

AMAYA ARCHITECTS

ADDENDUM NUMBER 2

For:

**Madacsi Residence
53 Roseleah Drive
Mystic, Connecticut**

Project Number 1588

18th of April 2019

The Drawings and Specifications prepared by Amaya Architects and its Consultants entitled “**Demolish an Existing Structure – Construct New Residence on a Fiberglass Pile Foundation**”, and known as the “**Madacsi Residence**” and located at “**53 Roseleah Drive, Norwalk, Connecticut – Drawings and Specifications dated the 15th of March 2019 - Project Number 1588**”, are hereby amended in the following particulars:

<u>Item #</u>	<u>Section/Dwg</u>	<u>Description</u>
1		Alternates to Specified Items – Alternates to the Specified Items, Products or Materials will NOT be accepted at the Bid Opening – The General Contractor's Bid must reflect all specified Products and/or Materials.
2		Items to Submit – The following items will need to be included in the Bid Package – Bid Form, Bid Breakdown (Section 00000B), Bid Security, Affidavit of Non-Collusion, Bidders Eligibility Certificate, General Bidder Certificate, Subcontract Bidder Certificate (if known), Subcontractor Identity (if known), Contract Schedule (outline format), HUD Equal Opportunity Employment, Section 3 and Segregated Facilities – All of the listed items are included in the Specifications
3		Existing Shed – The existing shed is scheduled to remain – The General Contractor shall protect the Shed from damage during the Construction process.
4	Section 00000B	Delete Specification Section 00000B – Bid Breakdown – Delete Section 00000B from the original Bid Package.

5	Section 00000B	Add Specification Section 00000B – Bid Breakdown – Add the attached Specification Section 00000B to the Bid Package – Allowances “D” revised, “F” added.
6	Section 01210	Delete Specification Section 01210 – Allowances – Delete Section 01210 from the original Bid Package.
7	Section 01210	Add Specification Section 01210 – Allowances – Add the attached Specification Section 01210 to the Bid Package – Allowances “D” revised, “F” added.
8	Section 01100	Amend Specification Section 01100 – Summary of Work – Subsection 1.2, D, 3 as follows; Delete note concerning General Contractor being responsible for replacing unsuitable soil. Unsuitable soil replacement will be handled as an Allowance Item – Specification Section 01210. The General Contractor will be responsible for compaction of the replaced material to 95 percent.
9		<p>Exterior Water Barrier System – Provide DuPont Tyvek DrainWrap material to exterior side of Plywood Sheathing and under the Rain Screen System – Install per manufacturers specifications and as follows;</p> <p>Overlap all horizontal and vertical joints by 6" – Tape all horizontal and vertical joints using 3" DuPont Tyvek Tape or DuPont StraightFlash.</p>
10		Forced Main – For the purposes of Bidding the scope of work required for the New Sanitary System shall include all items outlined on Drawing C-1 (included as part of the Bid Documents) – Items include, but may not be limited to the following; Sanitary Lateral from new Structure, New 1,500 Gallon Raw Sewage Pump Chamber, and Force Main to new Sanitary LPFM Connection at existing Manhole.
11		<p>Building Insulation – The insulation material for the various spaces and wall cavities shall be as manufactured by Rockwool and as follows;</p> <p>Exterior Wall Cavity, Floor Cavity and Ceiling/Attic Area – Comfortbatt Thermal Batt Insulation – Material is a semi-rigid stone wool batt insulation – Thickness to be 5 1/2" – Provide one layer in exterior wall cavities, two layers in floor assembly, and two layers in attic area – As shown on the Drawings</p>

