



1.5

TOWNSEND WATER DEPARTMENT
540 Main Street West Townsend, Massachusetts 01474

Michael MacEachern, Chairman

Nathan Mattila, Vice-Chairman

Lance Lewand, Clerk

Paul L. Rafuse,
Water Superintendent

(978) 597-2212
Fax (978) 597-5561

WATER COMMISSIONERS MEETING MINUTES

Wednesday, May 11, 2016 - 5:30P.M.

Water Department 540 Main Street, Meeting Room

I. PRELIMINARIES:

- 1.1 Mm CALLED THE MEETING TO ORDER AT 5:30 pm AT 540 Main Street.
- 1.2 Roll call showed Members Present: MM - Michael MacEachern, NM -Nathan Mattila and LL- Lance Lewand.
Guest Present: Paul Rafuse and Brenda Boudreau.
- 1.3 MM announced that the meeting is being tape recorded
- 1.4 Chairman's additions or deletions.-None
- 1.5 Review/Approve meeting minutes -None
- 1.6 Review correspondence. None

II. APPOINTMENTS:

- 2.1 Meeting with the DPW committee. LL suggested that we email the DPW committee requesting what will be discussed on the agenda 48 hours in advance.

III. MEETING BUSINESS:

- 3.1 Reorganize the Board. **LL made a motion to reorganize the Board as follows: Nathan Mattila as the new Vice-Chairman Lance Lewand as clerk and to have Mike MacEachern remain as Chairman. NM seconded. Unanimous vote.**
- 3.2 Review/Discuss Articles acted upon at Town Meeting. The Board discussed/reviewed all articles that had passed at Town Meeting.
- 3.3 Close out several Water and Special Projects accounts and transfer remaining balances into System Enhancements. See recommended motion attached. (Votes may be taken). Tabled. Paul is waiting for further instructions from the town accountant.
- 3.4 Amend Rules and Reg's to include new Water Restriction By-Law approved at 5/3/2016 Town Meeting. (Votes may be taken). **LL motioned to accept the draft water use restrictions as written to the Rules and Regulations including title change. NM seconded. Unanimous vote.**
- 3.5 Review/Discuss Highland St. storage tank improvements project. (votes may be taken) After reviewing the Board requested Paul to get more quotes.
- 3.6 Review/Discuss Proposal for repairs and upgrades on the Fitchburg Rd. tank. (Votes may be taken)Paul reported that Scott Kelly will be performing an adhesion test ASAP to see if we can move forward. Quotes will be sent out to five contractors. **Once we receive the quotes Paul will email them to the BOWC for review.**
- 3.7 Review/Discuss revised proposal for test well installation at Cross St. station. The Board reviewed and revised the proposal from Maher Services to test and install a new well north from existing well in the amount of \$5,286.00.
- 3.8 Request to purchase disinfectant booster system from Medora. MM and the Board felt there was no need for the booster system at this time.
- 3.9 Refund to acct#60791, \$350.00, Townsend Fire Department, 13 Elm Street RE: Overpaid. NM made a motion to refund the TFD \$350.00. MM seconded. Unanimous vote.

- 3.10 Refund to acct#60918, 150.00, 224 Main Street, RE: Has been charged for 3 unit charges and only has two.
NM made a motion to refund Townsend Package Store \$150.00. LL seconded. Unanimous vote.
- 3.11 Adjust acct# 1790, 30 Ash Street, \$4.93 RE: EZ Bill transfer error. Nm made a motion to adjust \$4.93 to acct# 1790. LL seconded. Unanimous vote.

IV. COMMISSIONERS UPDATES AND REPORTS.

4.1

V. WATER SUPERINTENDENTS UPDATES AND REPORTS.

5.1

VI. OFFICE UPDATES AND REPORTS.

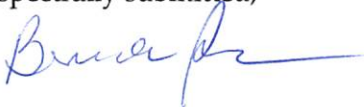
- 6.1 The Board reviewed and signed Bills Payable Warrants.
6.3 The Board reviewed and signed April Schedule of Bills Receivable report.
6.4 The Board reviewed April Accounts Receivable report.
6.5 The Board reviewed April Appropriation balance report.

VII. ADJOURNMENT:

NM made a motion to review reports and sign bill payable warrants out of session. LL seconded. Unanimous vote.

MM adjourned the meeting at 6:40P.M.

Respectfully submitted,



Brenda Boudreau

WATER DEPARTMENT MEETING

DATE: May 11, 2016

NAME

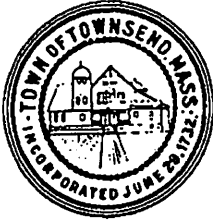
ADDRESS

PH/EMAIL

Todd A Melanson

12 Clement Rd

978-597-1874



Office of the Town Clerk
Town of Townsend
272 Main Street
Townsend, MA 01469

Kathleen M. Spofford
Town Clerk
Carolyn Smart
Assistant Town Clerk

Office: (978) 597-1704
Fax: (978) 597-8135

May 9, 2016

STREET ACCEPTANCES

At the Annual Town Meeting on May 3, 2016 the following streets were accepted as Town Ways:

Alyssa Drive

Extending westerly from Ash Street with a length of approximately 3,350 feet and a right of way width of 50 feet; to include three drainage easements labeled "Drainage Easement 1", "Drainage Easement 2" and "Drainage Easement 3" as shown on a plan entitled "Plan of Easement – Alyssa Drive".

Trophy Avenue

Having an approximate length of 504 feet and a right of way of 50 feet; including a drainage easement on Lot 7 of approximately 8,993 square feet, access easement A on Lot 7 to open space of approximately 3,117 square feet and access easement B on Lot 7 to open space of approximately 16,780 square feet. Said proposed way is to be called Trophy Avenue.

Respectfully Submitted,

Kathleen M. Spofford
Kathleen M. Spofford,
Town Clerk

ARTICLE 9

To see if the Town will vote to appropriate the sum of \$856,813.71 to operate the Water Department for Fiscal Year 2017 and that \$667,742.00 of this sum come from Water Enterprise Fund revenues and, in order to fund the cost of inter-municipal expenses, that \$189,071.71 of this sum be appropriated in the general fund and funded from enterprise revenues, or take any other action in relation thereto.

SUBMITTED BY: Board of Water Commissioners

APP

ARTICLE 9 (MOTION)

I move that the Town vote to appropriate the sum of \$856,813.71 to operate the Water Department for Fiscal Year 2017 and that \$667,742.00 of this sum come from Water Enterprise Fund revenues and, in order to fund the cost of inter-municipal expenses, that \$189,071.71 of this sum be appropriated in the general fund and funded from enterprise revenues.

Read By: Paul Rafuse Date: 5/3/2016 Vote: Unanimous

ARTICLE 15

To see if the Town will vote to transfer from the Water Enterprise Retained Earnings Account the sum of \$40,000.00 for the for the purpose of replacing and upgrading the Witches Brook Pump Station #1, or take any other action in relation thereto.

SUBMITTED BY: Board of Water Commissioners

APP

ARTICLE 15 (MOTION)

I move that the Town vote to transfer from Water Enterprise Retained Earnings Account the sum of \$40,000.00 for the purpose of replacing and upgrading the Witch's Brook Pump Station # 1.

Read By: Paul Rafuse Date: 5/3/2016 Vote: Unanimous

ARTICLE 16

To see if the Town will vote to transfer from the Water Enterprise Retained Earnings Account the sum of \$300,000.00 for the for the purpose of constructing and developing a replacement well at Cross Street to address high iron and manganese, or take any other action in relation thereto.

SUBMITTED BY: Board of Water Commissioners

ARTICLE 16 (MOTION)

I move that the Town vote to take no action on article 16.

Read By: Paul Rafuse Date: 5/3/2016 Vote: Unanimous

NO ACTION

ARTICLE 17

To see if the Town will vote to transfer from the Water Enterprise Retained Earnings Account the sum of \$400,000.00 for the for the purpose of rehabilitation and maintenance of the Fitchburg Road storage tank, or take any other action in relation thereto.

SUBMITTED BY: Board of Water Commissioners

ARTICLE 17 (MOTION)

I move that the Town vote to take no action on article 17.

Read By: Paul Rafuse Date: 5/3/2016 Vote: Unanimous

No ACTION -

ARTICLE 18

To see if the Town will vote to transfer from the Water Enterprise Retained Earnings Account the sum of \$45,000.00 for the for the purpose of repair and maintenance of the Highland St. storage tank, or take any other action in relation thereto.

SUBMITTED BY: Board of Water Commissioners

Amended to \$75,000 -

ARTICLE 18 (MOTION)

I move that the Town vote to transfer from the Water Retained Earnings Account the sum of \$75,000.00 for the purpose of repair and maintenance of the Highland St. storage tank.

Read By: Paul Rafuse Date: 5/3/2016 Vote: Unanimous

Appd.

ANNUAL TOWN MEETING MAY 3, 2016

ARTICLE 28

To see if the Town will vote to amend the General Bylaws to add Chapter 87 entitled "Outdoor Water Use Bylaw" by adopting the following:

CHAPTER 87: OUTDOOR WATER USE BYLAW

Section 1: Authority

This Bylaw is adopted by the Town of Townsend under its police powers pursuant to the Home Rule Amendment of the Massachusetts Constitution, Article LXXXIX, to protect public health and welfare and pursuant to its powers under M.G.L. c.40, §§21 et seq. and implements the Town's authority to regulate water use pursuant to M.G.L. c.41, §69B. This bylaw also implements the Town's authority under M.G.L. c. 40, §41A, conditioned upon a declaration of water supply emergency issued by the Department of Environmental Protection (DEP) under G.L. c. 21G, §15-17. This bylaw is also intended to implement other water conservation requirements of M.G.L. c. 21G, the "Massachusetts Water Management Act" and its regulations promulgated at 310 CMR 36.00.

Section 2: Purpose

The purpose of this bylaw is to protect, preserve and maintain the public health, safety, welfare and the environment whenever there is in force a "State of Water Supply Conservation" or a "State of Water Supply Emergency" by ensuring an adequate supply of water for drinking and fire protection and to protect the quality and quantity of water in local aquatic habitats such as ponds, rivers and wetlands. This purpose will be accomplished by providing for the imposition and enforcement of any duly implemented restrictions, requirements, provisions or conditions on water use imposed by the Town of Townsend in accordance with this bylaw and/or by the DEP under its state law authorities.

Section 3: Applicability

All Town residents that are customers of the public water supply system shall be subject to this bylaw. This bylaw shall be in effect May 1st- September 30th.

Section 4: Definitions

Agriculture shall mean farming in all its branches as defined at M.G.L. c. 128, § 1A.

Automatic sprinkler system shall mean any system for watering vegetation other than a hand-held hose or a bucket.

Nonessential outdoor water use shall mean those uses that are not required:

1. for health or safety reasons;
2. by regulation;
3. for the production of food and fiber;
4. for the maintenance of livestock; or
5. to meet the core functions of a business (for example, irrigation by golf courses as necessary to maintain tees and greens, and limited fairway watering, or irrigation by plant nurseries or agricultural operations as necessary to maintain stock or establish new plantings, wash equipment to prevent damage and/or maintain performance, pest management and plant cooling).

Nonessential outdoor water uses that are subject to mandatory restrictions include:

1. irrigation of lawns via sprinklers or automatic irrigation systems;
2. washing of vehicles, except in a commercial car wash or as necessary for operator safety or to prevent damage and/or maintain performance of agricultural or construction vehicles or equipment; and
3. washing of exterior building surfaces, parking lots, driveways or sidewalks, except as necessary

to apply paint, preservatives, stucco, pavement or cement.

