

**Town of Georgia Highway Garage  
Design Services RFP  
11-May-20**

**Background**

Town of Georgia (TOG) has retained the services of Matt Young of Ascent Consulting LLC as their Municipal Project Manager (MPM) to assist with preconstruction and construction of a new Town Highway Garage. TOG purchased land South of the existing garage for the new garage. On March 5, 2020, the Town has been authorized by its voters to proceed with phase-1 schematic design and cost estimate in preparation for the November 3, 2020 general election. Voters will be asked to approve TOG to proceed with phase-2 which will be to complete design, permitting and bid out the project for a 2021 construction start.

**Schedule**

The preconstruction phase of this project is on a very tight schedule and key milestones must be met. The selected team must be ready to start work immediately.

- |                                   |                         |
|-----------------------------------|-------------------------|
| 1. Post Design Services RFP       | 05/12/20                |
| 2. Last day for RFI               | 05/22/20                |
| 3. Addendum posted                | 05/27/20                |
| <b>4. Design Services RFP Due</b> | <b>05/29/20 3pm EDT</b> |
| 5. Select Design Team             | 06/08/20                |
| 6. Kick-off Meeting               | 06/10/20                |
| 7. Complete Schematic Design      | 07/15/20                |
| 8. Public Forum Meetings          | Aug/Sep/Oct 2020        |
| 9. Election                       | 11/03/20                |

**Instructions**

All questions re: this project must be directed to Matt Young at [myoung@ascentconsultingllc.com](mailto:myoung@ascentconsultingllc.com) and copy Amber Baker, Town Administrator Georgia Town Administrator [administrator@townofgeorgia.com](mailto:administrator@townofgeorgia.com). Do not contact committee members, staff or selectboard members re: this project. By doing so can get you disqualified. Proposal response is due no later than date shown via email in a pdf format. Hard copies are not required. Late proposals will not be accepted. Limit proposal page count to 20, plus bid form. All RFIs are to be emailed to Matt Young and copy Amber Baker. Responses to the RFIs will be issued in a form of an addendum. Responders are responsible for The Town reserves the right to make decisions based on what is in the best interest of the Town and the project. Single service firms are encouraged to propose just as well as a full-service or teamed firm. The Town reserves the right to award to individual firms to form a design partnership. For example, if it is in the best interest of the owner to hire XYZ structural and ABC architect they may do so. It will be the responsibility of ABC architect to fully coordinate with XYZ structural. The cost of preparation of this RFQ-RFP will be solely responsible of the responder.

**Design Narrative**

The following documents are attached as part of this RFP and for project understanding.

1. Ascent Consulting LLC Conceptual Estimate 1.1a Report dated 30-Apr-20
2. Cross Consulting Engineers septic design dated 27-Aug-19

## Scope of Services

Scope of services will be in two phases. Phase-1 consists of schematic design level. Purpose of this is to develop enough design in preparation of an accurate estimate and design deliverables for voters to best comprehend the design intent. Phase-2 commences if the voters approve the project to proceed. If phase-2 is not approved by the voters, the design team will be paid for work completed under phase-1 only. If at any time the project is put on hold or cancelled, design firms will be paid for the percentage of work completed. Design fees and reimbursables are to be lump sum. Use of 3D design required, either Revit, Sketch-up or similar software, but must be exportable to 3D .pdf and .nwf format. Owner will be responsible for applicable permit fees, special inspection costs and cost of hard copy plans. Septic design has been completed but may require validation due to final design and building location. Design services agreement will be ConsensusDocs 245 Standard Short Form Agreement Between Owner and Design Professional. Language in the contract will included "Design to Budget" at no cost to owner and design errors resulting in added change order cost to owner will be the responsibility of the designer. Required design services, but not limited to are listed below:

### Phase-1 Schematic Design

1. Civil, Utilities, Landscape
2. Structural
3. Architectural
4. Mechanical, Electrical, Plumbing,
5. Fire Protection (will be design-build, provide oversight)
6. Meeting notes posted within 48 hours
7. Digital deliverables in .pdf format and .nwf format for Navisworks Simulate 2020

### Phase-2 Complete Design/Permitting

1. Complete design for bidding & construction
2. Bi-monthly design meetings or as required
3. Permit processing and preparation of required documents
4. Use of 3D design required, either Revit, Sketch-up or similar software, but must be exportable to 3D .pdf and .nwf format
5. Support during bidding phase
6. Construction Administration (CA) services during construction
7. Builder pay application review will be process by Ascent Consulting LLC

## Required Information

The following information is required. Please keep your response brief and limited to 20 pages.

1. Team Experience
  - a. Firm outline, in-house services, etc.
  - b. Lead designer and resume
  - c. Subconsultants, if applicable
  - d. Similar client and project experience
  - e. 3D design experience
  - f. Copy of E&O insurance for each discipline
  - g. Unit prices for additional services
  - h. References
2. Signed Proposal Form



**Proposal Form  
Town of Georgia Highway Garage  
11-May-20**

Firm Name: \_\_\_\_\_ Primary Contact: \_\_\_\_\_

Address: \_\_\_\_\_

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

(If services not included, fill in as N/A)

1. **Phase-1** Design Cost: \$ \_\_\_\_\_

List services included: \_\_\_\_\_

List any sub-consultants: \_\_\_\_\_

2. **Phase-2** Design Cost: \$ \_\_\_\_\_

List services included: \_\_\_\_\_

List any sub-consultants: \_\_\_\_\_

**Total Proposal \$** \_\_\_\_\_ Lump Sum (includes all reimbursable)

The undersign is authorized to commit the team to the cost and schedule as outlined in the RFP. The undersign is also aware of the aggressive schedule and have the team, resources and time to adequately complete this project.

Name: \_\_\_\_\_ Title: \_\_\_\_\_  
(Print)

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

Town of Georgia  
Highway Garage  
Conceptual Estimate 1.1a Report

**Ascent Consulting LLC**

Providing wisdom for clients

**Construction  
Real Estate  
Business**



**GEORGIA** *Vermont*  
ESTABLISHED ON AUGUST 17, 1769

Town of Georgia, VT  
30-Apr-20

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30-Apr-20

Ms. Amber Baker  
Mr. Todd Cadieux  
Committee Members  
Town of Georgia  
47 Town Common Road North  
St. Albans, VT 05478

Re: Highway Garage  
Conceptual Estimate 1.1 Report

Dear Amber, Todd, and Committee Members:

Attached is a Conceptual Estimate 1.1 Report for your review and comment. This is an update from last night's web meeting. Also included in this is several Value Management (VM) items to consider that will either reduce cost or increase the efficient use of the building. Next steps will be for the committee to agree on the building program and budget, followed by Ascent preparing design RFP for public solicitation.