		<p>Exterior Face of Wall (Sheathing) – Comfortboard 80 – Rigid stone wool continuous insulation board used as a non-structural sheathing product – Thickness to be 1 1/2" – To be installed vertically on the exterior side of the wood studs and under the plywood sheathing material.</p> <p>Sound Batt Insulation – Safe'N'Sound Fire and Soundproofing Insulation – Thickness to be 3" – Provide in surrounding bathroom walls and as shown on the Drawings.</p> <p>(NOTE: The above insulation materials do not apply to the insulation material to be utilized as part of the EIFS Finish System – Refer to Item #23 below for additional information.)</p>
12		<p>Wood Interior Doors – All interior doors shall be Raised 2-Panel Doors (Series #82) as manufactured by the Simpson Door Company – The door units shall be wood (based on standard wood selections), which will be stained and protected with a clear sealer at the direction of the Owner.</p> <p>(NOTE: The existing French Door Unit scheduled to be removed shall be re-installed in the Studio – between the Kitchen and the Studio – Size the new opening to suit the existing door.)</p>
13		<p>Casement Windows and Patio Doors – The casement windows and patio doors are Marvin Integrity, Wood-Ultrex Series – Fiberglass Exterior with Wood Interior – Both windows and patio doors shall Impact-Resistant for Coastal installations.</p> <p>Sizes listed on the Drawings – Bedroom windows need to be sized for Egress – Provide with full screens and Control Opening Devices on all windows (Fall Protection).</p> <p>Exterior Finish – Fiberglass color to be selected by the Owner from standard color options.</p> <p>Interior Finish – Provide units with Factory-Applied White Semi-Gloss interior finish.</p> <p>Hardware – Window Hardware provide with Brass Finish – Patio Doors shall have Entry Lockset with key operation on exterior (Northfield Collection with Brass PVD Finish) – All Patio Door Locksets to be keyed alike.</p>
14		<p>Interior and Exterior Hardware – The Hardware Finish shall be Brass and provided as follows;</p> <p>Exterior Entry Door – Main Entrance Door (north side) – Provide Entry Lockset (Keyed Exterior and Turn-Piece/Button on Interior) –</p>

		<p>Keyed to match Interior Entry Door at top of stairs.</p> <p>Interior Stair Entry Door – Interior Stair Entrance Door (north side internal stair) – Provide Entry Lockset (Keyed Stair side and Turn-Piece/Button on Interior) – Keyed to match Exterior Entry Door.</p> <p>Bedroom and Bathroom Doors – Provide Privacy Set Hardware.</p> <p>Closets, Laundry Room Doors and Studio – Provide Passage Set Hardware.</p>
15		<p>Concrete Pad under Propane Tank – Refer to the attached information sheet for Anchoring Fuel Tanks as issued by FEMA – Also refer to the Sizing Chart attached for reference to this Addendum – For the purposes of Bidding figure a 1,000 Gallon Tank set on a concrete pad 17' long by 5' wide by 12" thick, reinforced with welded wire mesh.</p> <p>The General Contractor will be responsible for installing (per the FEMA Requirements) the Owner supplied Propane Tank.</p>
16		<p>Paint – Paint shall be manufactured by BEHR Process Corporation – Santa Anna, California and as follows;</p> <p>Ceiling Surfaces – Shall be finished using – BEHR Marquee Interior Paint with a Matte Finish.</p> <p>Wall Surfaces – Shall be finished using – BEHR Marquee Interior Paint with an Eggshell Finish.</p> <p>Primer for the Wall and Ceiling – The Primer for both the walls and the ceilings shall be – BEHR Premium Plus Interior/Exterior Multi-Surface Primer and Sealer – The primer can be tinted to match the finish coat.</p> <p>Wood Trim – Shall be finished using - BEHR Marquee Interior Paint with a Semi-Gloss Finish.</p> <p>Interior Doors – Shall be finished using a coat of Stain and a minimum of two coats of Polyurethane Varnish.</p> <p>Painted surfaces shall receive a minimum of two coats of paint (one coat of Primer and one coat of Finish) – Additional coats may be required for proper coverage.</p> <p>All final color selections will be by the Owner from standard color options – Figure a maximum of two different colors on the wall surfaces throughout the house, one color on the ceiling and one color on the wood trim.</p>