Exceptions to nonessential outdoor water uses are:

1. irrigation of public parks and recreation fields outside the hours of 9 AM to 5 PM and;
 2. irrigation of lawns, gardens, flowers and ornamental plants by means of a hand-held hose outside the hours of 9 AM to 5 PM and;
 3. Irrigation outside the hours of 9 AM to 5 PM with harvested and stored stormwater runoff
- The following outdoor water uses are subject to review and approval by the Town of Townsend, through its Board of Water Commissioners or their designee:
1. irrigation to establish replanted or resodded lawn or plantings during the months of May through September;
 2. irrigation of newly planted lawns (seeded or sodded) in the current calendar year for homes or businesses newly constructed in the previous twelve months;
 3. Filling of privately owned outdoor pools.

Person shall mean any individual, corporation, trust, partnership, association, agency or authority, or other entity and any officer, employee, group or agent of such persons.

State of Water Supply Emergency shall mean a State of Water Supply Emergency declared by the Department of Environmental Protection under M.G.L. c.21G, §15-17.

State of Water Supply Conservation shall mean a State of Water Supply Conservation declared by the Town of Townsend pursuant to Section 5 of this by-law.

Water Customers shall mean all persons using the public water supply irrespective of that person's responsibility for billing purposes for use of the water.

Water Users shall mean all persons using water within the Town's Water Distribution System.

Section 5: Declaration of a State of Water Supply Conservation

The Town of Townsend, through its Board of Water Commissioners or their designee authorized to act as such, may declare a State of Water Supply Conservation upon a determination that conservation measures are appropriate to ensure an adequate supply of water for drinking and fire protection, to protect the quality and quantity of water in local aquatic habitats such as ponds, rivers and wetlands and to ensure compliance with the Water Management Act. Upon notification to the public that a declaration of a State of Water Supply Conservation has been declared, no person shall violate any provision, restriction, requirement or condition of the declaration. The Water Commissioners may designate the Water Department Superintendent or Town Administrator to declare a State of Water Supply Conservation at any time that conditions warrant. Public notice of a State of Water Conservation shall be given under Section 8 of this by-law before it may be enforced.

Section 6: Declaration of a State of Water Supply Emergency

Upon notification to the public that a declaration of a State of Water Supply Emergency has been issued by the Department of Environmental Protection, no person shall violate any provision, restriction, requirement, condition of any order approved or issued by the Department for the purpose of bringing about an end to the State of Water Supply Emergency.

Section 7: Restricted Water Uses

A declaration of a State of Water Supply Conservation and/or a State of Water Supply Emergency shall include one or more of the following restrictions, conditions, or requirements limiting nonessential outdoor water use by water customers as necessary to control the volume of water pumped each day,

except as provided as acceptable in Section 4. The applicable restrictions, conditions or requirements shall be included in the public notice required under Section 8.

A. Nonessential outdoor water use days: Nonessential outdoor water use is permitted only on the days per week specified in the State of Water Supply Emergency or State of Water Supply Conservation and public notice thereof. During a State of Water Supply Emergency or State of Water Supply Conservation, nonessential outdoor water use is restricted to two days or fewer per week.

B. Nonessential outdoor water use hours: nonessential outdoor water use is permitted only during the hourly periods specified in the declaration of a State of Water Supply Emergency or State of Water Supply Conservation and public notice thereof. At a minimum, nonessential outdoor water use is prohibited during the hours from 9AM to 5PM.

C. Nonessential outdoor water use method restriction: nonessential outdoor water use is restricted to a bucket or hand-held hose controlled by a nozzle.

D. Nonessential outdoor water use ban: Nonessential outdoor water use is prohibited at all times.

E. Automatic sprinkler system ban: The use of automatic sprinkler systems is prohibited.

Section 8: Public Notification of a State of Water Supply Conservation or State of Water Supply Emergency; Notification of DEP

A. Public Notification of a State of Water Supply Conservation - Notice to the public of all provisions, including all restrictions, requirements and conditions imposed by the Town of Townsend as part of a State of Water Supply Conservation shall be made as soon as possible, but no later than 48 hours following the declaration of a State Water Supply Conservation by publication in a newspaper of general circulation within the Town and by signage on major roadways or intersections. The Town of Townsend may also notify the public using other means determined to be appropriate (cable TV, reverse 911, email, etc.). Notification may also include email, Web sites, public service announcements on local media or other such means reasonably calculated to reach and inform all Water Users.

B. Public Notification of a State of Water Supply Emergency - Notice to the public of all provisions, including all restrictions, requirements and conditions imposed by a State of Water Supply Emergency declared by the Department shall be made by publication in a newspaper of general circulation with the Town and by signage on major roadways or intersections. The Town of Townsend may also notify the public using other means determined to be appropriate (cable TV, reverse 911, email, etc.). This notice shall be provided as soon as possible, but no later than 48 hours after the public water system receives notice of the Department's declaration of a State of Water Supply Emergency. Notification may also include email, Web sites, public service announcements on local media or other such means reasonably calculated to reach and inform all Water Users of the State of Water Supply Emergency.

C. Any restriction imposed under Section 5 or Section 6 or in the Department's State of Water Supply Emergency or Order shall not be effective until notification to the public is provided. Submittal of MassDEP's form "Notification of Water Use Restriction" shall be provided to the Massachusetts DEP within 14 days of the effective date of the restrictions, per MassDEP regulations (310 CMR 22.15(8)).

Section 9: Termination of a State of Water Supply Conservation; Notice

A State of Water Supply Conservation may be terminated by a majority vote of the Board of Water Commissioners or by decision of their designee upon a determination by either or both of them that the conditions requiring the State of Water Supply Conservation no longer exist. Public notification of the termination of a State of Water Supply Conservation shall be given in the same manner as is required in Section 8a) for notice of its imposition.

Section 10: Termination of a State of Water Supply Emergency; Notice

Upon notification to the Town of Townsend or Water Commissioners or their designee or to the Water Department that the declaration of a State of Water Supply Emergency has been terminated by the DEP, the public will be notified of the termination in the same manner as is required in Section 8B for notice of its imposition.

Section 11: Penalties

The Town through its Water Commissioners or their designee including the water superintendent, water technicians and/or building inspector may enforce this bylaw. Any person violating this by-law shall be liable to the Town in the amounts listed below:

- A. First violation: Verbal Warning
- B. Second violation: Written Warning
- C. Third violation: \$ 100
- D. Fourth and subsequent violations: \$ 200

Each day of violation shall constitute a separate offense. Fines shall be recovered by complaint before the District Court, or by non-criminal disposition in accordance with section 21D of chapter 40 of the general laws. For purposes of non-criminal disposition, the enforcing person shall be the water superintendent or the superintendent's designee. If a State of Water Supply Emergency has been declared the Water Commissioners may, in accordance with G.L. c. 40, s. 41A, shut off the water at the meter or the curb stop.

Section 12: Severability

The invalidity of any portion or provision of this by-law shall not invalidate any other portion or provision thereof.

Section 13: Controls on In-Ground Irrigation Systems

All In-Ground Irrigation Systems, including soil moisture sensor devices and backflow prevention devices must comply with Section 19 of the Townsend Water Department Rules, Regulations, and Rates.

Or take any other action in relation thereto.

SUBMITTED BY: Board of Water Commissioners

ARTICLE 28 (MOTION)

I move that the Town vote to amend the General Bylaws to add Chapter 87 entitled "Outdoor Water Use Bylaw" by adopting the following:

CHAPTER 87: OUTDOOR WATER USE BYLAW

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4. for the maintenance of livestock; or
5. to meet the core functions of a business (for example, irrigation by golf courses as necessary to maintain tees and greens, and limited fairway watering, or irrigation by plant nurseries or agricultural operations as necessary to maintain stock or establish new plantings, wash equipment to prevent damage and/or maintain performance, pest management and plant cooling).

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- B. Nonessential outdoor water use hours: nonessential outdoor water use is permitted only during the hourly periods specified in the declaration of a State of Water Supply Emergency or State of Water Supply Conservation and public notice thereof. At a minimum, nonessential outdoor water use is prohibited during the hours from 9AM to 5PM.
- C. Nonessential outdoor water use method restriction: nonessential outdoor water use is restricted to a bucket or hand-held hose controlled by a nozzle.
- D. Nonessential outdoor water use ban: Nonessential outdoor water use is prohibited at all times.
- E. Automatic sprinkler system ban: The use of automatic sprinkler systems is prohibited.

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- A. Public Notification of a State of Water Supply Conservation – Notice to the public of all provisions, including all restrictions, requirements and conditions imposed by the Town of Townsend as part of a State of Water Supply Conservation shall be made as soon as possible, but no later than 48 hours following the declaration of a State Water Supply Conservation by publication in a newspaper of general circulation within the Town and by signage on major roadways or intersections. The Town of Townsend may also notify the public using other means determined to be appropriate (cable TV, reverse 911, email, etc.). Notification may also include email, Web sites, public service announcements on local media or other such means reasonably calculated to reach and inform all Water Users.
- B. Public Notification of a State of Water Supply Emergency – Notice to the public of all provisions, including all restrictions, requirements and conditions imposed by a State of Water Supply Emergency declared by the Department shall be made by publication in a newspaper of general circulation with the Town and by signage on major roadways or intersections. The Town of Townsend may also notify the public using other means determined to be appropriate (cable TV, reverse 911, email, etc.). This notice shall be provided as soon as possible, but no later than 48 hours after the public water system receives notice of the Department’s declaration of a State of Water Supply Emergency. Notification may also include email, Web sites, public service announcements on local media or other such means reasonably calculated to reach and inform all Water Users of the State of Water Supply Emergency.
- C. Any restriction imposed under Section 5 or Section 6 or in the Department’s State of Water Supply Emergency or Order shall not be effective until notification to the public is provided. Submittal of MassDEP’s form “Notification of Water Use Restriction” shall be provided to the Massachusetts DEP within 14 days of the effective date of the restrictions, per MassDEP regulations (310 CMR 22.15(8)).

Section 9: Termination of a State of Water Supply Conservation; Notice

A State of Water Supply Conservation may be terminated by a majority vote of the Board of Water Commissioners or by decision of their designee upon a determination by either or both of them that the conditions requiring the State of Water Supply Conservation no longer exist. Public notification of the termination of a State of Water Supply Conservation shall be given in the same manner as is required in Section 8a) for notice of its imposition.

Section 10: Termination of a State of Water Supply Emergency; Notice

Upon notification to the Town of Townsend or Water Commissioners or their designee or to the Water Department that the declaration of a State of Water Supply Emergency has been terminated by the DEP, the public will be notified of the termination in the same manner as is required in Section 8B for notice of its imposition.

Section 11: Penalties

The Town through its Water Commissioners or their designee including the water superintendent, water technicians and/or building inspector may enforce this bylaw. Any person violating this by-law shall be liable to the Town in the amounts listed below:

- A. First violation: Verbal Warning
- B. Second violation: Written Warning
- C. Third violation: \$ 100
- D. Fourth and subsequent violations: \$ 200

Each day of violation shall constitute a separate offense. Fines shall be recovered by complaint before the District Court, or by non-criminal disposition in accordance with section 21D of chapter 40 of the general laws. For purposes of non-criminal disposition, the enforcing person shall be the water superintendent or the superintendent's designee. If a State of Water Supply Emergency has been declared the Water Commissioners may, in accordance with G.L. c. 40, s. 41A, shut off the water at the meter or the curb stop.

