FIELD
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CONSULTING ENGINEERS

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June 9, 2014
Project No. 1998

Ms. Sarah Porter, Agent
City of New Bedford Conservation Commission
New Bedford City Hall
133 William Street
New Bedford, MA 02744

RE: NEW BEDFORD-LOGAL LLC
DEP File No. SE 049-0702 - Response to Notice of Intent (NOI) Review Comments
100 Duchaine Boulevard

Dear Ms. Porter:

Field Engineering Co., Inc. has received the NOI review comment letter dated June 2, 2014 prepared by Nitsch Engineering and has prepared the following response narrative and supporting documentation for consideration by the Commission.

Numbering below corresponds to the numbering in Nitsch's letter.

1.a. Based on the discussions with the owner, it is our understanding that the gravel area will be used sparingly by everyday truck traffic. The owner has approximately 30 trucks on the road, and this area will be used to keep empty trailers parked on site. The main truck route for the trucks coming to and leaving the facility will remain on the asphalt surfaces that currently exist and which are being proposed to access the new loading area along the southern portion of the building.

With that being said, in order to be even more conservative, we have revised the CN number for the gravel parking area and driveway to 96 in the updated Post Development watershed analysis. Gravel with a CN of 96 would still be considered pervious material but takes into account the compaction of the gravel surface that may occur over time. It should be noted, that the majority of this area was previously occupied by a building and the concrete rubble that exists on-site is the result of on-going demolition activities at the facility.

1.b. We have added a cross sectional detail of the gravel parking and driveway sections to the plan set as requested. The cross section will consist of 6" dense graded crushed stone over a 12" gravel base.

2.a. Additional information on the fueling facility layout and design has been included on the site plans and shop cuts of the proposed fuel storage tank are included with this response letter. The above ground storage tank will be a double walled tank with leak detection within the secondary containment envelope of the tank. An additional concrete pad has been proposed where vehicles will park during fueling to minimize the chance for infiltration of the fuel into the ground due to a spill. This concrete pad will be level and equipped with notches cut into the concrete to retain any minor spills that could potentially occur during refueling. The notches have been sized and designed to retain approximately 15 gallons of fuel should a spill occur while fueling.

Spill kits will be required on-site in accordance with all local, state, and federal regulations. In addition, the locking latch on the fuel nozzle will be removed to minimize the chance of overfilling and signs will be in place on the facility to instruct the operators to not leave the nozzle while refueling their vehicles. Finally, the fuel management key system can be programmed to limit the amount of fuel to be dispensed at one time, further minimizing the opportunity for substantial spills during refueling of the vehicles.

2.b. We take no exception to this recommendation as this would be required for the fuel storage facility under the applicable regulations.

2.c. Based on discussions with the owner, there would be no other areas on the project site that would be considered LUHPPL's. The parking areas will not be handling high-intensity uses. The trailer parking area will be mainly used to park empty trailers and would not be used for fleet storage. It is my understanding that the owner has approximately 30 trucks on the road and they will be coming and going from the facility on a daily basis. The trip generation for this number of trucks would not approach the criteria to be considered a high-intensity use.

3. We have performed test pit excavations with a backhoe in each of the proposed stormwater best management practices (BMP's) as recommended by Nitsch. The test pits revealed sandy soils with groundwater mottling between two and four feet below existing grade, depending on location. As the plans show, none of the proposed BMP's will intercept groundwater and we are providing a minimum of one foot of vertical separation between the mottling and the bottom of the BMP's in all stormwater BMP's with the exception of Bio-Retention Area 4. In this area we are limited by the existing piping system and driveway elevations and will provide separation to the maximum extent practicable while maintain the pre-existing pipe outfalls.

4. We have revised the design in this location to eliminate any work within the 25' buffer to the wetland. We are now proposing to retain the existing driveway and drainage system in this location and construct a bioretention area in the open area outside of the 25' buffer.

5. We have updated the proposed design to include an inlet Stormceptor 450i at the double grate catch basin to provide additional TSS removal prior to discharge to the subsurface detention area. A TSS Removal Spreadsheet for this treatment train is provided in the Stormwater Management System Report-Addendum 2, attached to this response.

6. We have reviewed and revised the Post Development watershed analysis as requested. An updated Post Development watershed analysis has been provided in Addendum 2.

7. We have updated the Pre Development watershed analysis to separate the grass and woods areas in PRE-B and PRE-E as applicable and removed the "woods/grass comb" designation. An updated Pre Development watershed analysis has been provided in Addendum 2.