If you have any questions, please do not hesitate to call me at 802.503.7008.

Sincerely,  
Ascent Consulting LLC

A handwritten signature in blue ink that reads "Matt Young".

Matt Young  
President

**Project Brief**

This project consists of 13,500 gsf public works garage with washbay and 1,000 gsf offices with a total structure of 14,500 sf. The garage has 8 total overhead doors, 14' high and 16' wide clearance. The building is a single story shed roof structure. Onsite septic mound system and well will be required. Project also includes converting existing garage to a secondary storage use. This project is located on newly purchased 5.4 acres behind the existing garage, with Highway 7 frontage in Town of Georgia, VT.

**Program**

**Offices**

**68'x15'**

**1,020 gsf**

- Office-1
- Office-2
- Breakroom
- Bathroom-1
- Bathroom-2
- Conference for 10
- Laundry/Storage/Janitorial
- Mechanical/Sprinkler
- Electrical/I.T. Room
- Circulation

**Garage/Washbay**

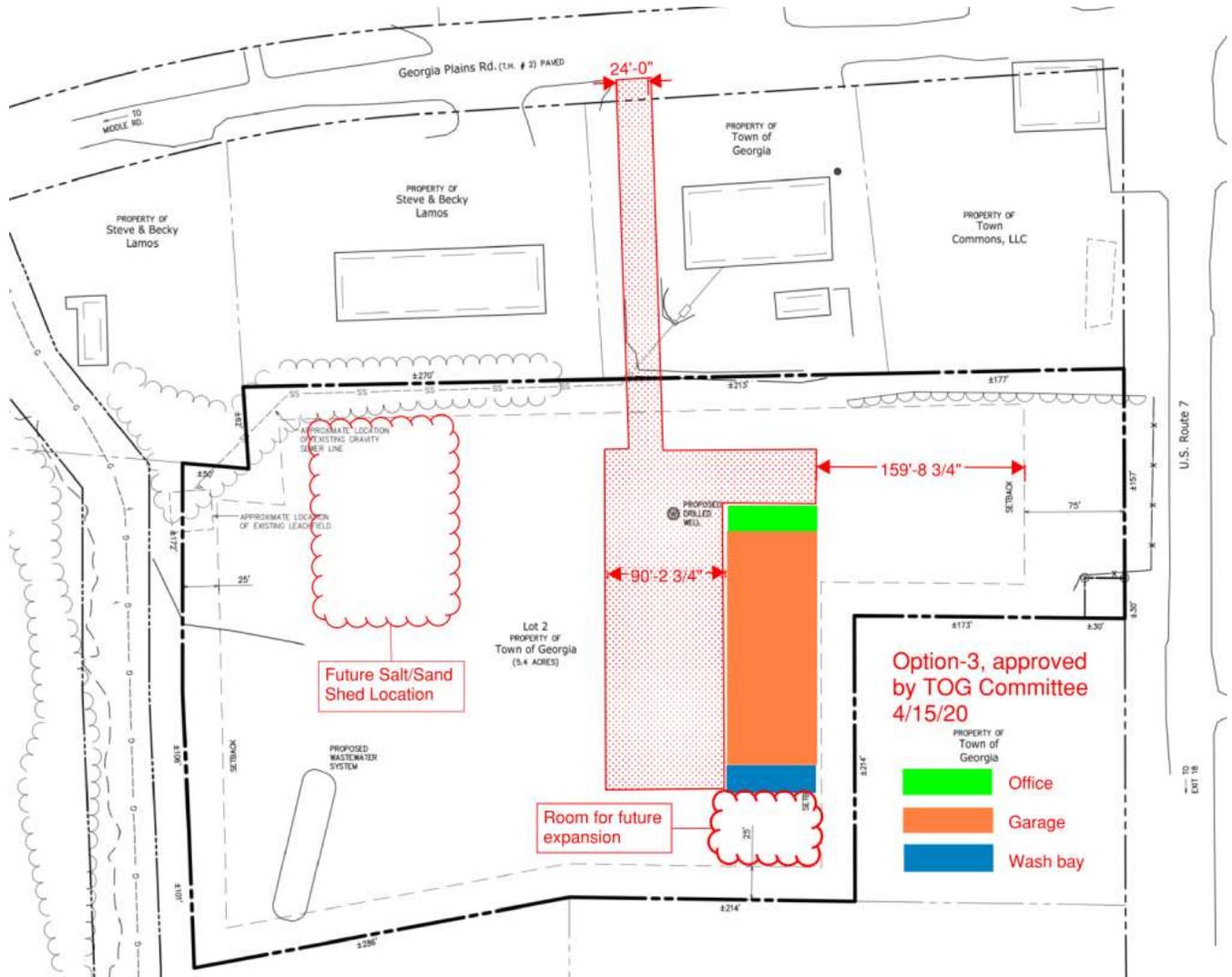
**68'x198'**

**13,464 gsf**

- 6 Bays-Excavation/Truck Equipment
- 1 Bay-Lift and Mechanics
- 1 Bay Storage & Shop
- 1 Washbay

**Gross Building SF 14,484 GSF**

After much discussion on 4/15/20, the group had decided on siting the new garage as shown below. This location will allow for future town buildings on the East of the garage and future garage expansion South of the washbay.



### Code Review

This estimate is based on a preliminary code review for the buildings to be type 2B non-combustible or 5B combustible, sprinkled with a mixed building use of Business Group B and S-1. Vermont has adopted IBC 2015 building code and Vermont 2015 Commercial Building Energy Standards.

### Basis of Design

The estimate is based on the following narrative that becomes the basis of design. The purpose is to provide a brief description of the general intent of the buildings and how they were estimated. Additional details and quantities are included in the estimate report. It is the Garage Committee's desire that the building is architecturally fitting to the area in Town of Georgia Center with New England style.

#### A. Substructure

1. Building excavation and pad preparation included.
2. Foundation work to be cast-in-place concrete for footings and frost wall.
3. Slab-on-grade in garage is 6", slab-on-grade for office area is 4" with wire mesh.
4. Footing linear drain.

#### B. Building Core & Shell

1. The building structure consists of a pre-engineered steel with 4" sandwich metal roof and 3" sandwich metal wall panels.
2. Windows are assumed as standard 3'x5' double hung, either vinyl, aluminum, metal or fiberglass.
3. Overhead doors consist of primarily sized 14' hx16'w electric powered with insulated glass window.
4. All exterior service doors are insulated hollow metal with welded hollow metal frames and standard commercial grade hardware.
5. Security locks excluded.