Section 12: Severability

The invalidity of any portion or provision of this by-law shall not invalidate any other portion or provision thereof.

Section 13: Controls on In-Ground Irrigation Systems

All In-Ground Irrigation Systems, including soil moisture sensor devices and backflow prevention devices must comply with Section 19 of the Townsend Water Department Rules, Regulations, and Rates.

Read By: Paul Rafuse

Date: 5/3/2016

Vote: Approved By Majority

ANNUAL TOWN MEETING MAY 3, 2016

ARTICLE 29

To see if the Town will vote to amend the General Bylaws, Section 1-1 to insert a new section K, as follows:

K. Outdoor Water Use Bylaw.

(1) Enforcing Officers:

- (a) Water Superintendent
- (b) Water Technicians

(2) Fine Schedule:

- (a) First Offense: Verbal Warning
- (b) Second Offense: Written Warning
- (c) Third Offense: \$100
- (d) Fourth and Subsequent Offense(s): \$200

or take any other action relative thereto.

SUBMITTED BY: Board of Water Commissioners

ARTICLE 29 (MOTION)

I move that the Town vote to amend the General Bylaws, Section 1-1 to insert a new section K, as follows:

K. Outdoor Water Use Bylaw.

(1) Enforcing Officers:

- (a) Water Superintendent
- (b) Water Technicians

(2) Fine Schedule:

- (a) First Offense: Verbal Warning
- (b) Second Offense: Written Warning
- (c) Third Offense: \$100
- (d) Fourth and Subsequent Offense(s): \$200

or take any other action relative thereto.

Read By: Gordon Clark

Date: 5/3/2016

Vote: Unanimous

Approved
TM.
5/3/16

Motion to close out Accounts for Board of Water Commissioners at meeting on 5/9/2016:

I make a motion to close out the following accounts;

061-04-400-5009-0000-000	Main Street Station Upgrade	\$58,219.23
061-04-400-5013-0000-000	Water Main Extension	\$127,911.75
061-04-400-5014-0000-000	Well Development & Exploration	\$6,276.29
061-04-500-5806-2016-251	Water-A28ATM-5/15 New Vehicle	\$6,333.00
061-04-500-5850-2004-000	Equipment Replacement Fund	\$1,426.07

totaling \$200,166.34 and transfer this amount into account 061-04-400-5012-0000-000

System Enhancements

SECTION 12
WATER USE RESTRICTIONS

- 12.1 In order to protect, preserve and, maintain public health, safety and, welfare the Board of Water Commissioners under their authority and, the Massachusetts Department of Environmental Protection (MassDEP) shall annually implement seasonal outdoor water use restrictions in accordance with conditions within the Townsend Water Departments Water Withdrawal Permit issued by MassDEP under M.G.L. c. 21G the "Water Management Act". Outdoor water use restrictions shall be in force from May 1st - September 30th. Outdoor water use is permitted for "odd" numbered homes on "odd" numbered days and, "even" numbered homes on "even" numbered days. Outdoor water use is strictly prohibited during the day time hours between 9:00 AM - 5:00 PM. Any person/s violating this section shall be fined as follows:
- A. First violation: Verbal Warning
 - B. Second violation: Written Warning
 - C. Third violation: \$100
 - D. Forth and subsequent violations: \$200

Each day in violation shall constitute a separate offense.

Other levels of restrictions or emergencies may be declared by the Board of Water Commissioners or the MassDEP such as a Declaration of a State of Water Supply Conservation or a Declaration of a State of Water Supply Emergency detailing but, not limited to authority, purpose, public notification and, termination as described in and in accordance with Chapter 87: Outdoor Water Use ByLaw of the Towns General Bylaws.

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Deleted: USE OF WATER DURING THE DRY SEASON

Deleted: The use of water for lawns and gardens, subject to the discretion of the Superintendent of the Water Department, may be restricted during drought periods as follows: Water may be used in all parts of Town between the hours of 7:00 a.m. to 8:00 a.m. In addition, on the even numbered days of the month all residents on the East side of Route 13 may also use water from 5:00 p.m. to 8:00 p.m. On the odd numbered days of the month all residents on the West Side of Route 13 may also use water from 5:00 p.m. to 8:00 p.m. All sprinkling must cease immediately upon the sounding of a fire alarm and may not be resumed until the fire is out (all within the limits described previously).

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SECTION 13
VIOLATIONS

- 13.1 Any and all charges and fines levied by the Water Department in connection with these rules and regulations may be sued for and collected by the Board of Water Commissioners acting as agents for the Water Department.

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Deleted: 12.2 Customers will be notified by mail and through the local press when such restrictions are in force. Failure to comply with these regulations will result in assessment for extra water used. Takers will be notified in writing at the time of violation. Assessments will be added to the next water bill as follows First Notice, Written warning (no charge), Second Notice, Fifty Dollars (\$50.00), Third Notice, One Hundred Dollars (\$100.00). Each additional notice, One Hundred Dollars (\$100.00). Each twenty four hour day from 8:00 am. to 8:00 p.m. shall constitute a notice period.

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SECTION 14
CONTROL OF HYDRANTS

- 14.1 The Fire Department shall have control of the hydrants incase of fire. In no case will any other person(s) be permitted to operate or handle hydrants or other Water Department appurtenances without prior authorization by the Superintendent of the Water Department. All authorized use of fire hydrants other than to extinguish a fire by the Fire Department shall be metered. A hydrant meter shall be installed on the hydrant prior to use, by the Water Department personnel. Only The Fire Department shall obtain authorization from the Water Department at least two (2) days prior of any proposed use of hydrants for training or purposes other than to extinguish fires.

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- 14.2 Fee of \$200.00 per fire flow test.

- 14.3 All Hydrant use after November 1st shall be for emergencies or firefighting only. Any exceptions will be at the discretion of the Board of Water Commissioners.

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Concrete Tank Services

Inspection | Rehab | Retrofit

11 Teal Road, Wakefield, MA 01880 | 781.246.1133 | Fax 781.224.5163

3.5

April 27, 2016

Townsend Water Department
540 Main Street
West Townsend, MA

Attn: Paul Rafuse
Water Superintendent

RE: Concrete Water Storage Tank Rehabilitation
Townsend, MA

Dear Mr. Rafuse:

As requested we are pleased to provide the following budget estimates:

Clean Tank Exterior

Provide all labor, equipment, material and incidentals required to clean by high-pressure water blast the exterior surface of the exposed tank wall and dome including a rinse down using a minimum 5% chlorine solution to kill all mold and mildew.

Budget Estimate: \$20,000.00

Dome Access Hatches

Provide all labor, equipment, material and incidentals required to remove the three (3) existing dome access hatches and retrofit, as required, the existing curbs to install three (3) new aluminum USF hatches complete to the existing concrete hatch curbs.

Budget Estimate: \$7,500.00

Dome Vent

Provide all labor, equipment, material and incidentals required to remove the existing 30" concrete dome vent and retrofit, as required, the existing curb to install a new 30" fiberglass vent complete.

Budget Estimate: \$ 8,500.00



GridBee Mechanical Mixing System

Provide all labor, equipment, material and incidentals required to furnish and install a GridBee GS 12 mixing system into the existing concrete water tank. Work associated with this installation includes a weather-tight penetration through the roof vent to accommodate the power cable, conduit from the vent, across the tank roof and down the tank wall, a retrieval chain anchored to the roof vent and the mounting of the electrical conduit. The conduit will be mounted to the tank wall and terminated at grade for connection to electrical power by others.

Budget Estimate: \$19,900.00

Chlorine Injection Line

Provide all labor, equipment, material and incidentals required to furnish and install a ¾" wall penetration for chlorine injection. Work to include all concrete coring, link seal, pipe, and concrete work required.

Budget Estimate: \$5,500.00

- Hatch and Vent installation prices assume DN Tanks is already onsite with a crew and manlift. If work to be performed as a separate item a mobilization charge is required.
- Access to the tank site and a level, stable work area to be provided by others.
- Construction water to be provided by the Owner.
- Permits and fees, if required, are not included.
- Federal, State and Local taxes, if applicable, are not included.
- This budget is valid for one (1) year from date provided.

If I can be of any further assistance, or you have any questions please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Joseph Pappo', with a long horizontal flourish extending to the right.

Joseph Pappo
Technical Services Manager – Concrete Tank Services

**CONTRACTORS PROVIDED REQUESTS FOR QUOTES FOR
FITCHBURG RD. TANK**

1 Bill Reimann
Leary Construction Company
32 East Pierson Street
Greenfield, IN 46140

2 Ken Luneta
Utility Service Co
128 Elm Street
Bridgewater, MA 02324

3 Don Roberts
Hemi Enterprises Inc.
21 Washington Street #4
Attleboro, MA 02703

4 Vicki Caudill
Pittsburg Tank and Tower
P.O. Box 1849
Henderson, KY 42419

5 Randy Henry
LiquiVision Technology Inc.
711 Market Street
Klamath Falls, OR 97601

T-0354-1
May 6, 2016
Bill Reimann
Leary Construction Company
32 East Pierson Street
Greenfield, IN 46140

Re: **Townsend Water Department – Fitchburg Road Tank Repairs
Request for Quote**

Dear Bill:

Tighe & Bond on behalf of the Townsend Water Department would like to request a quotation of services from Leary Construction Company for the Fitchburg Road Tank Repairs. The project consists of the following items:

- 1. Sealing of several open penetrations through the roof of the tank.
- 2. Furnishing and installing a new finial vent, and permanently attaching existing ladder to roof.
- 3. Furnishing and installing a new roof hatch.

The project documents have been included as attachment to this letter. Please submit a quotation for services to:

Mr. Paul Rafuse, Superintendent
Townsend Water Department
540 Main Street
West Townsend, MA 01474

Quotation for services will be accepted by the Townsend Water Department until **2:00 PM May 20, 2016**. Thank you for your time and consideration in preparing a quotation of services for the Townsend Water Department. If you have any questions on the request herein, please call myself at 508-304-6358.

Very truly yours,

TIGHE & BOND, INC.



Louis A. Soracco, P.E.
Project Manager

J:\T\T0354 Townsend Water Department\1 - Fitchburg Road Tank\Request for Quote - Leary Construction.docx



T-0354-1
May 6, 2016
Ken Luneta
Utility Service Company
128 Elm Street
Bridgewater, MA 02324

Re: **Townsend Water Department – Fitchburg Road Tank Repairs
Request for Quote**

Dear Ken:

Tighe & Bond on behalf of the Townsend Water Department would like to request a quotation of services from Utility Service Co. for the Fitchburg Road Tank Repairs. The project consists of the following items:

1. Sealing of several open penetrations through the roof of the tank.
2. Furnishing and installing a new finial vent, and permanently attaching existing ladder to roof.
3. Furnishing and installing a new roof hatch.

The project documents have been included as attachment to this letter. Please submit a quotation for services to:

Mr. Paul Rafuse, Superintendent
Townsend Water Department
540 Main Street
West Townsend, MA 01474

Quotation for services will be accepted by the Townsend Water Department until **2:00 PM May 20, 2016**. Thank you for your time and consideration in preparing a quotation of services for the Townsend Water Department. If you have any questions on the request herein, please call myself at 508-304-6358.