8. The areas of existing concrete rubble were modeled as impervious due to the fact that there were buildings in these locations in the pre-developed condition. The Pre-Development analysis took into account the pre-existing building footprints to provide an accurate rate of runoff to the wetlands in the Pre-Developed condition, prior to demolition of the existing buildings.

9. A representative of Field Engineering walked the swale in question in the vicinity of the BVW and confirmed that this area all contributes flow to the BVW labeled as WET-3. Upon further investigation, it was determined that there are actually two swales in this area as shown on the updated Site Development Plans and these swales appear to eventually merge further down gradient within or in close proximity to the BVW labeled as WET-3. Based on the record topography of this entire vegetated area, it appears that the entire "island" drains towards the BVW labeled as WET-3.

10. The existing slab area corresponds with a pre-existing portion of the building with roof drains that were directly piped to the BVW labeled as WET-3. We conservatively assumed that this entire area would continue to flow to WET-3 in proposed conditions as there are currently no plans to demolish or improve the slab. The existing slab is relatively flat and the majority of the water sits on the slab and eventually makes its way overland towards the paved driveway and proposed paved parking spaces. We have conservatively assumed that this entire footprint will continue to flow to the BVW labeled as WET-3 in proposed conditions.

11. We have reviewed and revised the proposed design in this location. We are now proposing to retain the existing driveway and three existing catch basins as they currently stand. We are still proposing to construct Bio-Retention Area 4 and will direct the discharge from the existing catch basins to the sediment forebay. The area of the existing driveway to the south of the proposed parking area will remain unchanged and continue to drain as it does currently. We have also updated the Post Development watershed analysis to account for this plan revision.

12. We have performed a test pit at the bottom of each bioretention area and have confirmed very sandy soils within the subgrade. The mottling line indicating seasonal high groundwater was a minimum of one foot below the bottom of the bioretention areas (with the exception of Bio-Retention Area 4) and subsurface detention system, therefore we feel that some infiltration will occur from the bottom of the areas and the underdrain systems are not necessary.

13. The 12-inch outlet pipe from the subsurface detention system is now labeled as such on the updated Site Plans.

14. The outlet control structure labels for Bio-Retention Area 3 have been revised on the Site Grading Plan and Detail sheets to be consistent with the updated hydrologic model

15. The Long-Term Pollution Prevention Plan and Stormwater Management System Operation and Maintenance Plan on the Site Plans have been updated to prohibit snow storage directly within the stormwater management system.

16. The grading around Bio-Retention Area 1 has been revised as recommended to minimize the opportunity for runoff from the gravel parking area to short-circuit the sediment forebay. It should also be noted that we have also revised the design of Bio-Retention Area 1 to shift some of the work to the south which will minimize the amount of excavation and removal of the concrete foundations of the building which previously existed in this location. We have also placed a low flow drain at the bottom of Bio-Retention Area 1 to minimize the potential for extended ponding in this location. The updated Post Development watershed analysis takes these revisions into account.

17. We have added a notation to the plans directing the site contractor to remove the silt build-up within the existing drainage swale located at the outfall of the 18-inch drainage pipe. Riprap pads shall be placed at the outfalls of each drain to minimize erosion and stabilize the swale.

18. We have updated the notes related to the landscaping of the bioretention areas to require that the bottom of the basin also be seeded with a conservation/wildlife seed mix to provide erosion protection while the planting are becoming established.

It should also be noted that we have added a line of overhead poles and wires to the site plans. The applicant has been in discussions with NStar to bring new electrical service to the facility as the previous electrical service is out-dated and not necessary for their operations. As the plans show, we are proposing a number of poles along the existing paved access road to the west of the proposed re-development. A number of these poles will be located within the buffer zone to the existing bordering vegetated wetlands. As we discussed, we will refresh the wetland flags within 100' of this proposed work prior to issuance of the final Order of Conditions.

We feel that we have adequately addressed the Consultant's comments with this letter and the attached plans and documentation and look forward to discussing this exciting project with the Commission at the next Hearing on June 17. Please do not hesitate to contact me should you have any questions or require additional information.

Sincerely,

Field Engineering Co., Inc.