#### C. Interior Finishes

1. All interior walls constructed of metal studs, 5/8" gypsum, mud/taped, prime painted with 2 coats of finish.
2. All floor finishes to receive vinyl sheet/plank with vinyl base.
3. All interior doors to receive KD metal frames, solid core wood doors, 5"x20" vision panel and commercial grade hardware.
4. Drywall returns at windows with vinyl sill.
5. Fire extinguisher cabinets, standard toilet accessories, standard ADA signage.
6. Washbay is constructed of 8' high metal studs, wash side covered with Nudo FiberCorr panels, garage side plywood.
7. Glazing included.
8. Interior bollards at overhead garage doors.

#### D. Services

1. Each bathroom to receive one prefabricated shower, one toilet tank toilet, one urinal and one sink.

2. Office area heating included as ducted heating and cooling with wall mount natural gas boiler and water heater.
3. Garage heating to include in-floor radiant heat with wall mount NG boiler and one gas fired make-up heaters.
4. Linear floor drains located in front of all overhead doors and two floor drains at storage area.
5. Standard power distribution and energy efficient light fixtures with occupancy sensors.
6. Life safety items such as smoke detectors, fire alarms, strobes and CO2 detectors are included.
7. Wet system fire sprinkler.
8. Air conditioning in office area only.
9. Locally monitored CCTV and security excluded.
10. A single vehicle Plymovent exhaust system is included.
11. Wall mount hand wash and eye wash/shower station.
12. Building water filtration system included, more for taste and smell mitigation.
13. Unit heater not required in washbay.

#### E. Equipment

1. Breakroom appliances include refrigerator, electric stove, recirculating hood, and microwave.
2. Breakroom cabinets 12' upper and lower units with p-lam countertops.
3. Six metal lockers.
4. Interior ADA signage and exterior building signage included.
5. NG hot water pressure washer included.
6. Truck lift and air compressor by owner.
7. Fueling dispenser to be relocated by owner.

#### F. Special Construction-Existing Garage

1. Reclad existing garage with R10 Insofast insulation board and LP SmartSide sheet siding. Cover existing windows.
2. Selective demo non-load bearing interior partitions where allowed.
3. Replace all exterior doors with new hollow metal insulated doors and commercial hardware.
4. Abandon existing sewer service but may keep water service.

#### G. Building Sitework

1. Onsite sewer mound system with pressurized sewer line and related pump station.
2. Power tie-in to Green Mt. Power.
3. Natural gas connection off Georgia Plains Rd.
4. 6" thick x 40' concrete apron included along overhead doors, length of building.

5. Asphalt paving for general parking and yard with site lighting.
6. Electronic entry security gate with remote opener.
7. Storm water management.
8. New drilled well.

#### Z. General

1. Most CM/GC firms will include General Conditions (GC) which covers the cost of staff managing the project, such as superintendents, foreman, project manager, etc. Temporary services such as job trailer, power and water and jobsite related office equipment and technology is part of the GC cost.
2. General Requirements (GR) tend to be cost that do not belong to the typical cost of work items. GR cost can be dumpsters, temporary toilets, expendable tools and project wide safety construction.
3. The following allowances were included in the estimate.
  - (i) Break room appliances-\$1,200
  - (ii) Landscaping-\$5,000.
4. Contractor soft cost included are:
  - (i) Profit & overhead
  - (ii) Insurance
  - (iii) Payment & performance bond
5. Owner soft cost items included are:
  - (i) Design fees for geotech, architectural, civil, structural, mechanical, electrical, plumbing, fire protection and special inspections.
  - (ii) Project management
  - (iii) Permits
  - (iv) Builders risk insurance
  - (v) Owner contingency

#### Exclusions/Qualifications

The following items are not included in this estimate.

1. Impact fees, connection fees
2. Security system and keying
3. Owner past cost related to this project

Attached is a detailed estimate based on the estimate narrative and historical costs. But, because most folks want to know the bottom line first, here is the cost summary.

**Cost Summary**

Building & Sitework	\$2,510,872
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Real Estate  
Business

**Conceptual Estimate 1.1**  
**30-Apr-20**

**Owner:** Town of Georgia  
**Project:** Highway Garage  
**Type:** New Construction  
**Plans:** Siting Plan Option-3

14,500 GSF

8-May-20

Uniformat	Description	Qty	Unit	Total Cost	Unit Cost	Notes
Z	GENERAL CONDITIONS	14,500	SF	87,000	6.00	
Z	GENERAL REQUIREMENTS	14,500	SF	19,575	1.35	
A	SUBSTRUCTURE	14,500	SF	318,944	22.00	
B	SHELL	14,500	SF	695,976	48.00	
C	INTERIORS	14,500	SF	60,550	4.18	
D	SERVICES	14,500	SF	444,750	30.67	
E	EQUIPMENT & FURNISHINGS	14,500	SF	19,300	1.33	
F	SPECIAL CONSTRUCTION & DEMO	14,500	SF	48,990	3.38	
G	BUILDING SITEWORK	14,500	SF	438,505	30.24	
Z	CONTRACTOR SOFT COST	14,500	SF	257,716	17.77	
		<b>14,500</b>	<b>GSF</b>	<b>2,391,306</b>	<b>164.92</b>	<b>0</b>

Estimating Contingency	119,565	5.00%	8.25
<b>Construction Cost</b>	<b>119,565</b>	<b>2,510,872</b>	<b>173.16</b>

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Construction  
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Business

**Conceptual Estimate 1.1**

30-Apr-20

**Owner:** Town of Georgia

**Project:** Highway Garage

**Type:** New Construction

14,500 GSF

30-Apr-20

Uniformat	Description	Qty	Unit	Total	Total Unit Cost
<b>Z</b>	<b>General Conditions</b>	<b>14,500</b>	<b>SF</b>	<b>87,000</b>	<b>6.00</b>
	General Conditions	14,500	sf	87,000	6.00
<b>Z</b>	<b>General Requirements</b>	<b>14,500</b>	<b>SF</b>	<b>19,575</b>	<b>1.35</b>
	General Cleanup	14,500	sf	7,250	0.50
	Final Cleanup	14,500	sf	3,625	0.25
	Dumpster	6	ea	5,100	850.00
	Tools & expendables	1	job	3,000	3,000.00
	Porta potty	10	mo	600	60.00
<b>A</b>	<b>SUBSTRUCTURE</b>	<b>14,500</b>	<b>SF</b>	<b>318,944</b>	<b>22.00</b>
	Building pad excavation & preparation	14,500	sf	145,000	10.00
	Stego wrap	14,500	sf	9,425	0.65
	Frost wall footing-24"x12"xL	58	cy	23,010	400.00
	Frost wall-5'x8"xL	105	cy	47,302	450.00
	6" slab on grade-garage	13,500	sf	87,750	6.50
	4" slab on grade-office	1,000	sf	4,900	4.90
	Footing linear drain	623	lf	1,557	2.50
<b>B</b>	<b>SHELL</b>	<b>14,500</b>	<b>SF</b>	<b>695,976</b>	<b>48.00</b>
	Pre-engineer steel package	14,500	sf	217,500	15.00
	Metal sandwich panels, 3" & 4"	30,509	sf	427,126	14.00
	Vinyl double hung windows 3'x5'	7	ea	4,550	650.00
	HM doors, frame, hardware	7	ea	8,400	1,200.00
	Insulated OHD 16'x14'h w/ operators	8	ea	38,400	4,800.00