Very truly yours,

TIGHE & BOND, INC.



Louis A. Soracco, P.E.
Project Manager

J:\T\T0354 Townsend Water Department\1 - Fitchburg Road Tank\Request for Quote - Utility Services.docx



T-0354-1
May 6, 2016
Don Roberts
Hemi Enterprise Inc.
21 Washington Street #4
Attleboro, MA 02703

Re: **Townsend Water Department – Fitchburg Road Tank Repairs
Request for Quote**

Dear Don:

Tighe & Bond on behalf of the Townsend Water Department would like to request a quotation of services from Hemi Enterprise Inc. for the Fitchburg Road Tank Repairs. The project consists of the following items:

1. Sealing of several open penetrations through the roof of the tank.
2. Furnishing and installing a new finial vent, and permanently attaching existing ladder to roof.
3. Furnishing and installing a new roof hatch.

The project documents have been included as attachment to this letter. Please submit a quotation for services to:

Mr. Paul Rafuse, Superintendent
Townsend Water Department
540 Main Street
West Townsend, MA 01474

Quotation for services will be accepted by the Townsend Water Department until **2:00 PM May 20, 2016**. Thank you for your time and consideration in preparing a quotation of services for the Townsend Water Department. If you have any questions on the request herein, please call myself at 508-304-6358.

Very truly yours,

TIGHE & BOND, INC.



Louis A. Soracco, P.E.
Project Manager

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T-0354-1
May 6, 2016
Vicki Caudill
Pittsburg Tank and Tower
PO Box 1849
Henderson, KY 42419

Re: **Townsend Water Department – Fitchburg Road Tank Repairs
Request for Quote**

Dear Vicki:

Tighe & Bond on behalf of the Townsend Water Department would like to request a quotation of services from Pittsburg Tank and Tower for the Fitchburg Road Tank Repairs. The project consists of the following items:

1. Sealing of several open penetrations through the roof of the tank.
2. Furnishing and installing a new finial vent, and permanently attaching existing ladder to roof.
3. Furnishing and installing a new roof hatch.

The project documents have been included as attachment to this letter. Please submit a quotation for services to:

Mr. Paul Rafuse, Superintendent
Townsend Water Department
540 Main Street
West Townsend, MA 01474

Quotation for services will be accepted by the Townsend Water Department until **2:00 PM May 20, 2016**. Thank you for your time and consideration in preparing a quotation of services for the Townsend Water Department. If you have any questions on the request herein, please call myself at 508-304-6358.

Very truly yours,

TIGHE & BOND, INC.



Louis A. Soracco, P.E.
Project Manager

J:\T\T0354 Townsend Water Department\1 - Fitchburg Road Tank\Request for Quote - Pittsburg Tank and Tower.docx



Paul Rafuse

From: Randy Henry <lvt4@divingservices.com>
Sent: Tuesday, May 10, 2016 11:04 AM
To: prafuse@townsend.ma.us
Subject: LiquiVision Info
Attachments: BQForm.pdf; Email - Sample Report.pdf; StandardsandQualificationsSummary,rev.09-24-14.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Good morning Paul. I spoke with Brenda this morning and she suggested I send you some info on our company.

LiquiVision Technology is a commercial diving service that specializes in cleaning, inspecting and repairing drinking water tanks, river, lake or spring intakes, outfalls and other collector and underwater structures. For over 20 years LiquiVision has proven itself unsurpassed in the business. State of the art equipment and a staff dedicated to a commitment of excellence assures our place as the leader in the industry.

Our patented equipment, with its rotating brush, is the only effective way to remove sediment and bio film from not only the floors of water reservoirs, but the walls as well, without causing turbidity.

We are completely sanitary in our enclosed hard hat helmets and vulcanized rubber suits that are sprayed down with a 200 parts per million chlorine solution before every dive. The enclosed hard hat helmet is equipped with lights, video and audio feed that connects to the control trailer we bring along allowing you to watch and communicate with our divers the entire time we are in your tank. We then use the live feed to provide you with a video report as well as a USB thumb drive with a PDF copy of a written report for each tank we clean or inspect. These reports are provided at no additional cost.

I have attached our Standards and Qualifications Summary, along with a sample inspection report and a bid form you can complete and return if you would like a free non-obligational quote. If you would prefer you may call me and I will help you to complete the form over the phone. If you have any questions or need anything further, please contact me by calling, faxing or emailing me. My contact information is listed below.

We also encourage you to check us out on the World Wide Web at www.divingservices.com where a short video of our divers in action is available for your review. You can also find us on Facebook and Twitter.

Sincerely,

Randy Henry
LiquiVision Technology Inc.
711 Market St.
Klamath Falls, OR 97601
P: (800) 229-6959
F: (541) 883-1361
lvt4@divingservices.com

www.divingservices.com

Fitchburg Road Tank Repairs

Request for Quotes

Townsend Water Department

Superintendent
Paul Rafuse

April 2016

Tighe&Bond

Fitchburg Road Tank
Townsend, MA

Description of Tank

The existing Fitchburg Road Tank is a 500,000 gallon riveted steel ground storage tank. The tank has a shell height of 35-feet, and a diameter of 50-feet. The tank is located at approximate address 105 Fitchburg Road, Townsend, MA. The exterior paint color is light blue, and the interior paint color is white.

Scope of Work

Sanitary Improvements

There are several open penetrations through the roof of the tank that could potentially pose risk to the sanitary condition of the water supply. The oversized bolt holes along the base of the roof's center finial ball as well as the (3) missing rivet heads along the roof center plate peripheral lap seam could, and currently do, provide a potential passageway for rain runoff to enter the interior of the tank. These areas are to be sealed with an elastomeric caulking.

Structural Improvements

The tank is currently not equipped with a finial vent assembly. The existing finial ball is sealed, with no venting capabilities, furthermore there is no designed venting along the roof to shell junction. Instead, venting for the tank appears to be achieved through the random narrow gaps along the unfitted roof to shell junction as well as the overflow pipe. The existing finial ball assembly shall be replaced with a freeze/vacuum resistant finial vent assembly to ensure compliance with AWWA standards and current MA Chapter 8 Guidelines:

The vent shall open downward, and be fitted with either four mesh non-corrodible screen, or with finer mesh non-corrodible screen in combination with an automatically resetting pressure-vacuum relief or release mechanism, as required by MassDEP. If a vacuum release mechanism is utilized, a four mesh screen must surround this mechanism in order to prevent contaminants from entering the tank when the relief mechanism is activated and to assure that objects do not prevent the mechanism from reseating properly

When the finial vent is installed it will require the existing roof revolving ladder be detached from the existing finial ball and welded into a stationary position by welding a series of vertical standoffs to the roof and side rails of the ladder. Brackets needed for welding ladder to roof shall be spaced a maximum of 10-feet apart. The Contractor shall provide a protective coating system to match existing color of the tank at all areas damaged during installation of vent, for new components, and at all new welding areas. New components and areas needing repair shall be prepared with a power tool cleaning to a SP3 specification. The coating system shall be:

- Prime Coat: Modified Urethane
- Intermediate Coat: Epoxy (60% solids or better)
- Top Coat: Epoxy (60% solids or better)

Note: See recent tank inspection report for additional details.

REQUEST FOR QUOTE DUE DATE: May 6, 2016; 2 P.M. EST

Apr 21, 2016-2:30pm Plotted By: DRB2
Tighe & Bond, Inc. J:\110354 Townsend Water Department\Drawings\Model\Fitchburg Road Tank.dwg



FITCHBURG ROAD TANK REPAIRS TOWNSEND, MA	
FITCHBURG ROAD TANK SITE 101 Fitchburg Road	
DATE: 4/15/16	Tighe & Bond www.tighebond.com
SCALE: 1" = 250'	
FIGURE 1	

SECTION 00410

REQUEST FOR QUOTATION

PROJECT IDENTIFICATION:

Fitchburg Road Tank Repairs

TABLE OF ARTICLES

1. Quote Recipient
2. Contractor's Acknowledgements
3. Contractor's Representations
4. Contractor's Certifications
5. Basis of Quote
6. Time of Completion
7. Quote Submittal

ARTICLE 1 - QUOTE RECIPIENT

- 1.1 This Quote is submitted to:

Townsend Water Department

540 Main Street, West Townsend, MA 01474

- 1.2 The undersigned Contractor proposes and agrees, if this Quote is accepted, to perform all Work as specified or indicated in the Documents for the prices and within the times indicated in this Quote and in accordance with the other terms and conditions of the Documents.

ARTICLE 2 - CONTRACTOR'S ACKNOWLEDGEMENTS

- 2.1 The Quote will remain subject to acceptance for 30 days after the opening, or for such longer period of time that Contractor may agree to in writing upon request of Owner.

ARTICLE 3 - CONTRACTOR'S REPRESENTATIONS

- 3.1 In submitting this Quote, Contractor represents, as set forth in the Agreement, that:
- A. Contractor has examined and carefully studied the Documents, and any data and reference items identified in the Documents and hereby acknowledges the receipt of all Addenda.
 - B. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local and Site conditions that may affect cost, progress, and performance of the Work.
 - C. Contractor is familiar with and has satisfied itself as to all federal, state and local Laws and Regulations that may affect cost, progress and performance of the Work.

- D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified, especially with respect to Technical Data in such reports and drawings.
- E. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Documents; and any Site-related reports and drawings identified in the Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (3) Contractor's safety precautions and programs.
- F. Contractor agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Quote for performance of the Work at the price Quote and within the times required and in accordance with the other terms and conditions of the Documents.
- G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Documents.
- H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Documents, and confirms that the written resolution thereof by Engineer is acceptable to Contractor.
- I. The Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- J. The submission of this Quote constitutes an incontrovertible representation by Contractor that Contractor has complied with every requirement of this Article, and that without exception the Quote and all prices in the Quote are premised upon performing and furnishing the Work required by the Documents.

ARTICLE 4 - CONTRACTOR'S CERTIFICATION

- 4.1. Contractor certifies that Contractor is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work, that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee, and that Contractor will comply fully with all laws and regulations applicable to awards made subject to MGL Chapter 30, Section 39M.

ARTICLE 5 - BASIS OF QUOTE

- 5.1 Contractor proposes to furnish all labor and materials required for construction of the Fitchburg Road Tank Repairs, Townsend, MA in accordance with the accompanying

Documents prepared by Tighe & Bond, Inc., for the Contract Price specified below, subject to additions and deductions according to the terms of the Documents.

5.2 This Quote includes Addenda numbered _____.

5.3 The proposed Contract Price (base Quote) is:

_____ dollars

(words)

(\$ _____)

(figures)

ARTICLE 6 - TIME OF COMPLETION

6.1 Contractor agrees that the Work will be substantially completed and ready for final payment within 45 calendar days from a Notice to Proceed.