17		Exterior Trim Material – Where exterior trim material is required provide unpainted AZEK Material – Refer to Specification Section 06600 for additional information.
18		<p>Cable Railing System – The Cable Railing System (Cable Wire, Posts, Cap and related accessories as required for assembly) for the south facing deck and stairs to grade shall be as manufactured by "Viewrail" and as follows;</p> <p>Posts – Brushed Stainless Steel, surface mounted with foot covers – Alloy should be 2205 Duplex Stainless Steel for Coastal Areas.</p> <p>Cable – Stainless Steel Cable, 5/32" non-flexible.</p> <p>Top Rail – Brushed Stainless Steel, Metal Handrail 1" x 2", mounted using the Universal Top Mount – Provide end caps as required to close off open ends.</p> <p>Accessories – Provide as required to complete the installation of the railing system.</p>
19		<p>Decking Material – The finish surface material for the south facing deck and the mechanical platform on the buildings west side shall be as follows;</p> <p>IPE Decking Material – Provide 1" x 6" "pregrooved" boards – Install using the IPE Clip Extreme Hidden Deck Fastener System designed for hidden fastening and as per the manufacturers recommendations – Color selection will be by the Owner from standard color options – The IPE material is a pre-finished board.</p>
20		<p>Elevator System – The elevator shall be as manufactured by Symmetry Elevating Solutions and as follows;</p> <p>Inline Gear Drive Unit with two stops – The cab interior shall be a standard Flat Panel Design constructed using standard wood species and finish with standard stained colors – All control devices shall have a Brushed Stainless Steel finish – Refer to the Drawings for placement, door opening locations and electrical requirements.</p> <p>All color selections will be by the Owner from standard color options.</p>
21		Fiberglass Piles – The Base Bid should reflect 51 Concrete Filled Fiberglass Piles as shown on Drawing F-1 – All 51 piles will extend downward approximately 25'-0" below finish grade – Of the 51 piles, 40 piles extend upward to the underside of the wood

		<p>framing above – 11 piles are located beneath the concrete foundation wall at the main entrance enclosure, these piles do not extend upward – Fill all Fiberglass Piles solid with concrete – For bidding purposes figure 40 Piles at a length of 40' and 11 Piles at 25' in length.</p> <p>The Fiberglass Piles are available through Pearson Pilings, Inc. – 846 Airport Road – Fall River, Massachusetts – 508.675.0594.</p>
22		<p>Rain Screen System – The exterior rain screen system shall be “Climate Shield Rain Screen Wood Siding System” – References to other systems indicated on the Drawings shall be deleted – The rain screen system shall include; Climate Shield Rain Screen Clips, Cor-A-Vent SV5 siding ventilation and Mataverde 1 x 6 Premium IPE Hardwood Siding – The system shall be installed as per manufacturers specifications – Color selection will be by the Owner from standard color options.</p> <p>The system materials, clips and wood boards are available through General Woodcraft, Inc. – 531 Broad Street – New London, Connecticut – 860.444.9663.</p>
23		<p>EIFS Finish System (North Wall at Entrance and Underside of House) – Provide EIFS Material as manufactured by the STO Corporation – Install as per manufacturers specifications for the given application with a standard “Fine Surface Finish” – The insulation material for the EIFS Finish System shall be 1 1/2 “ Expanded Polystyrene.</p>
24		<p>Geotechnical Report – There was no Geotechnical Report completed for the Site.</p>
25		<p>Borings – Only one boring was taken at the Site – The results are included in the Specifications under Section 00100 and 00100A – Boring Report – The location of the Boring is also indicated with the Boring Report.</p>
26		<p>Wall Tile Allowance for Tub and Shower Surrounds – Refer to Specification Section 01210 – Allowances – Subsection 3.3 E – The allowance for the tile material to be utilized for the Master Bathroom Shower (walls and flooring), the Main Bathroom Tub/Shower surround, and the Studio Bathroom Shower surround is \$3.50 per square foot.</p> <p>This allowance is only for the Tile Material. The labor and any equipment or supplies (grout) required to install the tile should</p>