<b>C</b>	<b>INTERIORS</b>	<b>14,500</b>	<b>SF</b>	<b>60,550</b>	<b>4.18</b>
	Interior general offices, restroom, support space partitions	1,000	sf	12,000	12.00
	Acoustical ceiling	1,000	sf	2,600	2.60
	Floor finishes	1,000	sf	4,000	4.00
	Painting	1,000	sf	1,500	1.50
	Hollow metal frame, wood doors, hardware	10	ea	15,000	1,500.00
	Glass & glazing	1	job	1,500	1,500.00
	Toilet accessories	2	ea	5,400	2,700.00
	Washbay wall, 4" metal studs, Nudo FiberCorr panels, plywood garage side, 8' tall	1,000	sf	12,250	12.25
	Interior garage bollards	18	ea	6,300	350.00
<b>D</b>	<b>SERVICES</b>	<b>14,500</b>	<b>SF</b>	<b>444,750</b>	<b>30.67</b>
D20	Plumbing: new bathroom, fixture counts	14,500	sf	101,500	7.00
D21	Plumbing: domestic water filtration system	1	job	2,500	2,500.00
D30	HVAC: office heat, ventilation, cooling, radiant floor heat	14,500	sf	188,500	13.00
D40	Fire Protection: wet system	14,500	sf	36,250	2.50
D50	Electrical: power, lighting, data, life safety	14,500	sf	116,000	8.00
<b>E</b>	<b>EQUIPMENT &amp; FURNISHINGS</b>	<b>14,500</b>	<b>SF</b>	<b>19,300</b>	<b>1.33</b>
	Kitchen appliances	1	ea	1,500	1,500.00
	Kitchen cabinets	20	lf	3,000	150.00
	Kitchen countertop	10	lf	600	60.00
	Employee lockers	6	ea	3,300	550.00
	Interior ADA signage	1	job	600	600.00
	Exterior building signage	1	job	1,300	1,300.00
	Hot water pressure washer	1	ea	9,000	9,000.00

Estimate  
Details

<b>F</b>	<b>SPECIAL CONSTRUCTION &amp; DEMO</b>	<b>14,500</b>	<b>SF</b>	<b>48,990</b>	<b>3.38</b>
	Reclad existing garage with Insofast R10, adhesive, LP Smartside sheet	5,440	sf	39,440	7.25
	Demo existing interior partitions	1	job	3,000	3,000.00
	Replace HM doors, hardware	3	ea	3,600	1,200.00
	Abandon water & sewer	1	job	750	750.00
	Replace culvert w/ 24" diameter	1	job	2,200	2,200.00
<b>G</b>	<b>BUILDING SITEWORK</b>	<b>14,500</b>	<b>SF</b>	<b>438,505</b>	<b>30.24</b>
	Site work, storm management, utilities, site lighting	14,500	sf	290,000	20.00
	Pump station w/ related equipment and mound system	1	ea	70,000	70,000.00
	Landscape allowance	1	job	5,000	5,000.00
	6" concrete pad @ OHD	7,920	sf	51,480	6.50
	4" concrete sidewalk	450	sf	2,025	4.50
	Drilled well	1	job	15,000	15,000.00
	Electronic gate w/ opener	1	ea	5,000	5,000.00
	<b>SUBTOTAL</b>	<b>14,500</b>	<b>SF</b>	<b>2,133,590</b>	<b>147.14</b>
<b>Z</b>	<b>CONTRACTOR SOFT COST</b>	<b>14,500</b>	<b>SF</b>	<b>257,716</b>	<b>17.77</b>
	Profit & overhead	10.00%		213,359	14.71
	Insurance	0.75%		16,002	1.10
	Bond	1.20%		28,355	1.96
	<b>TOTAL</b>	<b>14,500</b>	<b>SF</b>	<b>2,391,306</b>	<b>164.92</b>

Attached is a global project schedule identifying important milestones. The schedule outline includes high level tasks just up to town vote of the project. The primary milestones are Owner items, Meetings, Permits, Preconstruction, Design and Construction and are identified.

<b>Milestones</b>	<b>Dates</b>
1. Owner	
a. Approve Conceptual Program	04/15/20
b. Approve Conceptual Estimate and Program	04/29/20
c. Select Design Team	06/11/20
d. Approve Schematic Design	07/03/20
e. Approve Final Design & Budget	07/24/20
2. Meetings	
a. Public Forum #1	08/21/20
b. Public Forum #2	08/28/20
c. Town Vote	11/03/20
3. Permits	
a. State Permits	TBD
b. Local Permits	TBD
4. Preconstruction	
a. Prepare Conceptual Estimate 1.0	04/27/20
b. Prepare SD Estimate 2.0	07/24/20
5. Design	
a. Submit Design RFP	05/14/20
b. Design RFP Due	06/04/20
c. Complete Schematic Design	07/10/20

# Value Management Log

Below are options for the owner to consider. These options are either for saving cost or pricing that the owner has requested.

**Ascent Consulting LLC**  
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Construction  
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Business