ARTICLE 7 - QUOTE SUBMITTAL

CONTRACTOR: *[Indicate correct name of Quoting entity]*

By:

[Signature] _____

[Printed name] _____

(If Contractor is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:

[Signature] _____

[Printed name] _____

Title: _____

Submittal Date: _____

Address for giving notices:

Telephone Number: _____

Fax Number: _____

Contact Name and e-mail address: _____

**Contractor's License
No.:** _____

(where applicable)

END OF SECTION

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SECTION 00800

SUPPLEMENTARY CONDITIONS - BONDS AND INSURANCE

- A. Insurance certificate(s) shall also contain the following:
1. Confirmation that the General Liability policy covers only the Work under this Contract, with project specific limits.
 2. Confirmation that automobile insurance covers all Scheduled, Hired and Non-Owned vehicles.
 3. Names of all additional insureds as specified herein.
- B. The limits of liability for the insurance required shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers' Compensation:

Employer's Liability:

Bodily injury, each accident	<u>\$1,000,000</u>
Bodily injury by disease, each employee	<u>\$1,000,000</u>
Bodily injury/disease aggregate	<u>\$2,000,000</u>

2. Contractor's Commercial General Liability:

General Aggregate	<u>\$2,000,000</u>
Products - Completed Operations Aggregate	<u>\$2,000,000</u>
Personal and Advertising Injury Each Occurrence (Bodily Injury and Property Damage)	<u>\$1,000,000</u>

3. Automobile Liability:

Bodily Injury:

Each person	<u>\$1,000,000</u>
Each accident	<u>\$1,000,000</u>

Property Damage:

Each accident	<u>\$1,000,000</u>
---------------	--------------------

4. Excess or Umbrella Liability:

Per Occurrence	<u>\$2,000,000</u>
General Aggregate	<u>\$2,000,000</u>

5. Additional Insureds: Town of Townsend and Tighe & Bond

6. Contractor's Professional Liability:

Each Claim	<u>\$1,000,000</u>
Annual Aggregate	<u>\$2,000,000</u>

- C. Contractor shall purchase and maintain a separate Owner's Protective Liability policy, issued to Owner at the expense of Contractor, including Owner and Engineer as named insureds. This insurance shall provide coverage for not less than the following amounts:

Bodily Injury	\$2,000,000	Each Occurrence
	\$2,000,000	Aggregate
Property Damage	\$2,000,000	Each Occurrence
	\$2,000,000	Aggregate

1. Insurance coverage for the Contractor's Comprehensive General and Excess Liability policies and for the Owner's Protective Liability policy shall be written by one and the same insurance company to avoid the expense of duplicate and/or overlapping coverage and to facilitate and expedite the settlement of claims.
 2. The Owner's Protective Liability policy shall protect from claims which may arise from operations under the Contract, including operations performed for a named insured by independent contractors and general inspection or monitoring by a named insured. The policy also shall protect against Automobile Non-Ownership Liability in connection with the Contractor's operations under the Contract, whether such operations be by itself or by any Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable.
- D. In addition to Owner, Contractor, and all Subcontractors, include as insureds the following:
- 1) Tighe & Bond (446 Main Street, Worcester, MA 01608)
 - 2) Town of Townsend (540 Main Street, West Townsend, MA 01474)

Utility Service Group

Scott Kelley, Water Systems Consultant
843 North Barnstead Rd
Center Barnstead, NH 03225
603-724-8226
skelley@utilityservice.com



Fitchburg Road Tank 500,000 Gallon Ground Storage Tank Condition Assessment Report

Townsend Water Department, Townsend, MA



Prepared For:

Paul Rafuse
Superintendent
Townsend Water Department
50 Main Street, Townsend, MA 01474

Assessment Performed October 27, 2014

WATER STORAGE TANK CONDITION ASSESSMENT REPORT



Utility Service Group
 Merithew Service Center
 128 Elm St Bridgewater MA 02324
 508-279-9965 Fax: 508-279-9948

Date: 10/27/14	Project: 130976	Task: 1.01
Tank Name: Fitchburg Rd Tank		
Address: 105 Fitchburg Rd	City: Townsend	State: MA
County: Middlesex	Lat: 42.55	Long: 71.76
Capacity: 500,000 gallons	Tank Type: GST	Construction: Riveted Steel
Height: 35' shell	Diameter: 50'	Yr Built: NA By: NA
Exterior Last Painted: NA	Exterior Color: Light blue	Interior Last Painted: NA Interior Color: White
		Tank ID Plate: No Contract: NA

Exterior Roof Conditions: All questions are Yes / No / NA / NR unless listed (G/F/P) for Good / Fair / Poor / NA / NR

Tank Area	Item of Concern	Status	Comments
Roof Coating	Coating visual assessment? (G/F/P)	Good	<p>Coating Type: Alkyd Lead Bearing: Yes DFT: 7.4-20.2 mils</p> <p>The coatings along the roof are in good condition with at least 98.5% of the coating intact and providing an adequate level of protection. The remaining surfaces are exhibiting scattered areas of cracked and delaminated coating resulting in the exposure of the base coat of primer and/or the steel substrate, which is currently exhibiting light to medium rusting.</p> <p>The majority of this deterioration is along the roof lap seams and surfaces immediately adjacent to the seams. The finish coat is also heavily weathered resulting in minor surface degradation, and the surfaces are heavily chalked and soiled.</p>
	Actionable checking / delamination?	Yes	
	Actionable corrosion / deterioration?	Yes	
	Is there any graffiti paint or etchings?	No	
	Coating adhesion assessment? (G/F/P)	Good	
	Does soiling impact visual appearance?	No	
	Will antenna equipment impact recoat?	No	
Roof Structure	Structural visual assessment? (G/F/P)	Good	<p>The roof appears to be in good structural and sanitary condition with no significant metal loss or fatigue observed, however there are a few small holes due to missing rivets along the perimeter of the center dollar plate and unsealed gaps in the bolting holes which secure the base of the finial ball to the center of the roof.</p> <p>The outer perimeter of the roof is not sealed to the shell rim angle. There is a slight gap 1/4" to 1/2" in width along the entire perimeter of the roof which helps to serve as venting for the tank.</p>
	Are all plate seams sealed?	NA	
	Significant pitting or metal loss visible?	No	
	Rigging holes / access ports sealed?	NA	
	Other unsealed penetrations present?	Yes	
	Is the roof perimeter watertight?	No	
Roof Vent	Design meets state standards?	No	<p>Finial Stub OD: NA</p> <p>The roof is not equipped with a finial vent assembly, the finial ball serves only as a pivot point and support for the roof revolving ladder. There is a cutout located within the top of the vent that is used for rigging purposes however this cutout is currently sealed with a plug assembly.</p> <p>It appears that the overflow pipe and the unsealed roof/shell perimeter junction serves as the venting for the tank which conflicts with current state standards.</p>
	Screen intact?	NA	
	Vacuum pallet functional?	NA	
	Unsealed penetrations present?	No	
Roof Access	At least two hatches to WC present?	No	<p>The roof is equipped with a single roof hatch with a cover that sits flat to the roof and appears in sound structural condition and is equipped with a working lock. The hatch does not meet current state standards as it does not have a raised neck or frame to prevent rain runoff from entering.</p>
	Primary meets state standards?	No	
	Additional meet state standards?	NA	
	All roof access points secured?	Yes	
	Antenna equipment affects roof entry?	No	
Roof Safety	Is there a roof ladder / stair present?	Yes	<p>The roof is equipped with a rolling ladder that is attached to the neck of the finial ball. The ladder appears intact, structurally sound and in functional condition. The center pivot point (finial ball) also appears intact and structurally sound at least as viewed from the exterior of the tank.</p> <p>The coating along the ladder assembly is in generally fair to good condition with the exception of scattered areas of cracked and delaminated coating along a number of ladder rungs. This deterioration has resulted in the exposure of the steel surfaces and medium to heavy surface rusting.</p>
	Is there a guardrail system present?	No	
	Required fall arrest system present?	No	
	Are the roof FAA lights operational?	NA	

Exterior Shell Conditions: All questions are Yes / No / NA / NR unless listed (G/F/P) for Good / Fair / Poor / NA / NR

Tank Area	Item of Concern	Status	Comments
Shell Coating	Coating visual assessment? (G/F/P)	Fair	<p>Coating Type: Alkyd Lead Bearing: Yes DFT: 6.1-12.6 mils</p> <p>The coatings along the shell surfaces are in generally very good condition with at least 98% of the coating still intact and providing sound protection to the underlying steel surfaces. The remaining surfaces are exhibiting minor stone damage which has chipped away the coatings at point of impact, resulting in medium to heavy rusting, as well as areas of topcoat delamination resulting in the exposure of the base coat of primer which was noted to still be intact with minimal degradation observed.</p> <p>The majority of this delamination was found along the bottom few inches of the shell, just above the foundation. There was also a significant amount of rust staining along the top shell ring which appeared to be emanating out from the unsealed junction of the roof and shell.</p> <p>Testing of the exterior shell coatings revealed 13,000ppm of lead and 9.7ppm of chromium as shown on the attached laboratory report.</p>
	Actionable checking / delamination?	Yes	
	Actionable corrosion / deterioration?	Yes	
	Logo visual assessment? (G/F/P)	NA	
	Is there any graffiti paint or etchings?	No	
	Coating adhesion assessment? (G/F/P)	Fair	
	Does soiling impact visual appearance?	Yes	
Will antenna equipment impact recoat?	No		
Shell Structure	Structural visual assessment? (G/F/P)	Good	<p>The tank is comprised of (5) shell rings riveted together. The shell plates, as well as the lap seams and rivets, appeared to be in sound structural condition with no evidence of any aggressive corrosion, active metal loss or leaks present.</p> <p>There is evidence of previous metal loss in the form of surface pitting however these areas are currently protected by the existing coating, therefore there is no furtherance in metal loss taking place at this time.</p>
	Are all plate seams sealed?		
	Significant pitting or metal loss visible?	No	
	Unsealed penetrations present?	No	
	Floor plate extension condition? (G/F/P)	NA	
	Any active leakage observed?	No	
	Painter's angle or rigging rail present?	No	
Foundation	Structural visual assessment? (G/F/P)	Good	<p>The concrete ringwall appears to be in good condition with the exception of surface erosion which has resulted in the exposure of some of the larger aggregate as well as one localized area of cracked and spalled concrete.</p> <p>This deterioration is adjacent to a previously repaired area which is currently exhibiting some cracking and spalling of the patching material. There are no anchor bolt assemblies present along the base of the tank.</p>
	Anchor bolt corrosion / separation?	NA	
	Grout or sealer in sound condition?	Yes	
	Does grade promote good drainage?	Yes	
	Failure or undermining of foundation?	No	
Shell Access	At least two manholes present?	Yes	<p>The shell is equipped with (2) 18"x24" oval manways each with internally placed covers secured by (2) retention clamp and bolt assemblies. One is original to the tank based on its riveted design while the second was added later based on its welded design. Both manways meet state standards and are in sound structural condition with no signs of leaks.</p> <p>The coatings along both are in generally good condition with minimal degradation and rusting currently taking place however the surfaces of both are heavily coated with mildew.</p>
	Primary meets state standards?	Yes	
	Additional meet state standards?	Yes	
	Structural damage / leakage visible?	No	
Shell Safety	Required shell ladder present?	Yes	<p>Safety Climb Type: Flex Cable</p> <p>The shell ladder is equipped with a safety cage, flexible cable fall prevention device, and a locked anticlimb gate. The referenced items are in sound condition with no significant deterioration occurring at this time. The coatings along the ladder and cage assembly are also in fair to good condition with only minor areas of degradation and rusting taking place at this time.</p> <p>The bottom 6' of the ladder cage is also wrapped in a small mesh fencing material in order to prevent access through the side of the ladder cage.</p>
	Required safety climb system present?	Yes	
	Is shell ladder equipped with a cage?	Yes	
	Are there rest platforms present?	No	
	Actionable corrosion / deterioration?	No	
	Functional security gate present?	Yes	
	Do antennas / cables impact climbing?	No	
Overflow	Extends to near ground level?	Yes	<p>Pipe OD: 4" ID</p> <p>The overflow pipe appears to be intact and in good structural and sanitary condition. The coatings however are exhibiting localized areas of cracking and delamination which has resulted in the exposure of the steel substrate and light to medium rusting along at least 35% of the pipe surfaces, as well as the top and bottom 90° elbows. There is also areas of cracked and delaminated coating along the shell surfaces surrounding one of the pipe support brackets.</p> <p>The discharge opening of the overflow pipe is equipped with an intact screen</p>
	External weir box sealed / secured?	NA	
	Actionable corrosion / deterioration?	No	
	Unsealed penetrations present?	No	
	Required air gap present?	NA	
	Screen is intact or was replaced?	Yes	
	Flapper is functional or was replaced?	NA	