		be included in the Base Bid. The General Contractor will be responsible for calculating the amount of tile required. The Owner will select the tile material at a later time.
27		Generator – The Generator specified must be included in the General Contractors Bid – Alternates will not be considered at the time of the Bid Opening – The specified Generator can be purchased from any source that sells and services the type of Generator Specified.
28		<p>Steel Posts vs Engineered Wood Posts – The Column Schedule on Drawing S-1 is a Generic Schedule – All of the required Columns or Posts shown and indicated on Drawings S-1 and S-2 are Engineered Wood Posts.</p> <p>The wood posts shown as being located within a wood stud wall or partition, can be rotated to fit within the wall or partition.</p>
29		Taxable Items – State Sales Tax will apply to this project based on Construction Materials and Services normally subject to the State of Connecticut's Tax Regulations – This project is NOT a Tax Exempt Project.
30		Prevailing Wage Project – The Madacsi Residence Project is NOT a Prevailing Wage Project.
31		Drawing A10 – There is no Drawing A10 included as part of the Bid Package – References to Drawing A10 refer to other Drawings that were included in the Bid Package.

END OF ADDENDUM TWO

MADACSI RESIDENCE #1588
53 ROSELEAH DRIVE
MYSTIC, CONNECTICUT

DOCUMENT 00000B – BID BREAKDOWN (REVISED)

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|-----|--|----------|
| 1. | General Conditions and Miscellaneous Items
(Include General Overhead Items) | \$ _____ |
| 2. | Site Work
(Include Excavation, Backfill, Grading, Driveway,
Underground Utilities and Grass Areas) | \$ _____ |
| 3. | Concrete
(Include Footings, Building Sabs and Slabs on
Grade for Parking) | \$ _____ |
| 4. | Fiberglass Composite Piles
(Include Fiberglass Piers and Concrete Fill
Material for Piers) | \$ _____ |
| 5. | Metal and Steel Work | \$ _____ |
| 6. | Carpentry
(Include Rough and Finish Work) | \$ _____ |
| 7. | Thermal and Moisture Protection
(Include Roofing and Rain Screen System and
Exterior Finish Materials) | \$ _____ |
| 8. | Windows and Doors
(Include both Interior and Exterior Doors) | \$ _____ |
| 9. | Interior Finishes
(Include Painting, Flooring, and Tile Surrounds) | \$ _____ |
| 10. | Elevator
(Include Elevator Unit, Finishes in Cab and
related Equipment for Operation) | \$ _____ |
| 11. | Plumbing
(Include all specified Piping, Fixtures, Faucets,
Equipment and Accessories) | \$ _____ |
| 12. | Mechanical
(Include all specified Mechanical Equipment) | \$ _____ |

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13. Electrical \$ _____
(Include all specified Wiring, Panel Boxes, Equipment,
Light Fixtures, Generator and Accessories)

14. Allowances

A.	Lump Sum Flooring Allowance (Includes Material, Installation and Finish)	\$43,500.00
B.	Unit Cost Fireplace Allowance	\$16,500.00
C.	Lump Sum Testing and Inspections	\$ 4,000.00
D.	Lump Sum Survey/Elevation Certificate	\$ 6,000.00 (Revised)
E.	(To be included in General Contractors Base Bid – Line Item 9 above)	
F.	Lump Sum Unsuitable Soil	\$15,000.00 (Added)

TOTAL BASE BID \$ _____

15. Unit Price for Rock Excavation \$ _____ Per Cubic Yard

END OF DOCUMENT 00000B

SECTION 01210 – ALLOWANCES (REVISED)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements governing the following:
 - 1. Lump-sum Allowances.
 - 2. Unit-cost Allowances.
 - 3. Quantity Allowances.
 - 4. Contingency Allowances.
 - 5. Testing and Inspecting Allowances.
 - 6. Survey and Elevation Certificate Allowance
- B. See Division 01 Section 01400 "Quality Requirements" for procedures governing the use of allowances for testing and inspecting.