Richard R. Riccio III, P.E.
Project Manager

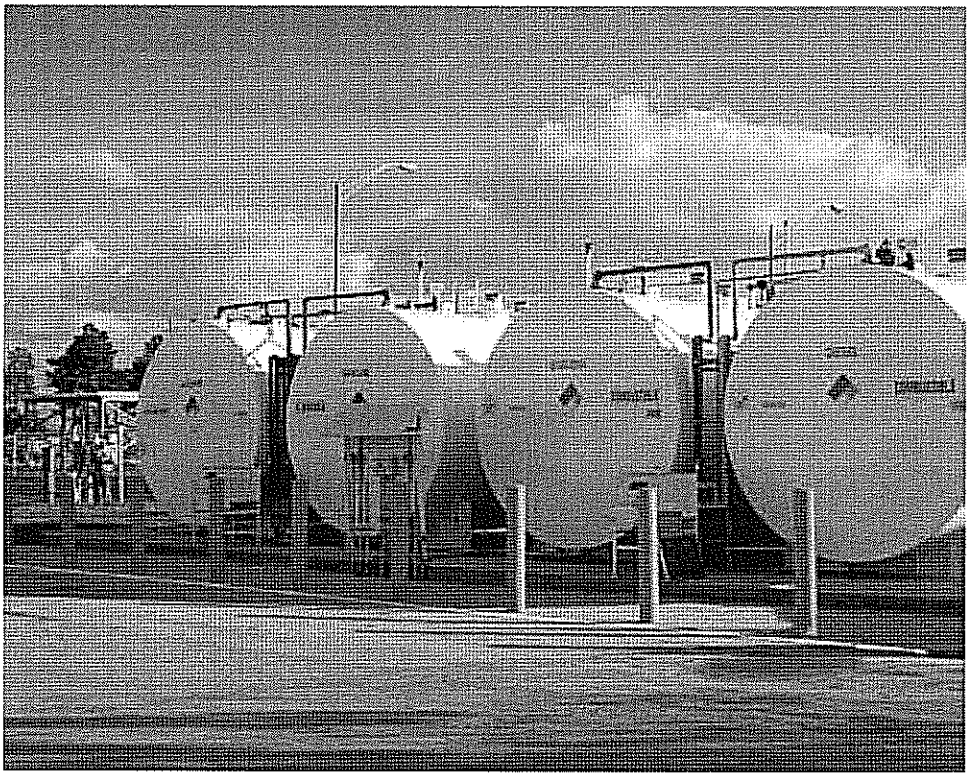
cc: Judith Nitsch Engineering (Scott Turner)
Eric DeCosta, NWD, Inc.

Attachments

1. Revised Site Development Plan Set (Dated 6/6/14)
2. Stormwater Management System Report Addendum 2 (Dated 6/5/14)
3. Cut Sheets on Fuel Storage System

Aboveground Horizontal UL-142 Tanks

Highland Tank®



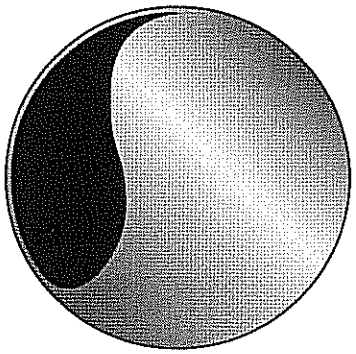
Aboveground Horizontal UL-142 Tanks
Highland aboveground steel tanks provide superior structural strength, product compatibility and durability for all your storage tank needs. Highland offers a variety of industry-proven designs with single and double wall options. Each tank is backed by Highland Tank's team of professionals in design, engineering, fabrication, delivery and service.

Highland aboveground horizontal tanks are available with or without supports to meet your requirements. Highland tanks are constructed to be compatible with the full range of petroleum products including those with higher methanol and ethanol contents.

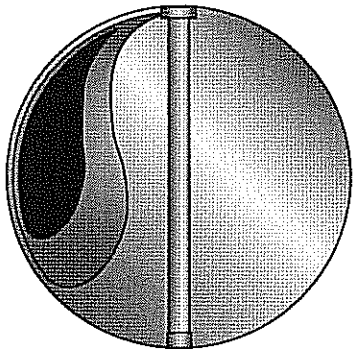
Each tank is constructed, tested, and labeled in accordance with Underwriters Laboratories Standard for Safety for the Aboveground Storage of Flammable and Combustible Liquids UL-142.

The UL Storage Tank Standards provide a long history of construction dependability. In addition, Highland's tanks meet or exceed the Federal Environmental Protection Agency's regulations for aboveground storage tanks for petroleum and chemical products.

Standard Construction



UL-142 Single-wall Construction
Highland single-wall storage tanks consist of a single sheet of steel meeting ASTM specifications, constructed to UL-142 standards. Material thicknesses range from 12 gauge to 3/8" of mild-carbon or stainless steel. Superior "ribbed" strength is achieved with lap joints employing a minimum 1/2" overlap.