## Value Management/VE Log

Town of Georgia  
Highway Garage  
Town of Georgia, VT

8-May-20  
VM Log Version 1.1.1

Prepared by: Matt Young

Item	Description	Cost	Owner Approved	Rejected	Pending	Notes
<b>Project Baseline Budget</b>						
1	Conceptual Estimate 1.1, dated 30-Apr-20.	\$ 2,957,167				
<b>Total</b>		<b>\$ 2,957,167</b>				
<b>GENERAL ITEMS/DESIGN CHANGES</b>						
	Delete 1 bay of garage, 1,500sf.	(\$ 117,000)		(\$ 117,000)		Rejected by committee on 5/6/20.
<b>A</b>	<b>SUBSTRUCTURE</b>					
<b>B</b>	<b>SHELL</b>					
B1	Replace pre-engineered steel structure with wood frame.	(\$ 87,000)		(\$ 87,000)		Rejected by committee on 5/6/20.
<b>C</b>	<b>INTERIORS</b>					
	Add mezzanine above office space, 1,000 sf.	\$ 32,500	Partial Design			Rejected by committee on 5/6/20, however use load bearing LGMF for future mezzanine.
<b>D</b>	<b>SERVICES</b>					
<b>E</b>	<b>EQUIPMENT &amp; FURNISHINGS</b>					
<b>F</b>	<b>SPECIAL CONSTRUCTION &amp; DEMO</b>					
<b>G</b>	<b>BUILDING SITEWORK</b>					
G1	Consider re-design of paving, include more gravel lots or recycled asphalt hard pact.	TBD				This can be priced accurately once design is more developed.
G2	Delete all asphalt paving, keep stone base.	TBD				This can be priced accurately once design is more developed.
G3	Replace exterior 6" concrete paving with asphalt.	(\$ 32,000)		(\$ 32,000)		Rejected by committee on 5/6/20.
<b>Z</b>	<b>GENERAL CONDITIONS/REQUIREMENTS</b>					
<b>GRAND TOTAL</b>		<b>(\$ 203,500)</b>	<b>\$0</b>	<b>(\$236,000)</b>	<b>\$0</b>	
<b>VM/VE STATUS SUMMARY</b>		<b>Potential Total Savings</b>	<b>Owner Approved</b>	<b>Rejected</b>	<b>Pending</b>	
		<b>(\$ 203,500)</b>	<b>\$0</b>	<b>(\$236,000)</b>	<b>\$0</b>	
		<b>Total</b>	<b>\$0</b>	<b>(\$236,000)</b>	<b>\$0</b>	
		<b>-6.88%</b>	<b>0%</b>	<b>115.97%</b>	<b>0.00%</b>	

**GENERAL NOTES:**

1.) THIS PLAN IS NOT THE RESULT OF A BOUNDARY SURVEY. LANDOWNER SHALL VERIFY BOUNDARIES PRIOR TO COMMENCING SITE WORK AND NOTIFY ENGINEER OF ANY SIGNIFICANT DEVIATIONS FROM THIS PLAN. PROPERTY LINE INFORMATION TAKEN FROM A PLAN TITLED "SUBDIVISION PLAT" FOR GARY F. & OLIVE B. GILMOND, CREATED BY BUTTON PROFESSIONAL LAND SURVEYORS, P.C., AND DATED JULY 18, 2019.

2.) CONTRACTOR TO NOTIFY DIGSAFE AND ALL OTHER UTILITIES BEFORE COMMENCING CONSTRUCTION TO VERIFY UTILITY LOCATIONS. (1-888-DIG-SAFE).

**SITE NOTES:**

1.) NO HEAVY EQUIPMENT OR VEHICLES SHALL BE OPERATED UPON AREA OF PROPOSED MOUND SYSTEM, AND AREA 25 FT. DOWNSLOPE OF THE PROPOSED MOUND SYSTEM.

HOLDING TANKS SIZE CRITERIA	
FOR WASHBAY HOLDING TANK	FOR FLOOR DRAIN HOLDING TANK
TOTAL WASHES PER DAY: 3	TOTAL SERVICE BAYS: 6
GALLONS PER WASH: 75	GALLONS PER SERVICE BAY: 5
DESIGN FLOW: (75 GAL./WASH)(3 WASHES/DAY) = 225gpd	DESIGN FLOW: (5 GAL./BAY)(6 SERVICE BAYS) = 30gpd
14 DAYS OF STORAGE REQUIRED (225gpd)(14) = 3,150gal	14 DAYS OF STORAGE REQUIRED (30gpd)(14) = 420gal
3500gal HOLDING TANK PROPOSED	1000gal HOLDING TANK PROPOSED
<b>75% ALARM FLOAT SETTING</b>	<b>75% ALARM FLOAT SETTING</b>
75% OF 3,500gal = 2,625gal	75% OF 1,000gal = 750gal
INTERIOR DIMENSIONS OF TANK = 14'x7'	INTERIOR DIMENSIONS OF TANK = 10'x5'
75% ALARM FLOAT TO BE SET 43" OFF FLOOR OF TANK (TOTAL INTERIOR DEPTH OF TANK = 72")	75% ALARM FLOAT TO BE SET 24" OFF FLOOR OF TANK (TOTAL INTERIOR DEPTH OF TANK = 48")

**HOLDING TANK FINAL DISPOSAL INFORMATION:**

- 1.) **1,000gal FLOOR DRAIN HOLDING TANK:**  
HOLDING TANK TO BE PUMPED OUT AS NEEDED BY A QUALIFIED HAULER. THE HOLDING TANK CONTENTS MUST BE DISPOSED OF AT AN APPROVED DISPOSAL FACILITY (I.E. A MUNICIPAL WASTEWATER FACILITY)
- 2.) **3,500gal WASHBAY HOLDING TANK:**  
OPERATIONS & DISPOSAL TO FOLLOW SECTION 4 OF THE STATE OF VERMONT ENVIRONMENTAL FACT SHEET FOR WASTEWATER DISCHARGES FROM VEHICLE WASHING. IF ALL OF SECTION 4 CAN NOT BE FOLLOWED THEN THE HOLDING TANK NEEDS TO BE PUMPED OUT AS NEEDED BY A QUALIFIED HAULER. THE HOLDING TANK CONTENTS MUST BE DISPOSED OF AT AN APPROVED DISPOSAL FACILITY (I.E. A MUNICIPAL WASTEWATER FACILITY)

**ZONING DATA**

Zoned: AR2 Residential Medium Density District  
Existing Land Use: Vacant (Pasture)  
Proposed Land Use: Commercial (Town Garage)