1.3 SELECTION AND PURCHASE

- A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.
- B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
- C. Purchase products and systems selected by Owner from the designated supplier.

1.4 SUBMITTALS

- A. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.
- B. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.5 COORDINATION AND DOCUMENTATION

- A. Coordination Responsibilities – The General Contractor shall be responsible for coordinating all allowance items with other portions of the Work. Furnish templates as required to coordinate installation. The General Contractor shall also be responsible for tracking all expenses related to Allowance Items and reporting any possible overages to the Architect in a timely manner and before items are purchased.
- B. Proof of Purchase – The General Contractor shall submit receipts, invoices or other proof of purchase documentation for all Allowance items listed in Subsection 3.3.
- C. Unused Allowance Money – All unused monies shall be credited back to the project at closeout time in the form of a Change Order (Credit).

1.6 ALLOWANCES

- A. Lump Sum Allowances - Unless otherwise indicated below in Subsection 3.3, the Lump Sum Allowance amount includes the Contractor's costs for the purchasing of the material and/or services provided, any applicable sales tax, receiving and handling of material at project site, labor, installation, overhead and profit, and similar costs related to products, materials or services.
- B. Unit Cost Allowances – Unless otherwise indicated below in Subsection 3.3, the Unit Cost Allowance amount includes the Contractor's costs for the purchasing of the material and/or services provided and any applicable sales tax. Receiving and handling of material at project site, labor, installation, overhead and profit, and similar costs related to products, materials or services shall be included as part of the General Contractor Base Bid.
- C. Testing, Inspection and Survey Allowances - Unless otherwise indicated below in Subsection 3.3, the Allowance amount includes the Contractor's costs for all required material testing and inspections required by these Specifications or as indicated on the Drawings. The Contractor shall submit copies of all invoices paid for the above referenced services.
- D. Survey and Elevation Certificate Allowance - Unless otherwise indicated below in Subsection 3.3, the Allowance amount includes the Contractor's costs for any required Site Surveys (both during and following the completion of the Construction) and an Elevation Certificate to establish the Finish Floor Elevation
- E. Refer to Schedule of Allowances - Subsection 3.3 for additional information.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

- A. Lump Sum Flooring Allowance: Finish flooring material, installation and finish will be addressed as an "Allowance" amount. The allowance will be based on two materials (as selected by the Owner) – The two materials included are Ceramic Tile (12 x 12) for the Lower Entrance Hall, Exercise Room, Laundry and all of the Bathrooms – with Hard Wood Flooring (3/4" Brazilian Koa) in the remainder of the house. **The Allowance amount will include material, installation and finishes – complete and ready for intended use.**

Flooring Allowance Amount	\$43,500.00
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- B. Unit Cost Fireplace Allowance – The Gas Fireplace will be addressed as an "Allowance" amount. The allowance amount will be based on Fireplace selected by the Owner and specified herewithin – Ortal Front Facing Unit, Model #150H, with Clear Double Glass Heat Barrier, Black Ceramic Reflective Glass Interior, and Driftwood Decorative Media. Center Fireplace Unit in a wood framed "box", 90" wide. Refer to the Floor Plans for the location of the Fireplace Unit. The Allowance amount will include the material costs (and any required sales taxes) for the specified unit – **The enclosure, installation (with venting) and all related gas connections (ready for the intended use) shall be included as part of the Contractors Base Bid Amount.**

Fireplace Allowance Amount	\$16,500.00
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- C. Lump Sum Testing and Inspection Allowance: All testing and or inspections either outlined as part of this Section or as directed by State and Local Authorities as being required, shall be included as part of this "Allowance" amount. Testing and inspections shall include, but not be limited to; concrete materials, formwork placement, setting of reinforcement, soil, soil compaction, and bolted connections. The Allowance amount shall include all costs related to Testing and Inspections.