UL-142 Double-wall Construction
Double-wall tanks consist of a primary steel tank wrapped by an exterior steel shell that may be in direct contact with the primary tank creating a full 360° double-wall tank. The interstice can be monitored for an unlikely leak using the 2" monitoring pipe. Both inner and outer tanks are supplied with emergency vent fittings.

With Highland Tank, you get historically proven steel design and construction that provide secure, dependable storage. In addition, you have the flexibility of customizing tanks to suit your needs.

Standard Construction Features
- Flat-flanged heads
- Continuous exterior fillet welds on all joints
- Threaded fittings (see schedule)
- Lifting Lugs
- UL-142 label
- 5 psi factory air test and seam inspection.
- Primer coating

Options include: Compartment bulkheads, manholes, flanges, enamel, epoxy or urethane exterior coatings, and special interior linings for aviation fuel, potable water and other liquids.

Emergency Vent Fittings
All Highland UL-142 tanks are supplied with an emergency vent fitting adequately sized to accomodate the intense increase in vapor pressure in the event of fire exposure. Emergency vents are available as an option.

Horizontal Tank Sizing Guide

Capacity (Gallons)	Dimensions Diameter	Length
185	3'-2"	3'-4"
240	3'-2"	4'-0"
300	3'-2"	5'-0"
500	4'-0"	5'-5"
500	4'-0"	5'-5"
500	4'-0"	5'-5"
1,000	4'-0"	10'-9"
1,000	4'-0"	10'-9"
1,000	5'-4"	6'-0"
1,500	5'-4"	9'-0"
2,000	5'-4"	12'-0"
3,000	5'-4"	18'-0"
4,000	5'-4"	24'-0"
4,000	6'-0"	19'-0"
4,000	8'-0"	10'-6"
5,000	6'-0"	23'-10"
5,000	8'-0"	13'-4"
6,000	6'-0"	28'-8"
6,000	8'-0"	16'-0"

Capacity (Gallons)	Dimensions Diameter	Length
8,000	8'-0"	21'-4"
8,000	10'-0"	14'-0"
10,000	8'-0"	26'-8"
10,000	10'-0"	17'-0"
12,000	8'-0"	32'-0"
12,000	10'-0"	20'-6"
15,000	8'-0"	40'-0"
15,000	10'-0"	25'-6"
20,000	10'-0"	34'-0"
20,000	10'-6"	31'-0"
25,000	10'-6"	38'-9"
25,000	10'-6"	38'-9"
30,000	10'-6"	46'-6"
30,000	10'-6"	46'-6"
40,000	12'-0"	47'-6"
50,000	12'-0"	59'-6"
50,000	12'-6"	54'-6"
60,000	12'-0"	71'-0"
60,000	12'-6"	65'-5"
60,000	13'-0"	60'-6"

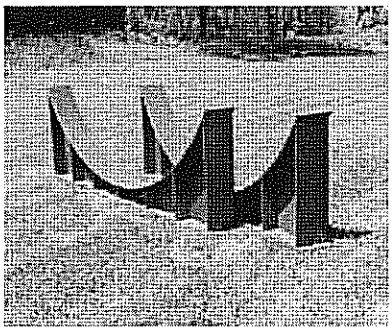
Notes:

For Double-wall (Type I) tanks, add 6" to length and 1" to diameter for outside dimensions (includes monitoring pipe).

For Double-wall (Type II) tanks, add 7" to length and 3" to diameter for outside dimensions.

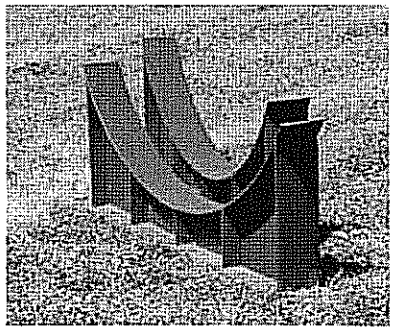
Two-saddle design available for all horizontal tanks. Tank heads may be fabricated with bracing or 1/16" thicker steel, per UL 142.

