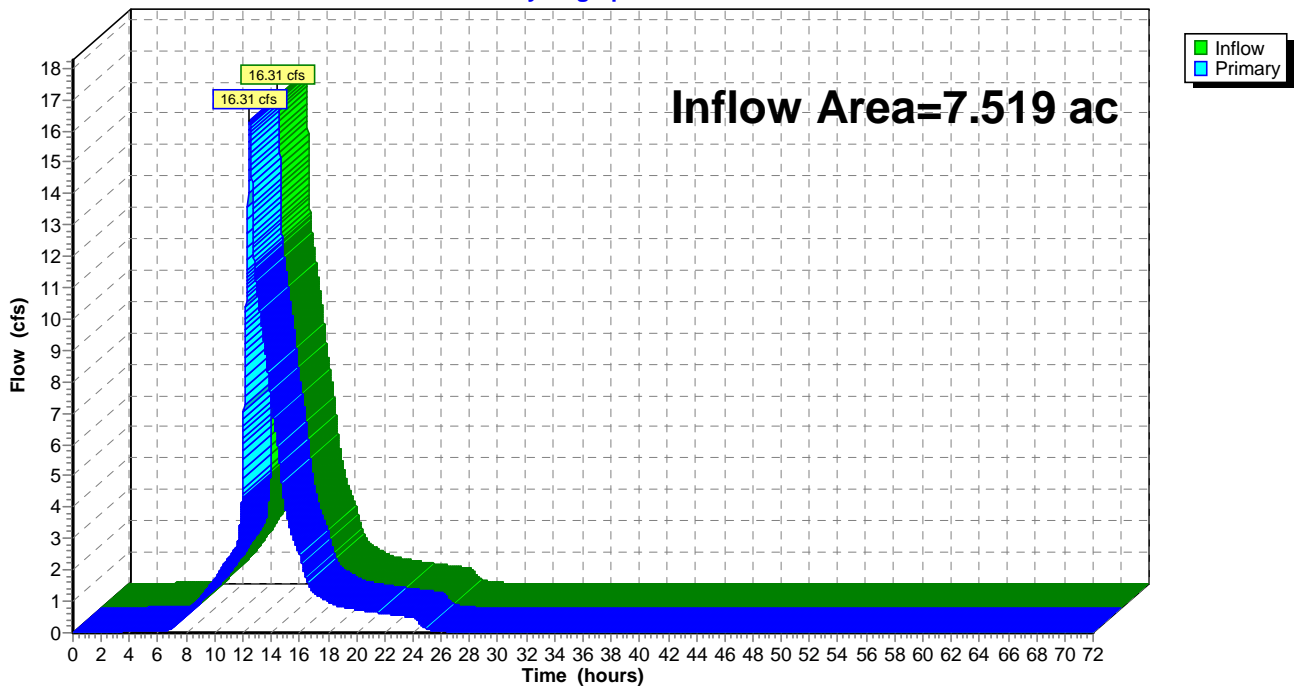
Summary for Link 5L: Wetland

Inflow Area = 7.519 ac, 85.12% Impervious, Inflow Depth = 6.03" for 100-Year event
Inflow = 16.31 cfs @ 12.49 hrs, Volume= 3.776 af
Primary = 16.31 cfs @ 12.49 hrs, Volume= 3.776 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link 5L: Wetland

Hydrograph



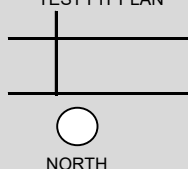

TEST PIT FIELD LOG

GZA GEOENVIRONMENTAL, INC. 188 Valley Street, Suite 300 GEOTECHNICAL/GEOHYDROLOGICAL CONSULTANTS	PROJECT DESCRIPTION: Montague, MA LOCATION: Montague Burn Dump	TEST PIT NO.: TP-1 FILE NO.: 34790 DATE: 7/23/20
---	--	--

GZA ENGINEER: Nolan Fonda WEATHER: Sunny, 80s	EXCAVATION EQUIPMENT CONTRACTOR: J Bates & Son OPERATOR: Brian McKenzie MAKE: CAT CAPACITY:	DATUM: 1988 GROUND ELEV.: 222 TIME STARTED: TIME COMPLETED:
--	---	--

DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT QTY. CLASS	REMARK NO.	
-1-	0-3' Brown Fine to Medium SAND, little Silt.	E	0		
		E	0		
-2-		E	0		
		E	0		
-3-		E	0		
		E	0		
-4-		3-10' Gray Fine to Coarse SAND and WASTE (Bags of household debris). Groundwater encountered approximately 8' below surface grade. Trash extends below groundwater elevation and bottom of test pit.	E	0	
			E	0	
-5-			E	0	
			E	0	
-6-	E		0		
	E		0		
-7-	E		0		
	E		0		
-8-	E		0		
	E		0		
-9-		E	0		
		E	0		
-10-		E	0		
		E	0		
-11-					
-12-					
-13-					
-14-					
-15-					

REMARKS:

TEST PIT PLAN 	LEGEND: BOULDER COUNT SIZE RANGE LETTER CLASSIFICATION DESIGNATION 6"-18" A 18"-36" B 36" OR LARGER C	PROPORTIONS USED TRACE (TR) 0-10% LITTLE (LI) 10-20% SOME (SO) 20-35% AND 35-50%	EXCAVATION EFFORT E EASY M MODERATE D DIFFICULT
NORTH VOLUME= cu. yd.			~8' BELOW SURFACE GRADE OBSERVED GROUNDWATER LEVEL



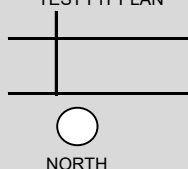

TEST PIT FIELD LOG

GZA GEOENVIRONMENTAL, INC. 188 Valley Street, Suite 300 GEOTECHNICAL/GEOHYDROLOGICAL CONSULTANTS	PROJECT DESCRIPTION: Montague, MA LOCATION: Montague Burn Dump	TEST PIT NO.: TP-2 FILE NO.: 34790 DATE: 7/21/20
---	--	--