Testing and Inspection Allowance Amount	\$ 4,000.00
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53 ROSELEAH DRIVE
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- D. Lump Sum Site Survey, Layout and Elevation Certificate Allowance: Tasks include under this line item "Allowance", but are not limited to the following; any required Site Layout, Staking of Building Elements and an Elevation Certificate after the lifting process has been completed. The Allowance amount shall include all costs related to Site Survey, Layout and the Elevation Certificate.

Site Survey and Elevation Certificate Allowance Amount \$ 6,000.00

- E. Material Tile Costs: For the purposes of calculating the specified tile finishes (not including the Flooring), the General Contractor shall carry a "Material Cost" of \$3.50 per Square Foot - For the Tile Surrounds and Tile Floor Surfaces specified for the Master Bathroom Shower enclosure, the Main Bathroom Tub/Shower enclosure and the Studio Bathroom Shower enclosure. The Floor Tile specified for the Bathrooms, Exercise Room and the Entrance Area shall be included as part of Allowance A – See Specification Section 01210, Subsection 3.3. **The installation of the Tile shall be included as part of the General Contractors Base Bid Amount.**

- F. Lump Sum Unsuitable Soils Allowance: This Allowance would be utilized to replace any Unsuitable Soils found at the Site during excavation work that is required to complete the specified Construction. The General Contractor will be responsible for notifying the Architect when unsuitable soils are found. Documentation of replaced quantities will be required before payment can be released.