Tank Support Systems



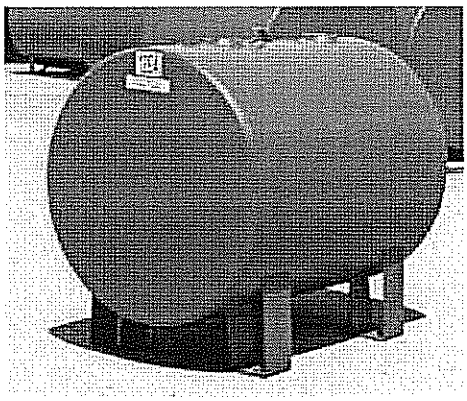
Saddles
Saddles are used to support the tank, maintain the tank's position and elevation and provide clearance for visual inspection of the underside. Highland manufactures in accordance with UL-142. Only two saddles per tank are required. Highland's two-saddle design facilitates quicker, more trouble-free installations. Standard saddles provide 6" of clearance and are available up to 12" high.

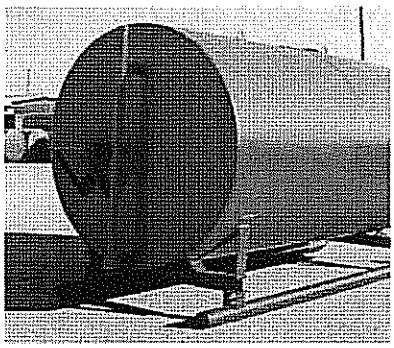
Note: Do not rely on tack or seal-welded saddles as a means for securing a tank in flood prone areas. A hold down system, connected to an adequately sized anchor pad is recommended.



Supports
Structural Steel Supports are also used to maintain the tank's position and elevation and provide clearance for visual inspection of the tank's underside. Standard supports provide 6" of clearance and are available on horizontal tanks up to 4,000 gallon 5'4" diameter.

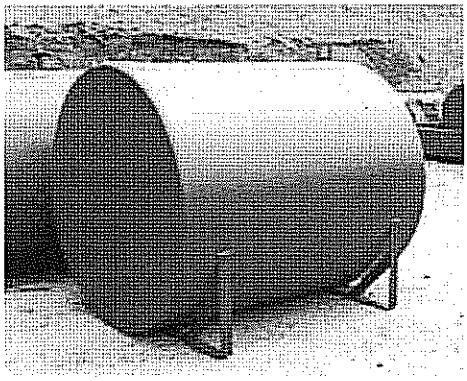
The total square surface area touching the ground is roughly equivalent to that of our skids, which helps minimize the risk of the tank sinking into soft foundations.





Skids
Skids are used to provide portability for empty horizontal tanks. They stabilize the tank and maintain a fixed elevation if being moved by towing. Skids also provide clearance for visual inspection of the tank underside. Highland manufactures two styles of skids; Small tank skids for tanks up to 1,500 gallons with runners fabricated from steel angle, and large tank skids with runners made from steel pipe.

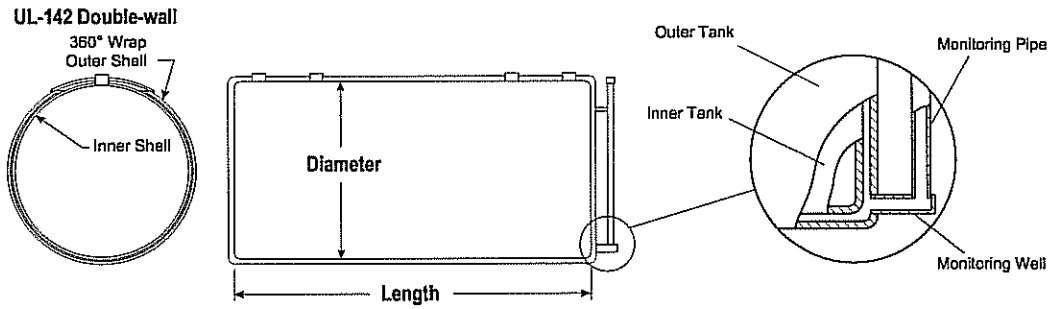
Optional Pump Platform shown on large skid tank at left.



Stabilizers
Stabilizers are used to maintain the the tank's position. The simplest support system available from Highland, stabilizers do not provide any clearance for visual inspection of the tank underside. Highland standard design consists of two stabilizers welded to the tank. Stabilizers are available on tanks up to 4,000 gallons, 5'4" diameter.