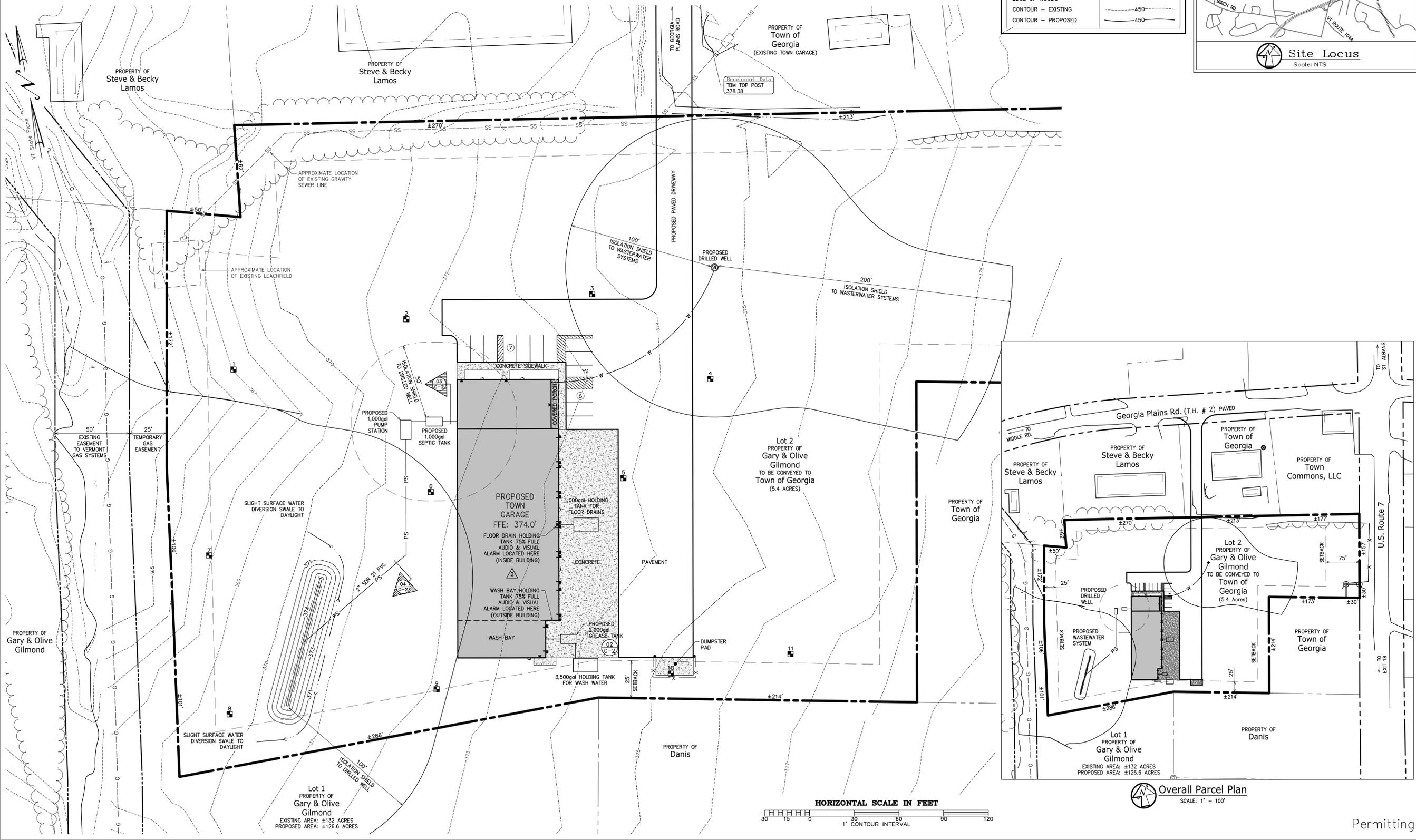
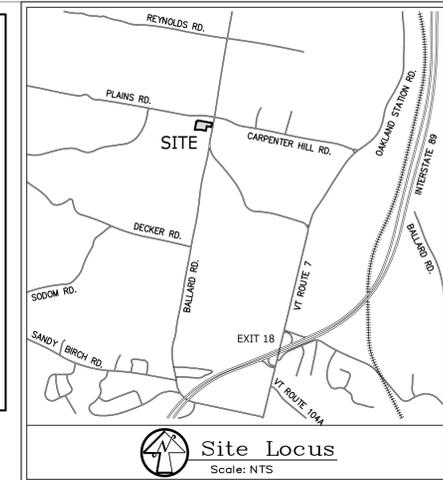
	Requirements	Proposed
Min. Lot Area	2 Acre	5.4 Acres
Min. Lot Frontage	150 ft	±187 ft
Front Yard Setback	75 ft	±443 ft
Side Yard Setback	25 ft	±33 ft
Rear Yard Setback	25 ft	±190 ft
Max. Building Height	35 ft	-

Source: 2012 Fairfield Subdivision & Zoning Bylaws

Note:  
BOUNDARY LINE INFORMATION TAKEN FROM PLAT TITLED "MAP OF BOUNDARY SURVEY" PREPARED BY CROSS CONSULTING ENGINEERS FOR ROMEO & HELMA PION TRUST, DATED APRIL 4, 2011

**LEGEND**

WELL	⊕
UTILITY POLE	⊕
ELEVATION BENCHMARK	⊕
SOIL TEST PIT	⊕
PERCOLATION TEST	⊕
PROPERTY LINE	---
RIGHT-OF-WAY	---
CULVERT - STORMDRAIN	---
EX. GRAVITY SANITARY SEWER	SS
EX. WATER MAIN/SERVICE	W
OVERHEAD UTILITY	OU
PROPOSED WATER LINE	W
PROPOSED GRAVITY SEWER	SS
EDGE OF WOODS	~
CONTOUR - EXISTING	450
CONTOUR - PROPOSED	450



Q:\2019 Drawings\19064-Town Of Georgia, New Town Garage\Current\C-1 Wastewater Site Plan.dwg Plotted: 10/16/2019 11:10:42 AM

PROJECT: 19064  
DATE: August 27, 2019  
DESIGN: PG  
DRAWN: RHW  
CHECKED: PHC  
APPROVED: PHC

CC CONSULTING ENGINEERS, P.C.  
103 Fairfax Rd.  
St. Albans, Vermont 05478  
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Cross Consulting Engineers, P.C.