GZA ENGINEER: Nolan Fonda WEATHER: Sunny, 80s	EXCAVATION EQUIPMENT CONTRACTOR: J Bates & Son OPERATOR: Brian McKenzie MAKE: CAT CAPACITY:	DATUM: 1988 GROUND ELEV.: 223 TIME STARTED: TIME COMPLETED:
--	---	--

DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT QTY. CLASS	REMARK NO.
-1-	0-6' Brown Fine to Medium SAND and WASTE (Bags of household debris).	E	0	
		E	0	
-2-		E	0	
		E	0	
-3-		E	0	
		E	0	
-4-		E	0	
		E	0	
-5-		E	0	
		E	0	
-6-		E	0	1
		E	0	
-7-		E	0	
		E	0	
-8-		E	0	
		E	0	
-9-		E	0	
		E	0	
-10-		E	0	
		E	0	
-11-				
-12-				
-13-				
-14-				
-15-				

REMARKS: 1. TP-2 was excavated to determine the horizontal limits of waste, the pit was not advanced to the depth of groundwater

TEST PIT PLAN 	LEGEND: BOULDER COUNT SIZE RANGE LETTER CLASSIFICATION DESIGNATION 6"-18" A 18"-36" B 36" OR LARGER C	PROPORTIONS USED TRACE (TR) 0-10% LITTLE (LI) 10-20% SOME (SO) 20-35% AND 35-50%	EXCAVATION EFFORT E EASY M MODERATE D DIFFICULT <div style="text-align: center;">  N/A OBSERVED GROUNDWATER LEVEL </div>
--	--	--	---

VOLUME= cu. yd.



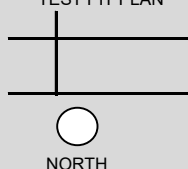

TEST PIT FIELD LOG

GZA GEOENVIRONMENTAL, INC. 188 Valley Street, Suite 300 GEOTECHNICAL/GEOHYDROLOGICAL CONSULTANTS	PROJECT DESCRIPTION: Montague, MA LOCATION: Montague Burn Dump	TEST PIT NO.: TP-3 FILE NO.: 34790 DATE: 7/21/20
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GZA ENGINEER: Nolan Fonda WEATHER: Sunny, 80s	EXCAVATION EQUIPMENT CONTRACTOR: J Bates & Son OPERATOR: Brian McKenzie MAKE: CAT CAPACITY:	DATUM: 1988 GROUND ELEV.: 215 TIME STARTED: TIME COMPLETED:
--	---	--

DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT QTY. CLASS	REMARK NO.
-1-	0-6' Brown Fine to Medium SAND and WASTE (Bags of household debris), little Silt.	E	0	
		E	0	
-2-		E	0	
		E	0	
-3-		E	0	
		E	0	
-4-		E	0	
		E	0	
-5-		E	0	
		E	0	
-6-		E	0	1
		E	0	
-7-				
-8-				
-9-				
-10-				
-11-				
-12-				
-13-				
-14-				
-15-				

REMARKS: 1. TP-3 was excavated to determine the horizontal limits of waste, the pit was not advanced to the depth of groundwater

TEST PIT PLAN 	LEGEND: BOULDER COUNT SIZE RANGE LETTER CLASSIFICATION DESIGNATION 6"-18" A 18"-36" B 36" OR LARGER C	PROPORTIONS USED TRACE (TR) 0-10% LITTLE (LI) 10-20% SOME (SO) 20-35% AND 35-50%	EXCAVATION EFFORT E EASY M MODERATE D DIFFICULT <div style="text-align: center;">  N/A OBSERVED GROUNDWATER LEVEL </div>
--	--	--	---

VOLUME= cu. yd.



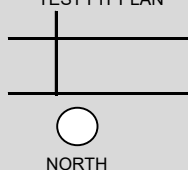

TEST PIT FIELD LOG

GZA GEOENVIRONMENTAL, INC. 188 Valley Street, Suite 300 GEOTECHNICAL/GEOHYDROLOGICAL CONSULTANTS	PROJECT DESCRIPTION: Montague, MA LOCATION: Montague Burn Dump	TEST PIT NO.: TP-4 FILE NO.: 34790 DATE: 7/23/20
---	--	--

GZA ENGINEER: Nolan Fonda WEATHER: Sunny, 80s	EXCAVATION EQUIPMENT CONTRACTOR: J Bates & Son OPERATOR: Brian McKenzie MAKE: CAT CAPACITY:	DATUM: 1988 GROUND ELEV.: 226 TIME STARTED: TIME COMPLETED:
--	---	--

DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT QTY. CLASS	REMARK NO.
-1-	0-6' Brown Fine to Medium SAND and WASTE (Bags of household debris), little Silt.	E	0	
		E	0	
-2-		E	0	
		E	0	
-3-		E	0	
		E	0	
-4-	Gray SILT (no waste)	E	0	
		E	0	
-5-		E	0	
		E	0	
-6-		E	0	
		E	0	
-7-		E	0	
		E	0	
-8-		E	0	
		E	0	
-9-				
-10-				
-11-				
-12-				
-13-				
-14-				
-15-				

REMARKS:

TEST PIT PLAN 	LEGEND: BOULDER COUNT SIZE RANGE LETTER CLASSIFICATION DESIGNATION 6"-18" A 18"-36" B 36" OR LARGER C	PROPORTIONS USED TRACE (TR) 0-10% LITTLE (LI) 10-20% SOME (SO) 20-35% AND 35-50%	EXCAVATION EFFORT E EASY M MODERATE D DIFFICULT <div style="text-align: center;">  N/A OBSERVED GROUNDWATER LEVEL </div>
--	--	--	---

VOLUME= cu. yd.