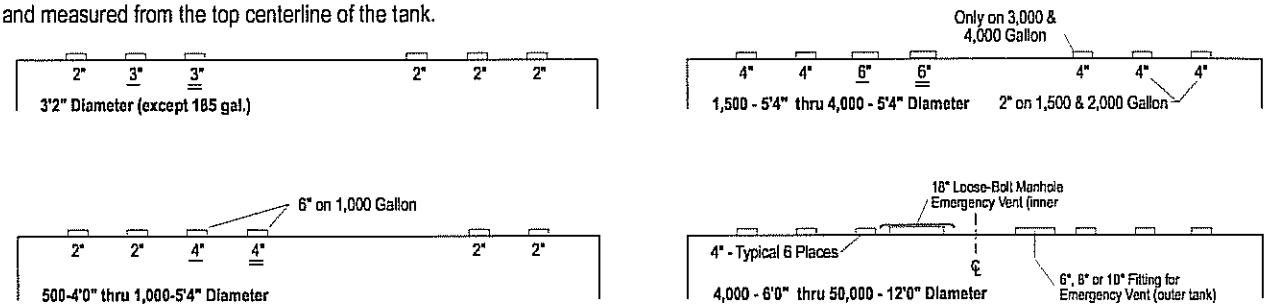
NOTE: Highland recommends that all aboveground horizontal tanks be installed elevated 4-6" to allow for routine visual inspections of the tank's underside.

General Arrangement



Standard Tank Fittings

All fittings are located and measured from the top centerline of the tank.



X - Fitting for primary tank emergency vent use; X - Fitting through outer shell only - interstitial emergency vent fitting

Recommended Guideline Specifications

Furnish and install a _____ gallon aboveground, horizontal, (single-wall or double-wall) steel storage tank _____ inches in diameter by _____ long. Tank shall be fabricated from mild carbon steel with flat-flanged heads. Tank thickness: head _____; shell _____. All items included with the tank shall be coated with red primer or _____ color, _____ _____ paint. The tank shall be manufactured in conformance with Underwriters Laboratories' UL-142 specifications and so labeled.

The tank shall be fabricated with the following threaded connections : _____ 2 inch, _____ 4 inch, _____ 6 inch as located on attached drawing, AND/ OR _____ 150# flanged connections with flange protectors. Flange sizes as follows (qty-size): ___ _____, _____, _____, with locations also indicated on drawing. (See standard fittings diagram for quantity, size and locations.) Thread protectors shall be inserted in all threaded openings prior to shipment.

Highland tanks are air tested at the factory but MUST be retested at the jobsite by the installer prior to installation.

Options & Accessories

- ____ Compartment Bulkheads
- ____ Manway(s) _____ inches in diameter with bolted and gasketed lid
- ____ Loose-bolt Manway _____ inches in diameter with bolted and gasketed lid (emergency vent)
- ____ Support Saddles
- ____ Supports (2 required, up to 4,000 gal. only)
- ____ Stabilizers (2 required, up to 4,000 gal. only)
- ____ Skids (up to 15,000 gal. only)
- ____ Emergency Vent(s) (2 needed on double-walls)
- ____ External Ladder
- ____ External Ladder & Filling Platform
- ____ Stairs & Filling Platform
- ____ Ships Ladder & Filling Platform
- ____ Pump Platform
- ____ Walkway(s) with Handrails
- ____ Exterior commercial grit blast (SSPC-6),
- ____ Exterior epoxy primer coat _____
- ____ Exterior polyurethane paint _____
- ____ Other exterior coating _____
- ____ Internal Ladder(s)
- ____ Internal lining _____ (Must include interior weld. Min. size 500 gallon.)
- ____ Level Sensing System(s)
- ____ Overfill Containment Chamber: welded or threaded
- ____ Leak Sensing System (double-wall tanks only)

Warranty

The subject tank is warranted by Highland Tank & Mfg. Co. to be free from defects in manufacturing, workmanship and materials. Highland Tank will repair or replace, at its sole discretion F.O.B. factory, within a period of one year after date of shipment, any item of our manufacture. All other items shall be warranted by their respective manufacturers. Liability hereunder is limited, as stated above, and does not include labor, installation costs, indirect or consequential damages of any kind. Tanks must be returned to the factory and if found to be defective upon examination, will be repaired, replaced or credit will be issued at our option.

Approved Manufacturer

Tank to be manufactured by Highland Tank at one of the following locations: Stoystown, PA, Manheim, PA, Watervliet, NY, or Greensboro, NC.