Site Plan

Town Of Georgia  
Georgia, VT

Proposed Town Garage

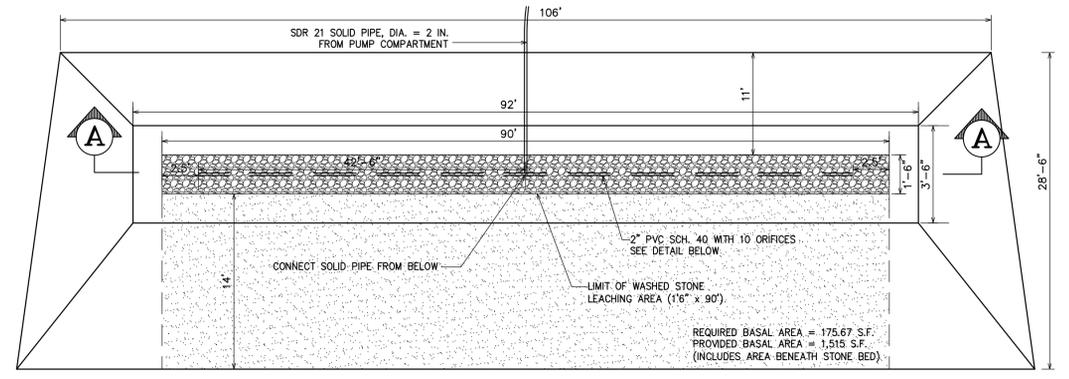
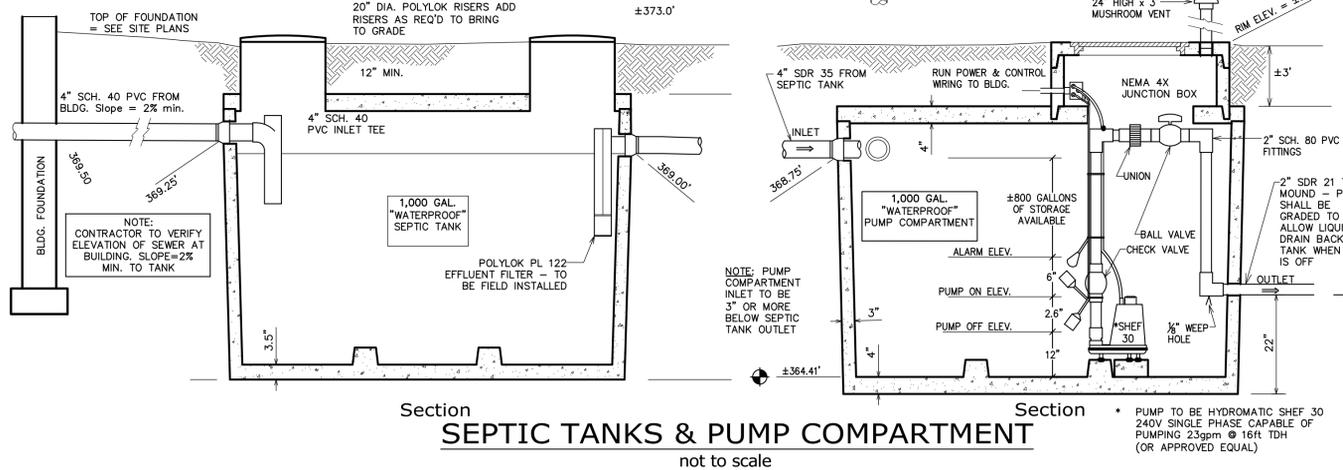
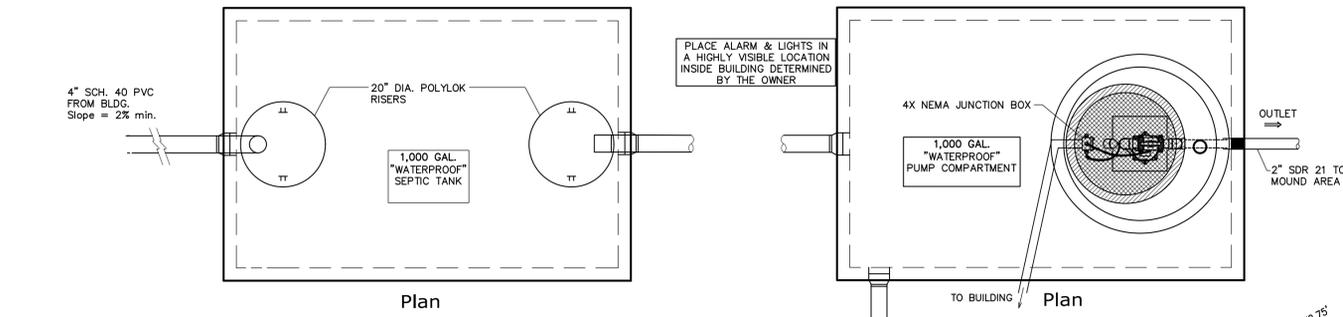
U.S. Route 7  
Georgia, VT

CIVIL

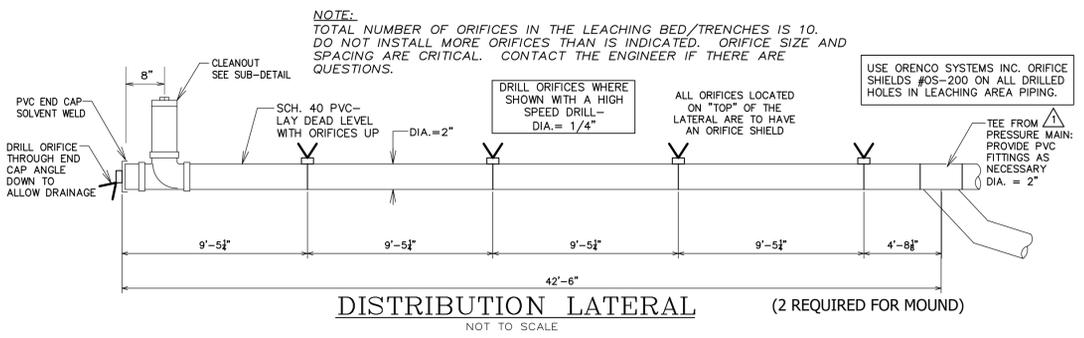
C-1

Permitting

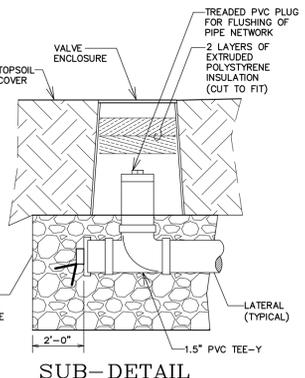
2019-09-16: LOT AND ACREAGE INFORMATION PER ANR COMMENTS  
2019-10-14: REVISED PER ANR COMMENTS



**PRIMARY LEACHING AREA**  
NOT TO SCALE



**DISTRIBUTION LATERAL**  
NOT TO SCALE (2 REQUIRED FOR MOUND)



**01 Lateral Flushing Access**  
NOT TO SCALE

**DESIGN CRITERIA FOR PROPOSED BUILDING**

TYPE OF ESTABLISHMENT: TOWN GARAGE  
 TOTAL EMPLOYEES: 10  
 DESIGN FLOW: (13 GAL./DAY/EMPLOYEE)(10 EMPLOYEES) = 130 GPD

GARBAGE GRINDER: NONE  
 SEPTIC TANK PROPOSED: NEW 1000 GALLON

LEACHING AREA: PRESSURIZED MOUND

MINIMUM BED SIZE BASED UPON MAXIMUM APPLICATION RATE OF 1.0 GAL./DAY/S.F. (130 GAL./DAY) / (1.0 GAL./DAY/S.F.) = 130 S.F.

TRENCH SIZE PROVIDED = 1.5 X 90 = 135 S.F.  
 135 S.F. > 130 S.F. REQUIRED

MINIMUM REQUIRED EFFECTIVE BASAL AREA USING MAXIMUM APPLICATION RATE OF 0.74 GAL./DAY/S.F. = 175.7 S.F.  
 BASAL AREA PROVIDED = 1,515 S.F.