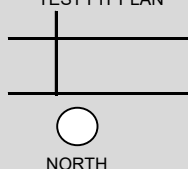

TEST PIT FIELD LOG

GZA GEOENVIRONMENTAL, INC. 188 Valley Street, Suite 300 GEOTECHNICAL/GEOHYDROLOGICAL CONSULTANTS	PROJECT DESCRIPTION: Montague, MA LOCATION: Montague Burn Dump	TEST PIT NO.: TP-5 FILE NO.: 34790 DATE: 7/23/20
---	--	--

GZA ENGINEER: Nolan Fonda WEATHER: Sunny, 80s	EXCAVATION EQUIPMENT CONTRACTOR: J Bates & Son OPERATOR: Brian McKenzie MAKE: CAT CAPACITY:	DATUM: 1988 GROUND ELEV.: 215 TIME STARTED: TIME COMPLETED:
--	---	--

DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT QTY. CLASS	REMARK NO.
-1-	0-1' Brown medium to fine SAND and silt (Topsoil). Brown SILT, little Fine to Medium Sand. Oxidized layer observed at approximately 2-3' below surface grade. (no waste)	E	0	
-2-		E	0	
-3-		E	0	
-4-		E	0	
-5-		E	0	
-6-		E	0	
-7-		E	0	
-8-		E	0	
-9-		E	0	
-10-				
-11-				
-12-				
-13-				
-14-				
-15-				

REMARKS:

TEST PIT PLAN 	LEGEND: BOULDER COUNT SIZE RANGE LETTER CLASSIFICATION DESIGNATION 6"-18" A 18"-36" B 36" OR LARGER C	PROPORTIONS USED TRACE (TR) 0-10% LITTLE (LI) 10-20% SOME (SO) 20-35% AND 35-50%	EXCAVATION EFFORT E EASY M MODERATE D DIFFICULT <div style="text-align: center;">  N/A OBSERVED GROUNDWATER LEVEL </div>
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VOLUME= cu. yd.



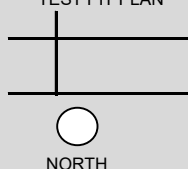

TEST PIT FIELD LOG

GZA GEOENVIRONMENTAL, INC. 188 Valley Street, Suite 300 GEOTECHNICAL/GEOHYDROLOGICAL CONSULTANTS	PROJECT DESCRIPTION: Montague, MA LOCATION: Montague Burn Dump	TEST PIT NO.: TP-6 FILE NO.: 34790 DATE: 7/21/20
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GZA ENGINEER: Nolan Fonda WEATHER: Sunny, 80s	EXCAVATION EQUIPMENT CONTRACTOR: J Bates & Son OPERATOR: Brian McKenzie MAKE: CAT CAPACITY:	DATUM: 1988 GROUND ELEV.: 209 TIME STARTED: TIME COMPLETED:
--	---	--

DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT QTY. CLASS	REMARK NO.
-1-	0-14' Brown to Gray Fine to Medium SAND and WASTE (household debris), little Silt. Groundwater encountered at 4-5' below surface grade.	E	0	
		E	0	
-2-		E	0	
		E	0	
-3-		E	0	
		E	0	
-4-		E	0	
		E	0	
-5-		E	0	
		E	0	
-6-		E	0	
		E	0	
-7-		E	0	
		E	0	
-8-		E	0	
	E	0	1	
-9-				
-10-				
-11-				
-12-				
-13-				
-14-				
-15-				

REMARKS: 1. Waste was encountered approximately 14' below the final finished surface grade area in the location of the test pit.

TEST PIT PLAN 	LEGEND: BOULDER COUNT <table style="width: 100%;"> <tr> <td style="width: 30%;">SIZE RANGE</td> <td style="width: 30%;">LETTER</td> <td style="width: 40%;">DESIGNATION</td> </tr> <tr> <td>6"-18"</td> <td>A</td> <td></td> </tr> <tr> <td>18"-36"</td> <td>B</td> <td></td> </tr> <tr> <td>36" OR LARGER</td> <td>C</td> <td></td> </tr> </table>	SIZE RANGE	LETTER	DESIGNATION	6"-18"	A		18"-36"	B		36" OR LARGER	C		PROPORTIONS USED TRACE (TR) 0-10% LITTLE (LI) 10-20% SOME (SO) 20-35% AND 35-50%	EXCAVATION EFFORT E EASY M MODERATE D DIFFICULT
SIZE RANGE	LETTER	DESIGNATION													
6"-18"	A														
18"-36"	B														
36" OR LARGER	C														
VOLUME= cu. yd.		 ~4-5' BELOW SURFACE GRADE OBSERVED GROUNDWATER LEVEL													



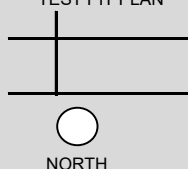

TEST PIT FIELD LOG

GZA GEOENVIRONMENTAL, INC. 188 Valley Street, Suite 300 GEOTECHNICAL/GEOHYDROLOGICAL CONSULTANTS	PROJECT DESCRIPTION: Montague, MA LOCATION: Montague Burn Dump	TEST PIT NO.: TP-7 FILE NO.: 34790 DATE: 7/30/20
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GZA ENGINEER: Nolan Fonda WEATHER: Sunny, 80s	EXCAVATION EQUIPMENT CONTRACTOR: J Bates & Son OPERATOR: Brian McKenzie MAKE: CAT CAPACITY:	DATUM: 1988 GROUND ELEV.: 206.15' TIME STARTED: TIME COMPLETED:
--	---	--

DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT QTY. CLASS	REMARK NO.	
-1-	0-5' Brown and Gray Fine to Medium SAND and SILT, little Waste (household debris, sporadic). Groundwater encountered approximately 5' below surface grade (Elevation 201.15')	E	0		
		E	0		
-2-		E	0		
		E	0		
-3-		E	0		
		E	0		
-4-		E	0		
		E	0		
-5-		E	0		
		E	0		
-6-					
-7-					
-8-					
-9-					
-10-					
-11-					
-12-					
-13-					
-14-					
-15-					

REMARKS:

TEST PIT PLAN 	LEGEND: BOULDER COUNT SIZE RANGE LETTER CLASSIFICATION DESIGNATION 6"-18" A 18"-36" B 36" OR LARGER C	PROPORTIONS USED TRACE (TR) 0-10% LITTLE (LI) 10-20% SOME (SO) 20-35% AND 35-50%	EXCAVATION EFFORT E EASY M MODERATE D DIFFICULT
NORTH VOLUME= cu. yd.			~5' BELOW SURFACE GRADE OBSERVED GROUNDWATER LEVEL



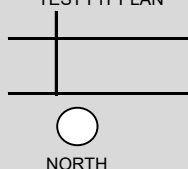

TEST PIT FIELD LOG

GZA GEOENVIRONMENTAL, INC. 188 Valley Street, Suite 300 GEOTECHNICAL/GEOHYDROLOGICAL CONSULTANTS	PROJECT DESCRIPTION: Montague, MA LOCATION: Montague Burn Dump	TEST PIT NO.: TP-8 FILE NO.: 34790 DATE: 7/30/20
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GZA ENGINEER: Nolan Fonda WEATHER: Sunny, 80s	EXCAVATION EQUIPMENT CONTRACTOR: J Bates & Son OPERATOR: Brian McKenzie MAKE: CAT CAPACITY:	DATUM: 1988 GROUND ELEV.: 216.40' TIME STARTED: TIME COMPLETED:
--	---	--

DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT QTY. CLASS	REMARK NO.
-1-	0-4' Brown SILT and CLAY (Oxidized layer at 4')	E	0	
		E	0	
-2-		E	0	
		E	0	
-3-		E	0	
		E	0	
-4-		E	0	
		E	0	
-5-		E	0	
		E	0	
-6-	5-15' Gray SILT and CLAY (Varved).	E	0	
		E	0	
-7-		E	0	
		E	0	
-8-		E	0	
		E	0	
-9-		E	0	
		E	0	
-10-		E	0	
		E	0	
-11-		E	0	
		E	0	
-12-		E	0	
		E	0	
-13-		E	0	
	E	0		
-14-		E	0	
		E	0	
-15-		E	0	
		E	0	1

REMARKS: 1. Groundwater was not encountered

TEST PIT PLAN 	LEGEND: BOULDER COUNT <table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">SIZE RANGE</td> <td style="width: 30%;">LETTER</td> <td style="width: 40%;">DESIGNATION</td> </tr> <tr> <td>6"-18"</td> <td>A</td> <td></td> </tr> <tr> <td>18"-36"</td> <td>B</td> <td></td> </tr> <tr> <td>36" OR LARGER</td> <td>C</td> <td></td> </tr> </table>	SIZE RANGE	LETTER	DESIGNATION	6"-18"	A		18"-36"	B		36" OR LARGER	C		PROPORTIONS USED TRACE (TR) 0-10% LITTLE (LI) 10-20% SOME (SO) 20-35% AND 35-50%	EXCAVATION EFFORT E EASY M MODERATE D DIFFICULT <div style="text-align: center;">  N/A OBSERVED GROUNDWATER LEVEL </div>
SIZE RANGE	LETTER	DESIGNATION													
6"-18"	A														
18"-36"	B														
36" OR LARGER	C														

VOLUME= cu. yd.



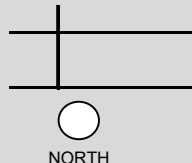

TEST PIT FIELD LOG

GZA GEOENVIRONMENTAL, INC. 188 Valley Street, Suite 300 GEOTECHNICAL/GEOHYDROLOGICAL CONSULTANTS	PROJECT DESCRIPTION: Montague, MA LOCATION: Montague Burn Dump	TEST PIT NO.: TP-9 FILE NO.: 34790 DATE: 8/6/20
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GZA ENGINEER: Adam Cote WEATHER: Sunny, 80s	EXCAVATION EQUIPMENT CONTRACTOR: J Bates & Son OPERATOR: Wayde Marsh MAKE: CAT CAPACITY:	DATUM: 1988 GROUND ELEV.: 261 TIME STARTED: TIME COMPLETED:
--	--	--

DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT QTY. CLASS	REMARK NO.	
-1-	0-5' Tan to tan-brown fine to medium SAND and SOLID WASTE.	E	0	1	
-2-		E	0		
-3-		E	0		
-4-		E	0		
-5-		E	0		
-6-		E	0		
-7-		5-8' Gray SILT	E	0	
-8-			E	0	
-9-					
-10-					
-11-					
-12-					
-13-					
-14-					
-15-					

REMARKS: 1. TP-9 was excavated to determine the horizontal limits of waste, the pit was not advanced to the depth of groundwater
 2. Additional solid waste was observed deeper than 8' below grade

TEST PIT PLAN 	LEGEND: BOULDER COUNT SIZE RANGE LETTER CLASSIFICATION DESIGNATION 6"-18" A 18"-36" B 36" OR LARGER C	PROPORTIONS USED TRACE (TR) 0-10% LITTLE (LI) 10-20% SOME (SO) 20-35% AND 35-50%	EXCAVATION EFFORT E EASY M MODERATE D DIFFICULT <div style="text-align: center;">  N/A OBSERVED GROUNDWATER LEVEL </div>
VOLUME= cu. yd.			