	Drain, spillway or rip-rap present?	Yes	over a larger metal screen and discharges between 12"-24" above grade onto a small area of riprap.
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Interior Roof Conditions: All questions are Yes / No / NA / NR unless listed (G/F/P) for Good / Fair / Poor / NA / NR

Tank Area	Item of Concern	Status	Comments
Roof Coating	Coating visual assessment? (G/F/P)	Good	<p>Coating Type: Epoxy Lead Bearing: No DFT: 6.6-19.4 mils</p> <p>The coatings along the underside of the roof and the roof rafters were found to be in generally good condition with at least 98% of the coatings still intact and providing adequate protection to the referenced surfaces. The remaining surfaces were exhibiting scattered areas of failure to the substrate and light to medium rusting primarily along lap seams, rivets and junctions between the roof plates and rafters.</p> <p>There are also additional areas of medium to heavy rusting scattered on the webs and bottom flanges of the rafters, as well as the ends of the stabilizer rods and the bolted connections of the center compression ring. The greatest degree of coating failure and subsequent rusting was along the outer perimeter retention bolts and J-bolt assemblies, as well as the top face of the shell rim angle with at least 35% of these surfaces affected.</p> <p>Testing of the interior shell coatings revealed 280ppm of lead and 88ppm of chromium as shown on the attached laboratory report.</p>
	Actionable blistering / delamination?	No	
	Actionable corrosion / deterioration?	Yes	
	Coating adhesion assessment? (G/F/P)	Good	
	Rafter visual assessment? (G/F/P)	Good	
	Roof to shell junction? (G/F/P)	Poor	
Roof Structure	Structural visual assessment? (G/F/P)	Good	<p>The underside of the roof plates as well as the rafters appear to be in good structural condition with no significant metal loss observed. All bolted connections observed from the roof hatch appeared sound, however scattered bolts along the outer roof perimeter as well as the J-bolt assemblies were exhibiting at least slight to moderate metal loss along the retention nuts.</p> <p>The sanitary condition of the roof appeared to be good however there was evidence of light leaks along the point of attachment for the finial ball and along a few areas of roof plates caused by missing rivets. These areas could permit runoff from the roof to enter the water chamber however there was no evidence to suggest that this has been an issue in the past.</p>
	Are all plate seams sealed?	NA	
	Significant metal loss on plates visible?	No	
	Significant metal loss on rafters visible?	No	
	Roof bolted connections sound?	Yes	
	Light leaks visible from the interior?	Yes	

Interior Shell & Floor Conditions: All questions are Yes / No / NA / NR unless listed (G/F/P) for Good / Fair / Poor / NA / NR

Tank Area	Item of Concern	Status	Comments
Shell & Floor Coatings	Coating visual assessment? (G/F/P)	Good	<p>Coating Type: Epoxy Lead Bearing: No DFT: NR</p> <p>The coatings along the shell surfaces were found to be in very good to excellent condition with at least 99% of the coatings still intact and providing sound protection to the underlying steel surfaces.</p> <p>The remaining surfaces are exhibiting isolated areas of medium to heavy rusting primarily along expansion joints of the fissure plates as well as extremely isolated areas of lap seams and rivets.</p>
	Actionable blistering / delamination?	No	
	Actionable corrosion / deterioration?	Yes	
	Coating adhesion assessment? (G/F/P)	NR	
Shell & Floor Structure	Structural visual assessment? (G/F/P)	Good	<p>The interior shell appear to be in good structural condition with no immediate concerns observed. There are however a few isolated areas of large tubercle formations which would suggest the probability of at least slight metal loss in the form of pitting. These areas should be periodically monitored.</p> <p>There is also evidence of widespread pitting from past corrosive activity however these areas as well as the large majority of all lap seams and rivet heads are still affectively sealed by the existing coating system.</p> <p>The shell to floor junction appears to be good however the majority of these surfaces were obscured by sediment.</p>
	Are all plate seams sealed?	Yes	
	Significant pitting or metal loss visible?	No	
	Column or wall conditions? (G/F/P)	Good	
	Shell to floor junction? (G/F/P)	Good	
	Fill line opening in sound condition?	Yes	
	Is there a silt stop present?	Yes	
Is a separate floor drain present?	No		
Shell Safety	Is an interior shell ladder present?	No	<p>Safety Climb Type: NA</p> <p>The interior of the tank is not equipped with an access ladder nor is one required or recommended.</p>
	Required safety climb system present?	NA	
	Actionable corrosion / deterioration?	NA	
	Internal balcony or platform present?	No	

Water Quality	Water quality visually acceptable?	Yes	<p>There is a 1/8"-2" layer of sediment which covers 99% of the floor surfaces affectively impeding visual assessment of the underlying surfaces. Localized areas were cleared of the sediment by the ROV and the tops of the rivet heads were readily visible along most surfaces.</p> <p>The coatings along these visible surfaces were found to be in good condition with no appreciable deterioration or rusting observed. Furthermore there was no evidence of any significant coating failure or rust tubercle formations protruding up through the silt.</p>
	Significant staining or biofilm present?	Yes	
	Significant floor sediment present?	No	
	Is there a mixing system present?	No	
	Is there a cathodics system present?	No	
	Is there a level indicator present?	No	

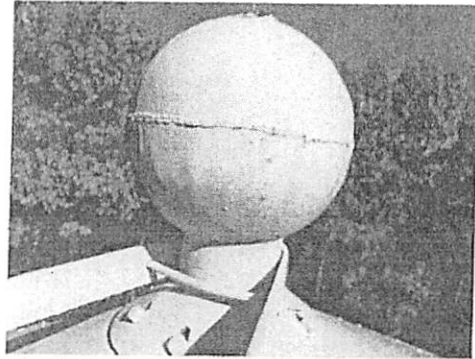
Site Conditions: All questions are Yes / No / NA / NR unless listed (G/F/P) for Good / Fair / Poor / NA / NR

Tank Area	Item of Concern	Status	Comments
Site	Is site equipped with a security fence?	Yes	The tank is surrounded by a perimeter fence which appears intact and serving as an effective deterrent base on the fact that there is no graffiti or any other signs of unauthorized access. The room within the confines of the fenced perimeter is limited, however additional space is available for a staging area along the access road.
	Any signs of damage to the fence?	No	
	Are fence gates secured with locks?	Yes	
	Is a vault or pump house present?	Yes	There is a valve vault located at the base of the tank which is equipped with a hinged, lockable steel door. The coatings along the piping located within the vault are in fair to poor condition with extensive failure to the substrate and subsequent rusting taking place.
	Sample tap onsite?	Yes	
	Is there telemetry / SCADA onsite?	No	The vault was free of standing water at the time of this inspection.
	Is there non-tank pooling water onsite?	No	
	Is there electrical service onsite?	Yes	SCADA is reportedly being installed by the 1 st of the year.
	Are there power lines near the tank?	No	
	Is there a non-tank water source onsite?	Yes	The sample tap is an acceptable threadless design and it appears to be functional.
	Is the tank located in a coastal area?	No	
	Site utility during tank rehab (G/F/P)?	Fair	

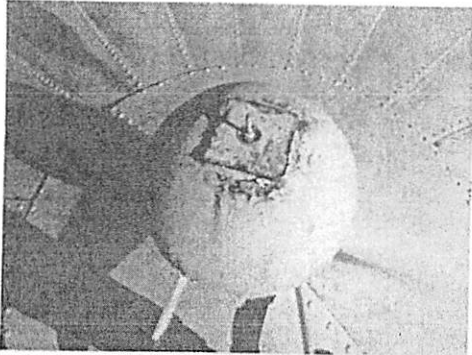
Fitchburg Rd 500,000 Gallon GST
Inspection Performed October 27, 2014



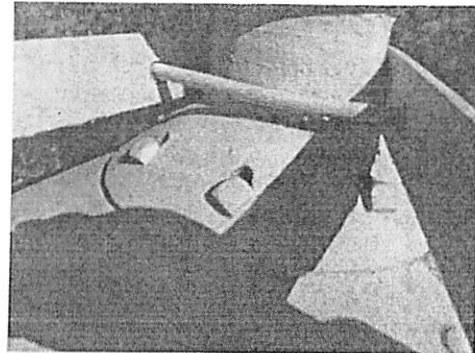
Showing the overall view of the Fitchburg Rd 500KG GST in Townsend, MA.



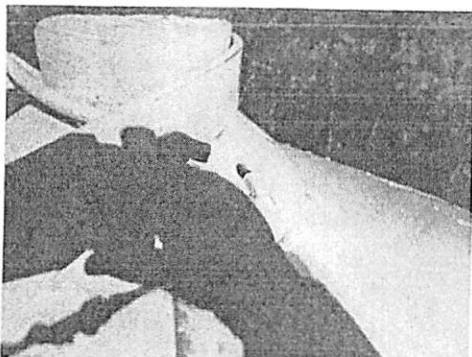
Roof exterior: showing center of roof fitted with a finial ball that does not function as a roof vent.



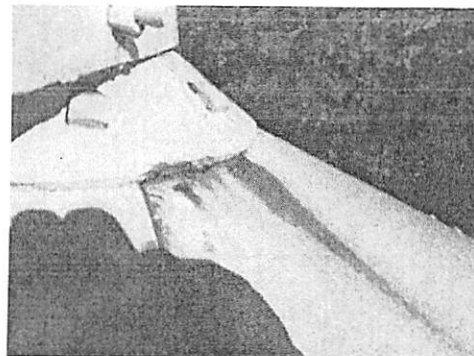
Roof exterior: showing scattered coating failure and rusting along top of finial ball and its rigging port.



Roof exterior: showing open penetrations resulting from slotted bolting holes at the base of the finial ball.

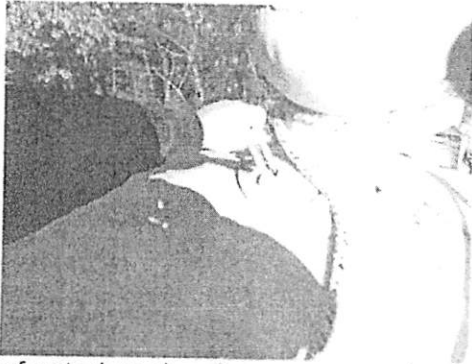


Roof exterior: showing light to medium rusting along the base of the finial ball.

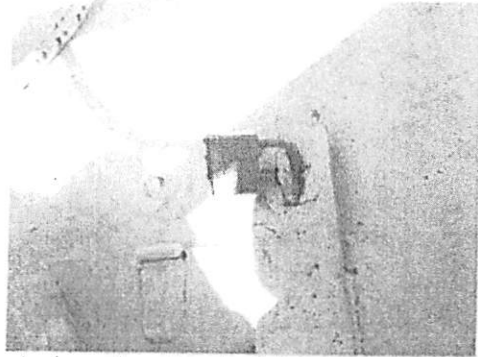


Roof exterior: showing finial ball connection to roof to be visually acceptable at least as viewed from the exterior of the tank.