DOSE VOLUME TO LEACHFIELD VIA PUMP STATION POTABLE WATER SUPPLY RULES SPECIFY A MINIMUM OF 4 DOSES/DAY  
 209gpd / 4 DOSE/DAY = 52.25 GAL  
 + 28.25gal OF DRAW BACK = 58.5GAL/DOSE TO THE LEACHFIELD

**Town Garage Desktop Mounding Analysis Calculating the Linear Loading Rate**

THE LINEAR LOADING RATE IS DETERMINED BY USING TABLE 9-14, LINEAR LOADING RATE FACTORS (f), AND THE AVAILABLE SOIL THICKNESS FOR GROUNDWATER MOUNDING (h)

WITH 2-4% SLOPES IN THE AREA OF THE PROPOSED LEACHFIELD, FINE SANDY LOAM SOILS, THE (f) = 4.4

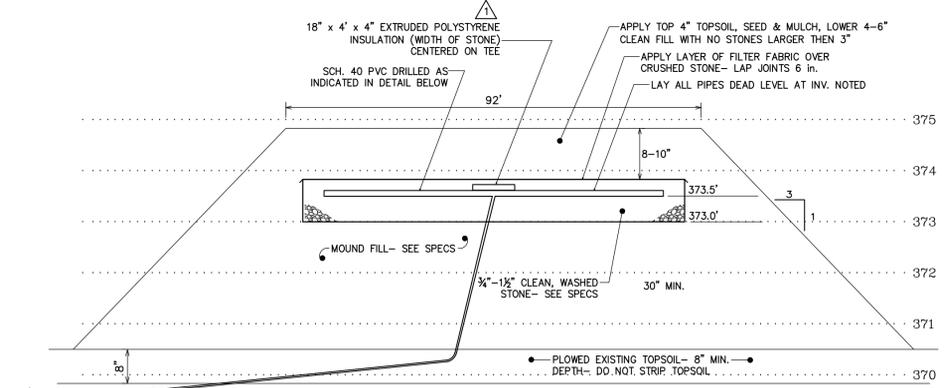
WITH 10 INCHES TO THE SEASONAL HIGH GROUNDWATER TABLE, MINUS 6 INCHES OF UNSATURATED SOIL NEEDED TO BE MAINTAINED BETWEEN THE BOTTOM OF THE SYSTEM AND THE INDUCED MOUNDING BENEATH THE SYSTEM.

THE (h) = 10 INCHES MINUS 6 INCHES = 4 INCHES OR 0.33 FEET

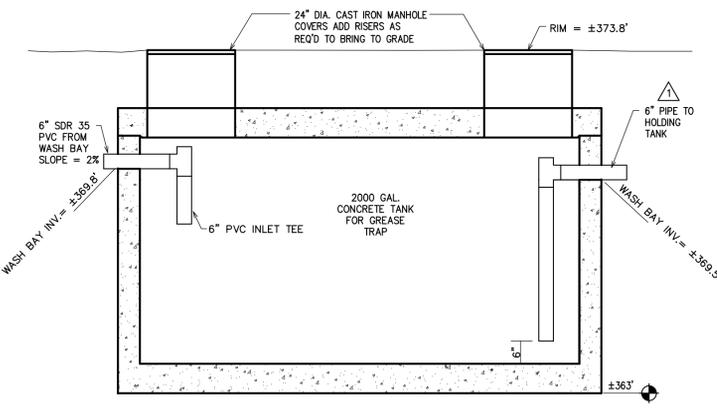
LINEAR LOADING RATE LLR = (h)(f)  
 LLR = (0.33)(4.4)  
 LLR = 1.452gpd/lf

THE MINIMUM SYSTEM LENGTH IS CALCULATED BY DIVIDING THE DESIGN FLOW BY THE LINEAR LOADING RATE.  
 THE MINIMUM LENGTH OF THE SYSTEM = 130gpd/1.452gpd/lf = 89.5lf

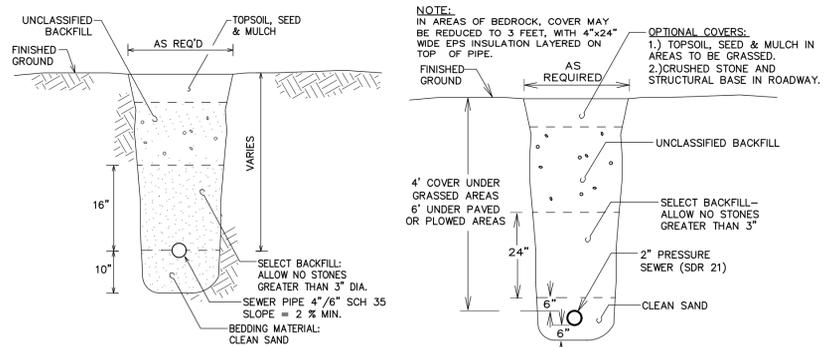
A SINGLE TRENCH SYSTEM IS TO BE USED. 1.5'x90' TRENCH IS PROPOSED



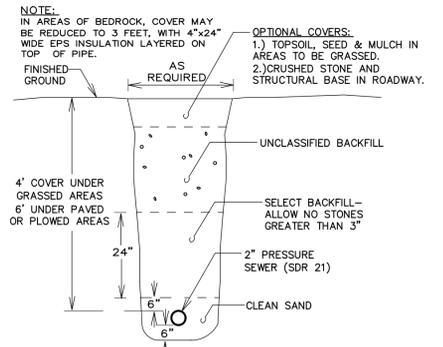
**SECTION A-A**  
NOT TO SCALE



**02 2000gal Oil & Grease Chamber**  
NOT TO SCALE



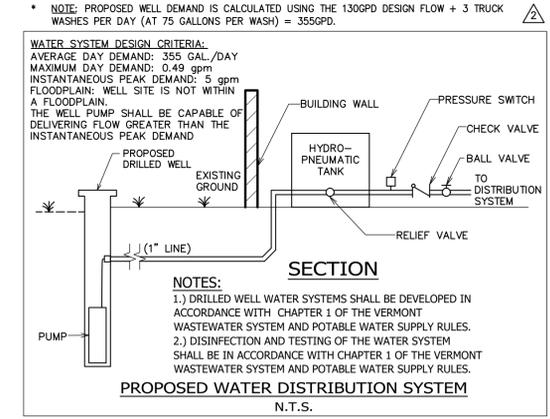
**03 Gravity Sewer Trench**  
NOT TO SCALE



**04 Pressure Sewer Trench**  
NOT TO SCALE

**MOUND FILL SPECIFICATIONS TABLE A**

(1)		(2)		(3)	
Sieve Number	Percent Passing	Sieve Number	Percent Passing	Sieve Number	Percent Passing
10	85-100	4	95-100	10	85-100
40	25-75	8	80-100	40	30-50
60	0-30	16	50-85	200	0-10
100	0-10	30	25-60		
200	0-5	50	10-30		
		100	2-10		



**PROPOSED WATER DISTRIBUTION SYSTEM**  
N.T.S.