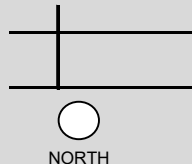

TEST PIT FIELD LOG

GZA GEOENVIRONMENTAL, INC. 188 Valley Street, Suite 300 GEOTECHNICAL/GEOHYDROLOGICAL CONSULTANTS	PROJECT DESCRIPTION: Montague, MA LOCATION: Montague Burn Dump	TEST PIT NO.: TP-10 FILE NO.: 34790 DATE: 8/6/20
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GZA ENGINEER: Adam Cote WEATHER: Sunny, 80s	EXCAVATION EQUIPMENT CONTRACTOR: J Bates & Son OPERATOR: Wayde Marsh MAKE: CAT CAPACITY:	DATUM: 1988 GROUND ELEV.: 261 TIME STARTED: TIME COMPLETED:
--	--	--

DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT QTY. CLASS	REMARK NO.	
-1-	Tan to tan-brown medium fine SAND, trace silt. Solid waste was not observed.	E	0	1	
-2-		E	0		
-3-		E	0		
-4-		E	0		
-5-		E	0		
-6-		E	0		
-7-		E	0		
-8-		E	0		
-9-					
-10-					
-11-					
-12-					
-13-					
-14-					
-15-					

REMARKS: 1. TP-10 was excavated to determine the horizontal limits of waste, the pit was not advanced to the depth of groundwater

TEST PIT PLAN 	LEGEND: BOULDER COUNT <table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">SIZE RANGE</td> <td style="width: 30%;">LETTER</td> <td style="width: 40%;">DESIGNATION</td> </tr> <tr> <td>6"-18"</td> <td>A</td> <td></td> </tr> <tr> <td>18"-36"</td> <td>B</td> <td></td> </tr> <tr> <td>36" OR LARGER</td> <td>C</td> <td></td> </tr> </table>	SIZE RANGE	LETTER	DESIGNATION	6"-18"	A		18"-36"	B		36" OR LARGER	C		PROPORTIONS USED TRACE (TR) 0-10% LITTLE (LI) 10-20% SOME (SO) 20-35% AND 35-50%	EXCAVATION EFFORT E EASY M MODERATE D DIFFICULT <div style="text-align: center;">  N/A OBSERVED GROUNDWATER LEVEL </div>
SIZE RANGE	LETTER	DESIGNATION													
6"-18"	A														
18"-36"	B														
36" OR LARGER	C														

VOLUME= cu. yd.

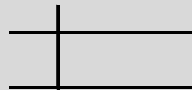

TEST PIT FIELD LOG

GZA GEOENVIRONMENTAL, INC. 188 Valley Street, Suite 300 GEOTECHNICAL/GEOHYDROLOGICAL CONSULTANTS	PROJECT DESCRIPTION: Montague, MA LOCATION: Montague Burn Dump	TEST PIT NO.: TP-11 FILE NO.: 34790 DATE: 8/6/20
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GZA ENGINEER: Adam Cote WEATHER: Sunny, 80s	EXCAVATION EQUIPMENT CONTRACTOR: J Bates & Son OPERATOR: Wayde Marsh MAKE: CAT CAPACITY:	DATUM: 1988 GROUND ELEV.: 261 TIME STARTED: TIME COMPLETED:
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DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT QTY. CLASS	REMARK NO.	
-1-	0-5' Tan to tan-brown fine to medium SAND and SOLID WASTE.	E	0	1	
-2-		E	0		
-3-		E	0		
-4-		E	0		
-5-		E	0		
-6-		E	0		
-7-		E	0		
-8-		E	0		
-9-		5-8' Gray SILT	E	0	
-10-			E	0	
-11-	E		0		
-12-	E		0		
-13-	E		0		
-14-	E		0		
-15-	E		0		

REMARKS: 1. TP-11 was excavated to determine the horizontal limits of waste, the pit was not advanced to the depth of groundwater

TEST PIT PLAN 	LEGEND: BOULDER COUNT <table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">SIZE RANGE</td> <td style="width: 30%;">LETTER</td> <td style="width: 40%;">DESIGNATION</td> </tr> <tr> <td>6"-18"</td> <td>A</td> <td></td> </tr> <tr> <td>18"-36"</td> <td>B</td> <td></td> </tr> <tr> <td>36" OR LARGER</td> <td>C</td> <td></td> </tr> </table>	SIZE RANGE	LETTER	DESIGNATION	6"-18"	A		18"-36"	B		36" OR LARGER	C		PROPORTIONS USED TRACE (TR) 0-10% LITTLE (LI) 10-20% SOME (SO) 20-35% AND 35-50%	EXCAVATION EFFORT E EASY M MODERATE D DIFFICULT N/A  OBSERVED GROUNDWATER LEVEL
SIZE RANGE	LETTER	DESIGNATION													
6"-18"	A														
18"-36"	B														
36" OR LARGER	C														

VOLUME= cu. yd.

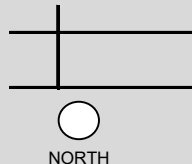

TEST PIT FIELD LOG

GZA GEOENVIRONMENTAL, INC. 188 Valley Street, Suite 300 GEOTECHNICAL/GEOHYDROLOGICAL CONSULTANTS	PROJECT DESCRIPTION: Montague, MA LOCATION: Montague Burn Dump	TEST PIT NO.: TP-12 FILE NO.: 34790 DATE: 8/6/20
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GZA ENGINEER: Adam Cote WEATHER: Sunny, 80s	EXCAVATION EQUIPMENT CONTRACTOR: J Bates & Son OPERATOR: Wayde Marsh MAKE: CAT CAPACITY:	DATUM: 1988 GROUND ELEV.: 261 TIME STARTED: TIME COMPLETED:
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DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT QTY. CLASS	REMARK NO.
-1-	0-2 feet Tan medium to fine SAND, trace Silt	E	0	1
		E	0	
-2-	2-10 feet Tan medium to fine SAND and SOLID WASTE, trace Silt	E	0	
		E	0	
-3-		E	0	
		E	0	
-4-		E	0	
		E	0	
-5-		E	0	
		E	0	
-6-		E	0	
		E	0	
-7-		E	0	
		E	0	
-8-	E	0		
	E	0		
-9-	E	0		
	E	0		
-10-	E	0		
	E	0		
-11-				
-12-				
-13-				
-14-				
-15-				

REMARKS: 1. TP-12 was excavated to determine the horizontal limits of waste, the pit was not advanced to the depth of groundwater