Please visit us at www.highlandtank.com

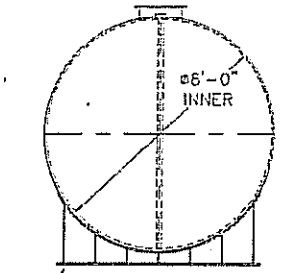
One Highland Road	4535 Elizabethtown Road	958 19th Street	2700 Patterson Street	2225 Chestnut Street	1510 Stoystown Road
Stoystown, PA 15563	Manheim, PA 17545	Watervliet, NY 12189	Greensboro, NC 27407	Lebanon, PA 17042	Friedens, PA 15541
814-893-5701	717-664-0600	518-273-0801	336-218-0801	717-664-0602	814-443-6800
FAX 893-6126	FAX 664-0617	FAX 273-1365	FAX 218-1292	FAX 664-0631	FAX 444-8662

© Highland Tank – HT– 1069 – 9/2011

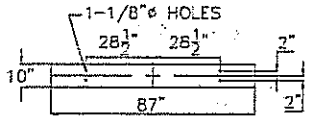
NOTE: ALL RIGHTS RESERVED. THIS DRAWING MUST NOT BE REPRODUCED IN ANY FORM WITHOUT THE WRITTEN PERMISSION OF HIGHLAND TANK®. HIGHLAND TANK® SHALL BE RESPONSIBLE ONLY FOR ITEMS INDICATED ON THIS FABRICATION DRAWING UNLESS OTHERWISE NOTED. CUSTOMER IS RESPONSIBLE FOR VERIFYING CORRECTNESS OF SIZE AND LOCATION OF FITTINGS, ACCESSORIES, AND COATINGS SHOWN ON THIS DRAWING.

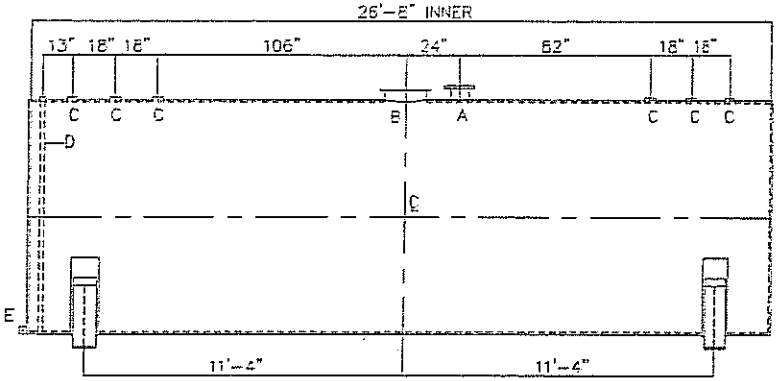
TOUCH UP OF FINISHED PAINT IS REQUIRED BY INSTALLATION CONTRACTOR. TOUCH UP PAINT SHIPPED WITH TANK.

SHIPPING LUGS AS NEEDED



(2) 8'ø x 6" HIGH UL STYLE SADDLES
SHIP (2) LOOSE WITH TANK





DESIGN DATA
CAPACITY – 9900 GALLONS
TYPE – DOUBLE WALL – TYPE I
NO. REQ. – –
OPERATING PRESSURE – ATMOSPHERIC
SPECIFIC GRAVITY = 1.0
TANK MATERIAL – MILD CARBON STEEL
THICKNESS – INNER– HEADS: 5/16" SHELL: 1/4" THICKNESS – OUTER– HEADS: 7 GA SHELL: 7 GA
CONSTRUCTION – INNER – LAP WELD OUTSIDE ONLY OUTER – LAP WELD OUTSIDE ONLY
TANK TEST – INNER – 5 PSIG OUTER – 2 PSIG AND FULL VACUUM
INT. FINISH – NONE
EXT. FINISH – SHOP PRIMER
LABEL – UL 142

LEGEND	
A	8" FFSO 150# FLANGE THROUGH OUTER SHELL ONLY. MARK WITH SPECIAL WARNING LABEL INTERSTITIAL EMERGENCY VENT USE ONLY
B	18" LOOSE BOLT MANWAY – PRIMARY EMERGENCY VENT USE
C	4" FITTING
D	2" INTERNAL INTERSTITIAL MONITOR PIPE
E	3" x 3" PLATE w/ 1/2"ø (MIN.) HOLE ON CENTER (GROUNDING LUG–ONE REQ'D)
F	