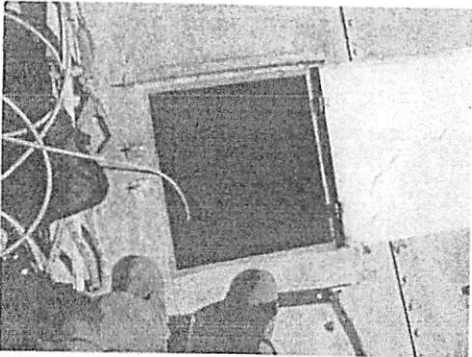
Fitchburg Rd 500,000 Gallon GST
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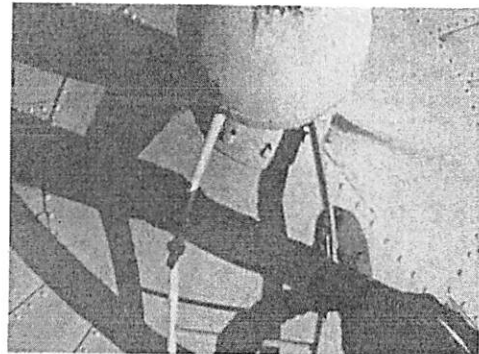
Roof exterior: showing open penetrations resulting from slotted bolting holes which appears to penetrate to inner surfaces.



Roof exterior: showing hatch cover equipped with a locking hasp and lock which was secured in place prior to and after inspection.



Roof exterior: showing existing hatch does not meet current state standards however is intact and functional.



Roof exterior: showing rolling revolving ladder is securely attached to the finial ball.

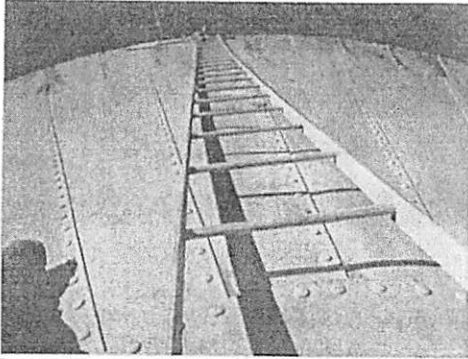


Roof exterior: showing bottom section of roof ladder equipped with the wheel assembly which is functional.

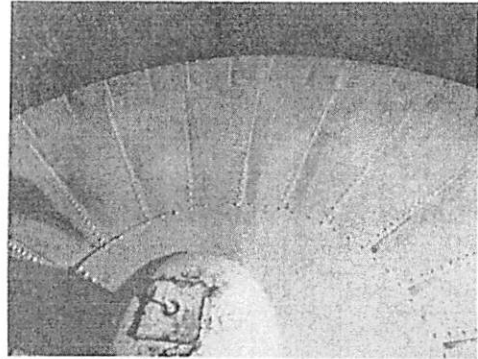


Roof exterior: showing revolving ladder to be intact and in good structural condition.

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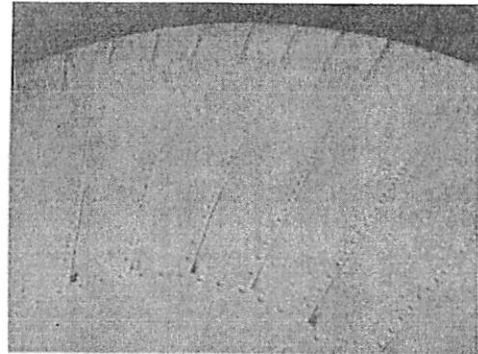
Roof exterior: showing coatings along ladder assembly to be in good condition with only minor failure and rusting evident.



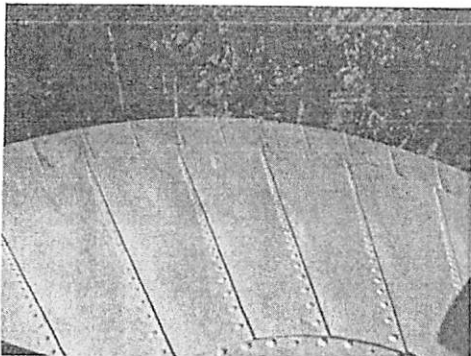
Roof exterior: showing coatings to be in fair to good condition with only minor degradation and localized rusting taking place.



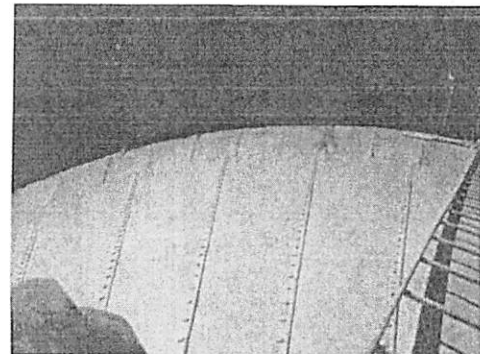
Roof exterior: showing existing coating to be in fair to good condition with only minor degradation and rusting taking place.



Roof exterior: showing weeping stains from the riveted lap seams as well as small spots of top coat delamination.

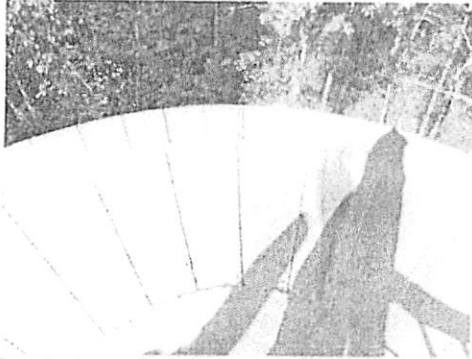


Roof exterior: showing surfaces to be in good structural condition with no aggressive corrosion or metal loss evident.



Roof exterior: showing roof lap seams to be generally tight with no open penetrations observed.

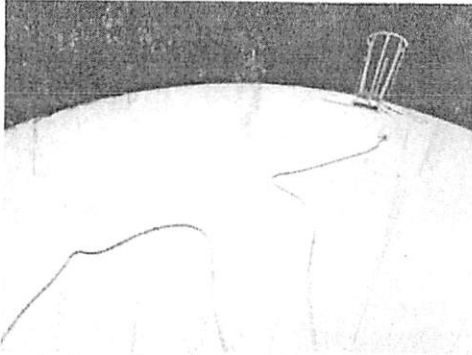
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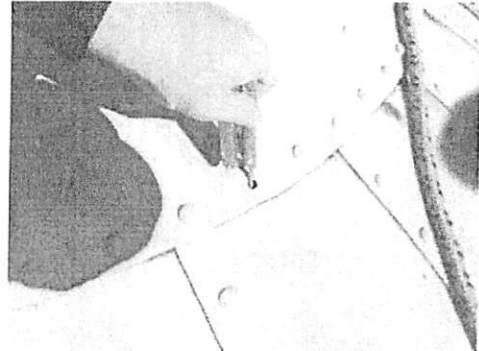
Roof exterior: showing coatings to be heavily chalked and moderately soiled in areas.



Roof exterior: showing coatings to be in fair to good condition with only minor degradation and localized rusting taking place.



Roof exterior: showing coatings to be in fair to good condition with only minor degradation and localized rusting taking place.



Roof exterior: showing minor hole resulting from a missing bolt along the outer perimeter of the center dollar plate.

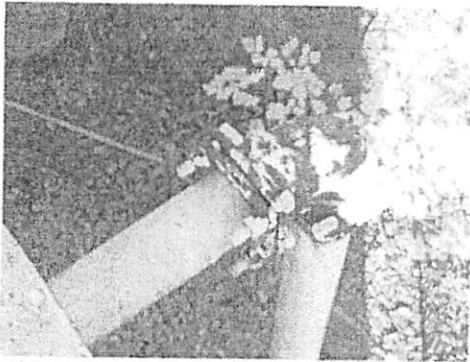


Roof exterior: showing roof lap seams to be generally tight with no open penetrations observed.

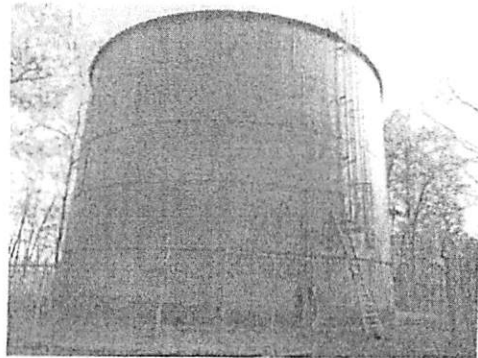


Roof exterior: showing results of adhesion test indicating good adhesion at all interfaces.

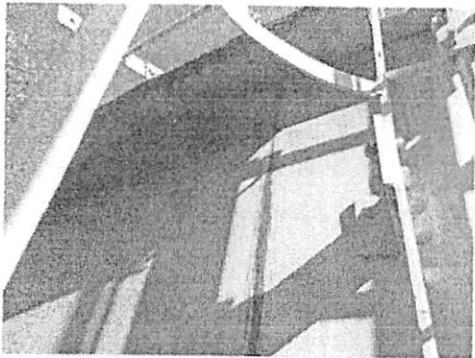
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Showing coating failure and heavy rusting is present on the top elbow assembly of the overflow pipe.



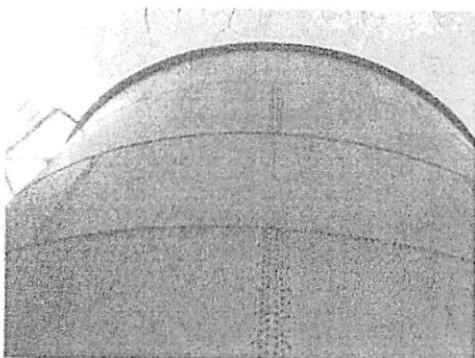
Shell exterior: showing coatings to be heavily weathered however in generally good condition.



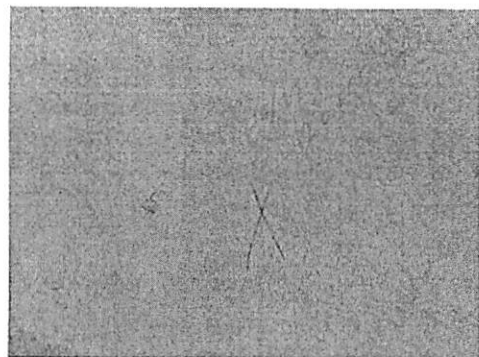
Shell exterior: showing rust staining weeping down from the unsealed roof to shell junction.



Shell exterior: showing rust staining weeping down from the unsealed roof to shell junction.

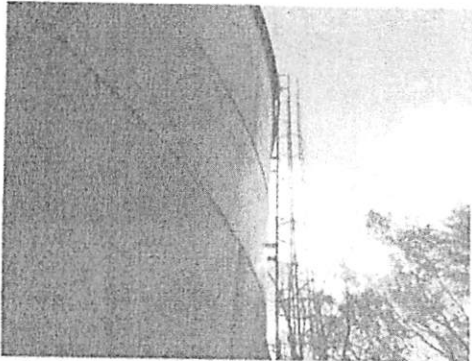


Shell exterior: showing no appreciable coating failure or rusting currently taking place.