TEST PIT PLAN 	LEGEND: BOULDER COUNT <table style="width: 100%;"> <tr> <td style="width: 30%;">SIZE RANGE</td> <td style="width: 30%;">LETTER</td> <td style="width: 40%;">DESIGNATION</td> </tr> <tr> <td>6"-18"</td> <td>A</td> <td></td> </tr> <tr> <td>18"-36"</td> <td>B</td> <td></td> </tr> <tr> <td>36" OR LARGER</td> <td>C</td> <td></td> </tr> </table>	SIZE RANGE	LETTER	DESIGNATION	6"-18"	A		18"-36"	B		36" OR LARGER	C		PROPORTIONS USED TRACE (TR) 0-10% LITTLE (LI) 10-20% SOME (SO) 20-35% AND 35-50%	EXCAVATION EFFORT E EASY M MODERATE D DIFFICULT <div style="text-align: center;">  N/A OBSERVED GROUNDWATER LEVEL </div>
SIZE RANGE	LETTER	DESIGNATION													
6"-18"	A														
18"-36"	B														
36" OR LARGER	C														
NORTH VOLUME= cu. yd.															

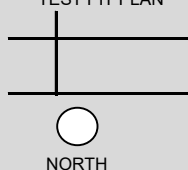

TEST PIT FIELD LOG

GZA GEOENVIRONMENTAL, INC. 188 Valley Street, Suite 300 GEOTECHNICAL/GEOHYDROLOGICAL CONSULTANTS	PROJECT DESCRIPTION: Montague, MA LOCATION: Montague Burn Dump	TEST PIT NO.: TP-13 FILE NO.: 34790 DATE: 8/10/20
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GZA ENGINEER: Nolan Fonda WEATHER: Sunny, 80s	EXCAVATION EQUIPMENT CONTRACTOR: J Bates & Son OPERATOR: Brian McKenzie MAKE: CAT CAPACITY:	DATUM: 1988 GROUND ELEV.: 262 TIME STARTED: TIME COMPLETED:
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DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT QTY. CLASS	REMARK NO.
-1-	0-8' Tan Fine to Coarse SAND.	E	0	
		E	0	
-2-		E	0	
		E	0	
-3-		E	0	
		E	0	
-4-		E	0	
		E	0	
-5-		E	0	
		E	0	
-6-		E	0	
		E	0	
-7-		E	0	
		E	0	
-8-		E	0	1
-9-				
-10-				
-11-				
-12-				
-13-				
-14-				
-15-				

REMARKS: 1. Buried waste was not encountered.

TEST PIT PLAN 	LEGEND: BOULDER COUNT SIZE RANGE LETTER CLASSIFICATION DESIGNATION 6"-18" A 18"-36" B 36" OR LARGER C	PROPORTIONS USED TRACE (TR) 0-10% LITTLE (LI) 10-20% SOME (SO) 20-35% AND 35-50%	EXCAVATION EFFORT E EASY M MODERATE D DIFFICULT <div style="text-align: center;">  N/A OBSERVED GROUNDWATER LEVEL </div>
--	--	--	---

VOLUME= cu. yd.



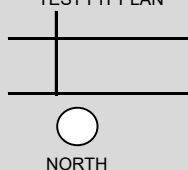

TEST PIT FIELD LOG

GZA GEOENVIRONMENTAL, INC. 188 Valley Street, Suite 300 GEOTECHNICAL/GEOHYDROLOGICAL CONSULTANTS	PROJECT DESCRIPTION: Montague, MA LOCATION: Montague Burn Dump	TEST PIT NO.: TP-14 FILE NO.: 34790 DATE: 8/10/20
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GZA ENGINEER: Nolan Fonda WEATHER: Sunny, 80s	EXCAVATION EQUIPMENT CONTRACTOR: J Bates & Son OPERATOR: Brian McKenzie MAKE: CAT CAPACITY:	DATUM: 1988 GROUND ELEV.: 263 TIME STARTED: TIME COMPLETED:
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DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT QTY. CLASS	REMARK NO.
-1-	0-8' Tan Fine to Medium SAND.	E	0	
		E	0	
-2-		E	0	
		E	0	
-3-		E	0	
		E	0	
-4-		E	0	
		E	0	
-5-		E	0	
		E	0	
-6-		E	0	
		E	0	
-7-		E	0	
		E	0	
-8-		E	0	1
-9-				
-10-				
-11-				
-12-				
-13-				
-14-				
-15-				

REMARKS: 1. Buried waste was not encountered.

TEST PIT PLAN 	LEGEND: BOULDER COUNT SIZE RANGE LETTER CLASSIFICATION DESIGNATION 6"-18" A 18"-36" B 36" OR LARGER C	PROPORTIONS USED TRACE (TR) 0-10% LITTLE (LI) 10-20% SOME (SO) 20-35% AND 35-50%	EXCAVATION EFFORT E EASY M MODERATE D DIFFICULT
NORTH VOLUME= cu. yd.			N/A OBSERVED GROUNDWATER LEVEL



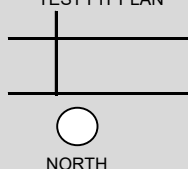

TEST PIT FIELD LOG

GZA GEOENVIRONMENTAL, INC. 188 Valley Street, Suite 300 GEOTECHNICAL/GEOHYDROLOGICAL CONSULTANTS	PROJECT DESCRIPTION: Montague, MA LOCATION: Montague Burn Dump	TEST PIT NO.: TP-15 FILE NO.: 34790 DATE: 8/10/20
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GZA ENGINEER: Nolan Fonda WEATHER: Sunny, 80s	EXCAVATION EQUIPMENT CONTRACTOR: J Bates & Son OPERATOR: Brian McKenzie MAKE: CAT CAPACITY:	DATUM: 1988 GROUND ELEV.: 261 TIME STARTED: TIME COMPLETED:
--	---	--

DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT QTY. CLASS	REMARK NO.
-1-	0-8' Tan Fine to Coarse SAND.	E	0	
		E	0	
-2-		E	0	
		E	0	
-3-		E	0	
		E	0	
-4-		E	0	
		E	0	
-5-		E	0	
		E	0	
-6-		E	0	
		E	0	
-7-		E	0	
		E	0	
-8-		E	0	1
-9-				
-10-				
-11-				
-12-				
-13-				
-14-				
-15-				

REMARKS: 1. Buried waste was not encountered.