Highland Tank®

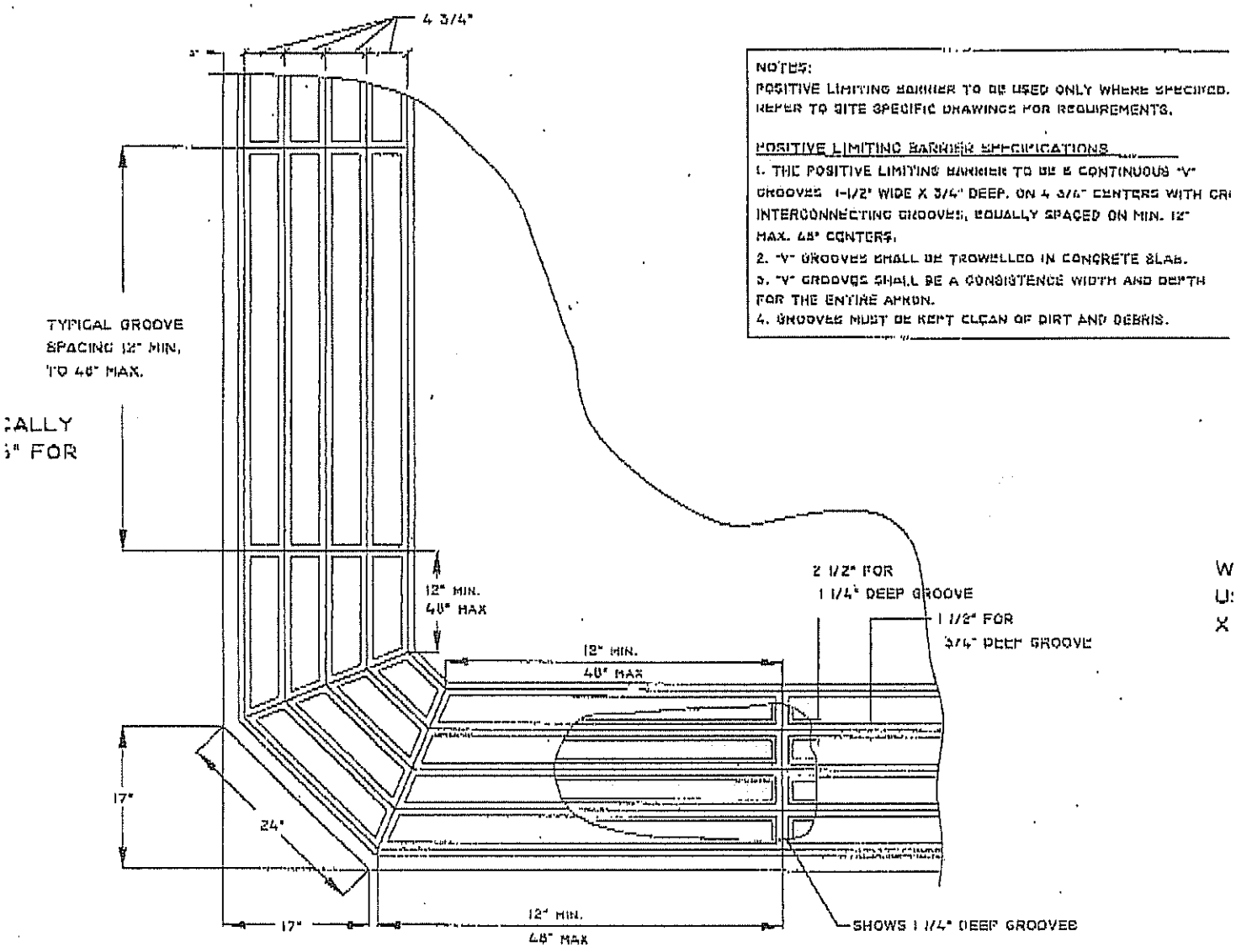
9900 GAL 96"ø AG DW HORIZONTAL

CUSTOMER:

PROJECT:

QUOTE NO.

SCALE: 1/4"=1'-0" | DWG. BY: | DWG. NO.: 9900 AHDW9(



NOTES:
POSITIVE LIMITING BARRIER TO BE USED ONLY WHERE SPECIFIED. REFER TO SITE SPECIFIC DRAWINGS FOR REQUIREMENTS.

POSITIVE LIMITING BARRIER SPECIFICATIONS

1. THE POSITIVE LIMITING BARRIER TO BE A CONTINUOUS "V" GROOVES 1-1/2" WIDE X 3/4" DEEP, ON 4 3/4" CENTERS WITH CR INTERCONNECTING GROOVES, EQUALLY SPACED ON MIN. 12" MAX. 48" CENTERS.
2. "V" GROOVES SHALL BE TROWELLED IN CONCRETE SLAB.
3. "V" GROOVES SHALL BE A CONSISTENCE WIDTH AND DEPTH FOR THE ENTIRE APRON.
4. GROOVES MUST BE KEPT CLEAN OF DIRT AND DEBRIS.

PLAN VIEW OF TYPICAL APRON CORNER AND GROOVE SPACING DETAIL

NOT TO SCALE