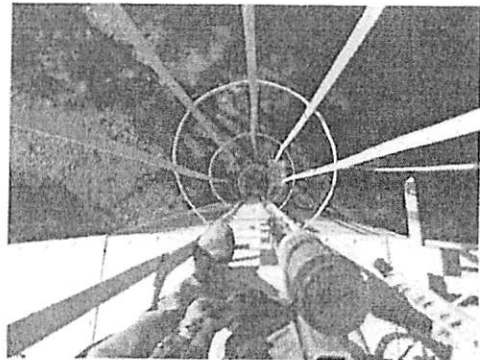


Shell exterior: showing results of adhesion testing indicating fair adhesion at interface with primer.

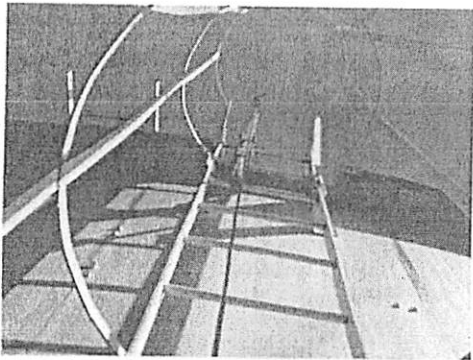
Fitchburg Rd 500,000 Gallon GST
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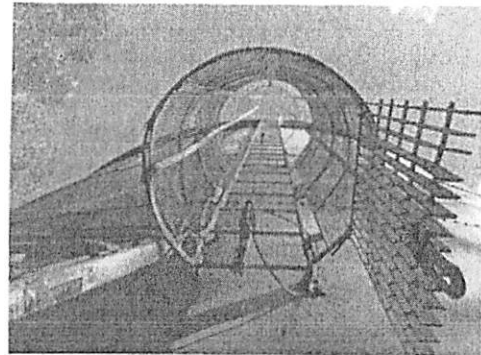
Shell exterior: showing access ladder and safety cage to be intact and structurally sound.



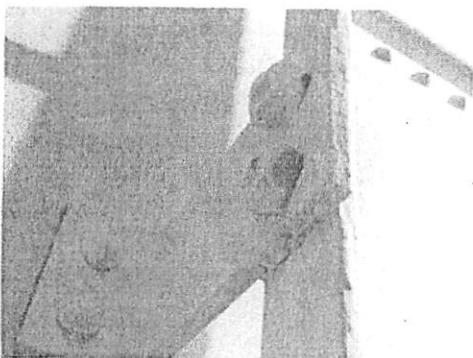
Shell exterior: showing coatings along access ladder assembly to be in good condition with minimal deterioration and/or rusting evident.



Shell exterior: showing access ladder assembly equipped with a functional fall prevention device.



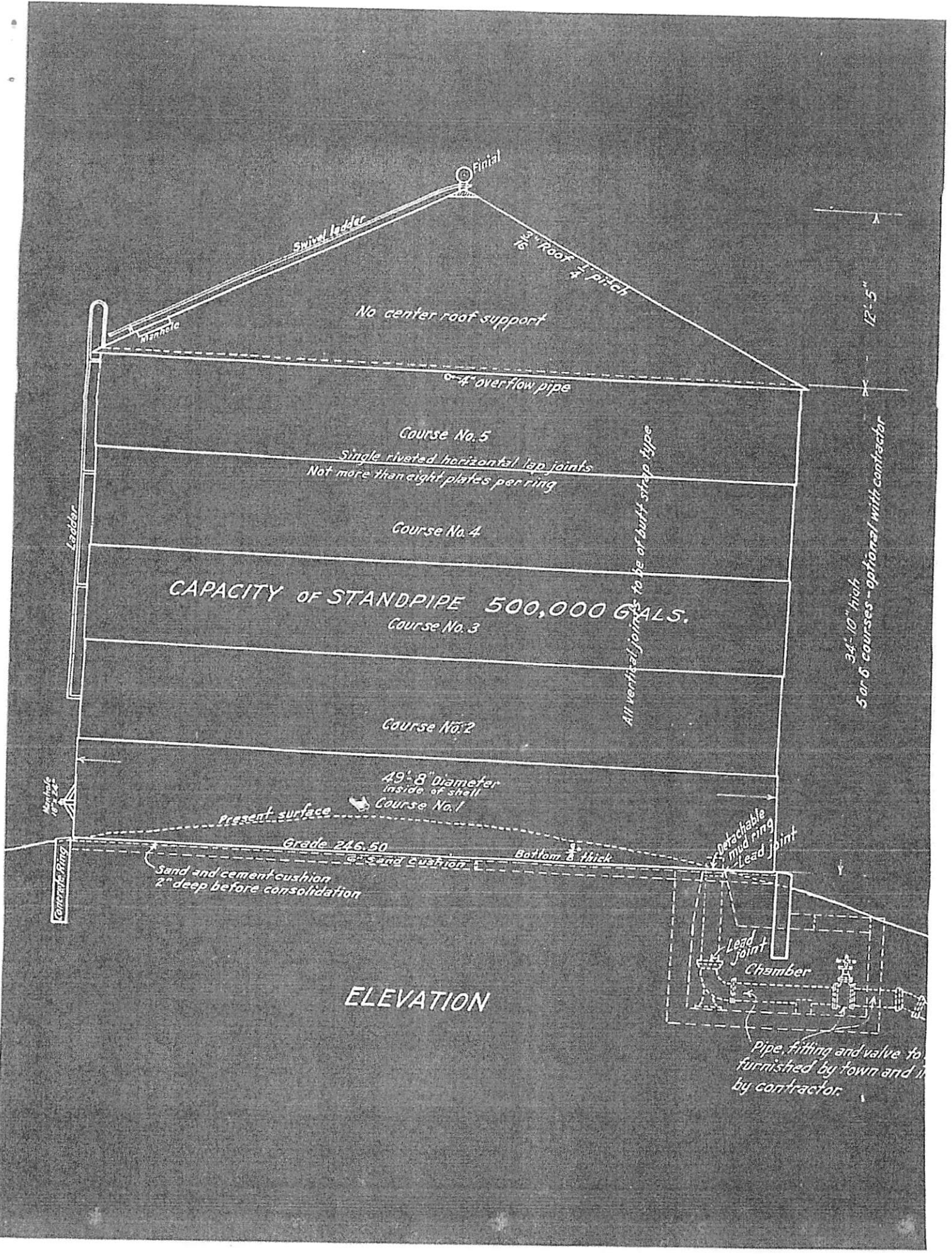
The shell ladder is equipped with a lockable anticlimb gate located at the opening of the ladder cage.



Shell exterior: showing minor degradation and rusting of the ladder side rail connections.



Shell exterior: showing additional degradation and rusting of the ladder side rail connections.



ELEVATION

Pipe, fitting and valve to be furnished by town and by contractor.

Paul Rafuse

From: Reidar Bomengen <RBomengen@maherserv.com>
Sent: Sunday, May 08, 2016 5:54 PM
To: z prafuse@townsend.ma.us
Subject: Additional Drilling Services
Attachments: MS-2739.pdf

3.7

Hello Paul,

Attached is the estimated cost for the additional Test Well and 2 Ft observation well. Crew should arrive between 7:30 and 8:00 AM tomorrow.

Regards,
Reidar Bomengen
V.P. Drilling Services



71 Concord Street, North Reading, MA 01864
Tel: 978-664-9355
Fax: 978-664-9356
Cell: 781-640-4316

Maher Services, Inc.
 71 Concord St., North Reading, MA 01864
 Tel: 978-664-WELL (9355) Fax: 978-664-3299

PROPOSAL #
MS-2739.xls

3.7

Page 1 of 1

TO: 5/8/2016

Paul Rafuse
 Townsend Water Department
 540 Main Street
 P.O. Box 17
 West Townsend, MA 01474
 paulr@townsendwater.ma.us
 Phone - (978) 597-2212
 Fax - (978) 597-5611

PROJECT:

Additional Test Well Drilling
 Cross Street Well
 Townsend, MA

Item	Description	Qty	Unit Cost	Total
1	Mobilization\Demobilization	0	\$ 750.00 / ls	\$ -
2	7822-DT35 Soil Sampling System	100	\$ 30.00 / ft	\$ 3,000.00
3	Installation of Well Material	100	\$ 5.00 / ft	\$ 500.00
4	2" Stainless Steel Screen	10	\$ 35.00 / ft	\$ 350.00
5	2" PVC Riser	84	\$ 4.00 / ft	\$ 336.00
6	End plug	2	\$ 15.00 / ea	\$ 30.00
7	4" Protective Casing	2	\$ 200.00 / ea	\$ 400.00
8	GeoProbe Liners	10	\$ 15.00 / ea	\$ 150.00
9	Development and Pumping	4	\$ 130.00 / hr	\$ 520.00
10	MA DEP Secondary	0	\$ 160.00 / ea	\$ -
11	Hydrogeologic Supervision	0	\$ 150.00 / hrs	\$ -
				=====
				\$ 5,286.00

Acct. Number **60918**
 Active
 Member
 Private
 Deposit **\$0.00**

FID _____ DLN _____ Gender **U** Ethn **U** Race **U** PW **NOT!**

First, Middle, Last Name _____ Online Bill

Company Name **DADA MAA CORPORATION** Home Ph. _____

Bill Address _____ Fax/Cell Ph. **(978) 496-0420**

Bill Here **224 MAIN STREET** Work/Cell Ph. **(978) 597-2502**

City, ST, Zip **TOWNSEND MA 01469** E-mail **spatel55@yahoo.com**

Service Location Information

ID **60918** Route **99** Seq # **1110**

Service Address _____ Access Lat. and Long. in grid below...

Bill Here **224 MAIN STREET**

City, ST, Zip **TOWNSEND MA 01469**

MAP _____ County _____ Beat/District _____

Comment _____

Dates In* **08/9/2011** Out _____

Minimum Bill
 Late Chg Exempt
 Cutoff Exempt
 Currently In Use

Well _____

Service Transaction Codes for This Location

	Code	Start Date	Multiplier	Initial Reading	Serial/Unit No.	Machine	Constan
▶	W03	08/09/2011	100	1114	0	35358283-02	1
	WR	08/09/2011	1	0	0		1
*							

Sunny 978 496-0420

2 units NOT 3

SUBMITTED BY Terry Walsh
FIELD REP Bobbi Colburn

COMMUNITY Townsend
FUND Water

RETAINED EARNINGS CALCULATION - ENTERPRISE FUND

PART I

CASH 1,507,141

SUBTRACT:

CURRENT LIABILITIES, DESIGNATIONS OF FUND BALANCE

Warrants Payable	14,511
Encumbrances	1,108
Expenditures	54,000
Continued appropriations	1,190,864
Petty cash	250
Perf Security Dep Payable	3,210

OTHER

Rounding (2)

TOTAL 243,196

PART II

RETAINED EARNINGS - UNDESIGNATED 243,196

SUBTRACT:

ACCOUNTS RECEIVABLE (NET)

_____	_____
_____	_____
_____	_____
_____	_____

OTHER

TOTAL 243,196

PART III

FIXED ASSETS:

DEBITS

CREDITS

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Total	-	_____	-
FIXED ASSET VARIANCE	-	_____	-

Bobbi Colburn

REVIEWED BY: _____

PLEASE SEE CERTIFICATION LETTER

DATE: _____

04/06/16

FOR DIRECTOR OF ACCOUNTS APPROVAL