TEST PIT PLAN 	LEGEND: BOULDER COUNT SIZE RANGE LETTER CLASSIFICATION DESIGNATION 6"-18" A 18"-36" B 36" OR LARGER C	PROPORTIONS USED TRACE (TR) 0-10% LITTLE (LI) 10-20% SOME (SO) 20-35% AND 35-50%	EXCAVATION EFFORT E EASY M MODERATE D DIFFICULT <div style="text-align: center;">  N/A OBSERVED GROUNDWATER LEVEL </div>
VOLUME= cu. yd.			



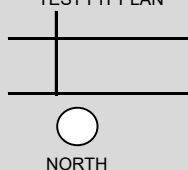

TEST PIT FIELD LOG

GZA GEOENVIRONMENTAL, INC. 188 Valley Street, Suite 300 GEOTECHNICAL/GEOHYDROLOGICAL CONSULTANTS	PROJECT DESCRIPTION: Montague, MA LOCATION: Montague Burn Dump	TEST PIT NO.: TP-16 FILE NO.: 34790 DATE: 8/10/20
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EXCAVATION EQUIPMENT			
GZA ENGINEER: Nolan Fonda	CONTRACTOR: J Bates & Son	DATUM:	1988
	OPERATOR: Brian McKenzie	GROUND ELEV.:	262
WEATHER: Sunny, 80s	MAKE: CAT	TIME STARTED:	
	CAPACITY:	MODEL: 349 E	TIME COMPLETED:
		REACH: ~20'	

DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT QTY. CLASS	REMARK NO.
-1-	0-8' Tan Fine to Coarse SAND.	E	0	
		E	0	
-2-		E	0	
		E	0	
-3-		E	0	
		E	0	
-4-		E	0	
		E	0	
-5-		E	0	
		E	0	
-6-		E	0	
		E	0	
-7-		E	0	
		E	0	
-8-		E	0	1
-9-				
-10-				
-11-				
-12-				
-13-				
-14-				
-15-				

REMARKS: 1. Buried waste was not encountered.

TEST PIT PLAN	LEGEND: BOULDER COUNT SIZE RANGE LETTER CLASSIFICATION DESIGNATION 6"-18" A 18"-36" B 36" OR LARGER C	PROPORTIONS USED TRACE (TR) 0-10% LITTLE (LI) 10-20% SOME (SO) 20-35% AND 35-50%	EXCAVATION EFFORT E EASY M MODERATE D DIFFICULT
 NORTH VOLUME= cu. yd.		 N/A OBSERVED GROUNDWATER LEVEL	



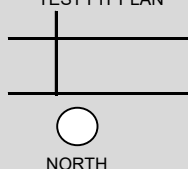

TEST PIT FIELD LOG

GZA GEOENVIRONMENTAL, INC. 188 Valley Street, Suite 300 GEOTECHNICAL/GEOHYDROLOGICAL CONSULTANTS	PROJECT DESCRIPTION: Montague, MA LOCATION: Montague Burn Dump	TEST PIT NO.: TP-17 FILE NO.: 34790 DATE: 8/10/20
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GZA ENGINEER: Nolan Fonda WEATHER: Sunny, 80s	EXCAVATION EQUIPMENT CONTRACTOR: J Bates & Son OPERATOR: Brian McKenzie MAKE: CAT CAPACITY:	DATUM: 1988 GROUND ELEV.: 260 TIME STARTED: TIME COMPLETED:
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DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT QTY. CLASS	REMARK NO.
-1-	0-2' Tan Fine to Coarse SAND, little metal scraps.	E	0	
		E	0	
-2-		E	0	
		E	0	
-3-		E	0	
		E	0	
-4-		E	0	
		E	0	
-5-	2-8' Tan Fine to Coarse SAND.	E	0	
		E	0	
-6-		E	0	
		E	0	
-7-		E	0	
		E	0	
-8-		E	0	
		E	0	1
-9-				
-10-				
-11-				
-12-				
-13-				
-14-				
-15-				

REMARKS: 1. Buried waste was not encountered, only surficial metal scraps.

TEST PIT PLAN  NORTH VOLUME= cu. yd.	LEGEND: BOULDER COUNT SIZE RANGE LETTER CLASSIFICATION DESIGNATION 6"-18" A 18"-36" B 36" OR LARGER C	PROPORTIONS USED TRACE (TR) 0-10% LITTLE (LI) 10-20% SOME (SO) 20-35% AND 35-50%	EXCAVATION EFFORT E EASY M MODERATE D DIFFICULT <div style="text-align: center;">  N/A OBSERVED GROUNDWATER LEVEL </div>
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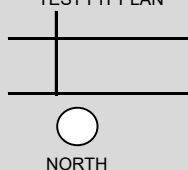

TEST PIT FIELD LOG

GZA GEOENVIRONMENTAL, INC. 188 Valley Street, Suite 300 GEOTECHNICAL/GEOHYDROLOGICAL CONSULTANTS	PROJECT DESCRIPTION: Montague, MA LOCATION: Montague Burn Dump	TEST PIT NO.: TP-18 FILE NO.: 34790 DATE: 8/10/20
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GZA ENGINEER: Nolan Fonda WEATHER: Sunny, 80s	EXCAVATION EQUIPMENT CONTRACTOR: J Bates & Son OPERATOR: Brian McKenzie MAKE: CAT CAPACITY:	DATUM: 1988 GROUND ELEV.: 260 TIME STARTED: TIME COMPLETED:
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DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT QTY. CLASS	REMARK NO.
-1-	0-8' Tan Fine to Coarse SAND.	E	0	
		E	0	
-2-		E	0	
		E	0	
-3-		E	0	
		E	0	
-4-		E	0	
		E	0	
-5-		E	0	
		E	0	
-6-		E	0	
		E	0	
-7-		E	0	
		E	0	
-8-		E	0	1
-9-				
-10-				
-11-				
-12-				
-13-				
-14-				
-15-				

REMARKS: 1. Buried waste was not encountered.

TEST PIT PLAN 	LEGEND: BOULDER COUNT SIZE RANGE LETTER CLASSIFICATION DESIGNATION 6"-18" A 18"-36" B 36" OR LARGER C	PROPORTIONS USED TRACE (TR) 0-10% LITTLE (LI) 10-20% SOME (SO) 20-35% AND 35-50%	EXCAVATION EFFORT E EASY M MODERATE D DIFFICULT <div style="text-align: center;">  N/A OBSERVED GROUNDWATER LEVEL </div>
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VOLUME= cu. yd.





MIIA Grant Statement

Town of Montague

Grand Total: \$8,190 \$5,500

Grant ID	Department	Category	Purpose	Status	Requested	Awarded
RM148	Administrati	Chainsaw kits:(helmet, chaps, gloves, vest, duffle (ELVEX) & integrated communication system	Chaps, hard hats with integrated intercom, head lamps, duffle bags	Yes	\$7,130	\$5,500
RM148	Administrati	Purchase of Ladder/Stepstools for classroom teachers	Step stools, ladders	No	\$720	
RM148	Administrati	Safety Equipment: manual material handling- dollies, carts, hydraulic lift gates, ladders, lockout tagout, manhole	Hand truck, utility wagon	No	\$340	

**Town of Montague
Virtual Town Meeting Readiness Assessment**

Dear Town Meeting Member,

Challenges presented by the COVID-19 pandemic have moved the Town Moderator and Selectboard to consider holding our next Special Town Meeting “remotely.” The goal is to ensure public safety, but also the broadest possible participation of Town Meeting members. The plan would rely on Zoom or a similar video conferencing tool. Please take a moment now to complete and return this survey, which will help us move forward in planning.

1) Do you have a reliable internet connection at home?

- Yes No

a. Is your internet connection good enough to support participation in a video conference?

- Yes No Don't Know

2) Is there another location from which you could video conference?

- Yes, weekday nights Yes, weekend days Not Sure

Comment:

3) Regardless of whether you have internet access, which of the following types of devices do you have access to as a means to participate in a remote Town Meeting?

- _____ iPhone or other smart phone device
- _____ iPad or other type of tablet device
- _____ Laptop or desktop computer with a webcam

4) How many ZOOM meetings have you participated in?

- zero 1 – 5 6 – 10 10 – 20 20 or more

a. Are you more familiar with another videoconferencing program?

- Yes No Don't Know

If yes, what is the name of the other program(s)?

5) How comfortable are you using ZOOM?

If you've never used Zoom, but identified a different program above, answer based on your comfort with that program.

- Very comfortable Comfortable enough Not at all comfortable

6) How likely would you be to participate in Town Meeting if it were conducted by remotely by videoconference)?

- Very likely Probable Unlikely

a. If you answered “Unlikely” and a telephone option were available, how likely would you be to participate in the remote Town Meeting?

- Very likely Probable Unlikely

7) If Town Meeting were held remotely, would you be in favor of having more than one, but briefer Special Town Meetings?

For example, two 90 minute meetings rather than a single 3-hour meeting?

- In favor Neutral Opposed

8) Would you require support or accommodations to participate in a remote Town Meeting?

9) Other comments or questions?

So we can follow up and better keep in contact with you, please provide your...

Name:

Phone:

Email:

If you happen to have any special skill, technical, logistical, or otherwise, related to managing large videoconferences – or otherwise want to support this effort – please contact Steve Ellis at

townadmin@montague-ma.gov or 413-863-3200 x110



TOWN OF MONTAGUE
Finance Committee
 One Avenue A
 Turners Falls, Massachusetts 01376
 413 863-3200 ext. 121

November 24, 2020

Dear Town Meeting Members:

The process of developing the Town of Montague's annual budget for the upcoming year has begun! This is the town's Fiscal Year 2022 budget, which goes into effect on July 1, 2021; if all goes as planned, you will consider and vote on articles related to this budget at our Annual Town Meeting on the first Saturday in May 2021.

You will receive a report and other background materials a few weeks prior to the Annual Town Meeting, but you are welcome to follow along as we collaborate with town staff to create the budget over the next six months. One way to start is by visiting the town's website: www.montague-ma.gov, where we post information related to the annual budget development process. (To find it, search for "Annual Budget Information" or navigate to the Finance Committee's area of the site.)

The Selectboard, the Finance Committee, and the Capital Improvements Committee (CIC) will be working on Montague's FY2022 budget throughout the winter and spring. Their meetings are being held online due to the ongoing pandemic; you are welcome to attend. Meeting agendas are posted on the website calendar and on the bulletin board outside the back door of Town Hall. You can also find recordings of most Selectboard and Finance Committee meetings courtesy of Montague Community Television at vimeo.com/mctvchannel17. Here is an overview of what's coming up:

December: Preliminary revenue estimates for FY2022; operating budget requests from town departments are due; the CIC reviews capital requests

January-February: Initial state budget is released; Selectboard and Finance Committee review operating budget requests from town departments, boards, and committees; CIC continues evaluating capital requests; Gill-Montague Regional School District and the Franklin County Technical School develop their FY2022 budgets

March-April: Revenue estimates are finalized; CIC presents recommendations for FY2022 capital projects; Selectboard and Finance Committees deliberate and vote on recommendations for operating budgets and articles that will appear on the Annual Town Meeting warrant; the Finance Committee prepares its annual report

If there are topics you are particularly interested in or would like to discuss, please be in touch!

Sincerely,
 Jen Audley, for the Montague Finance Committee