Unsuitable Soil Replacement Allowance Amount \$15,000.00

END OF SECTION 01210

Anchor Fuel Tanks



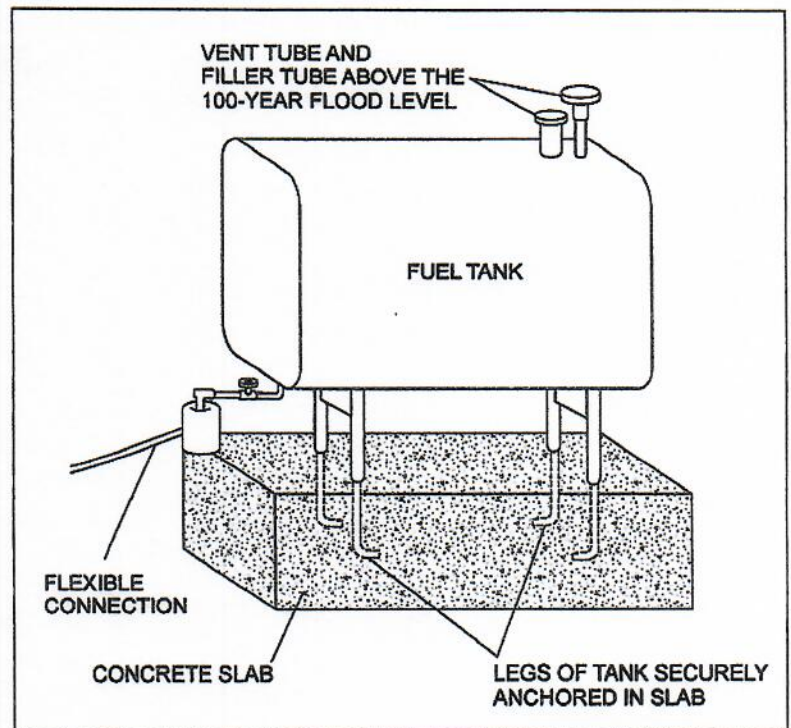
FEMA

PROTECTING YOUR PROPERTY FROM FLOODING

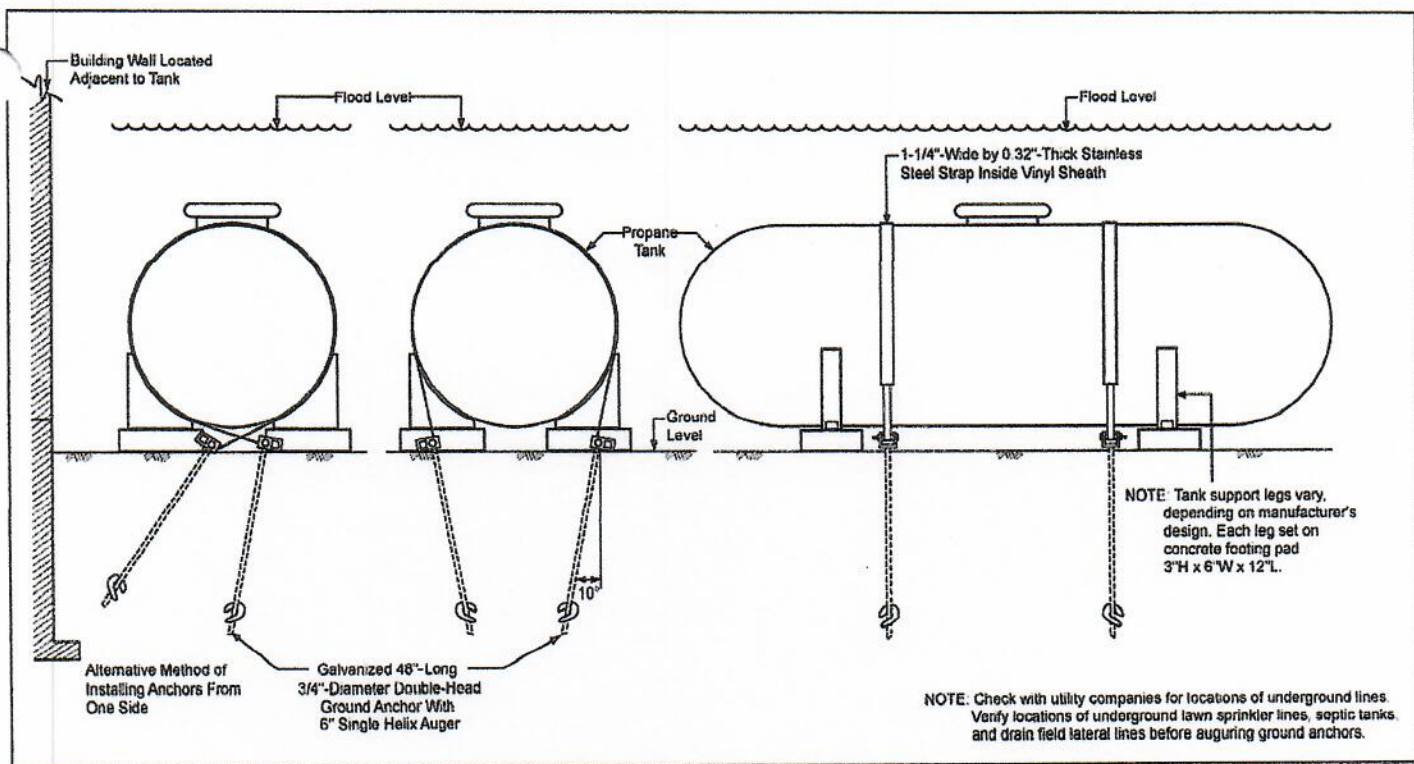
Unanchored fuel tanks can be easily moved by flood waters, posing serious threats not only to you, others, and your property, but also to public safety and the environment. An unanchored tank outside your building can be driven into the building walls by flood waters, or it can be swept downstream, damaging other houses. When an unanchored tank in your basement is moved by flood waters, the supply line can tear free and your basement can be contaminated by oil. Even a buried tank can be pushed to the surface by the buoyant effect of soil saturated by water.

As shown in the first figure, one way to anchor a fuel tank is to attach it to a large concrete slab whose weight is great enough to resist the force of flood waters. This method can be used for all tanks above ground, both inside and outside your property. You can also anchor an outside tank by running straps over it and attaching them to the concrete slab by using turnbuckles.

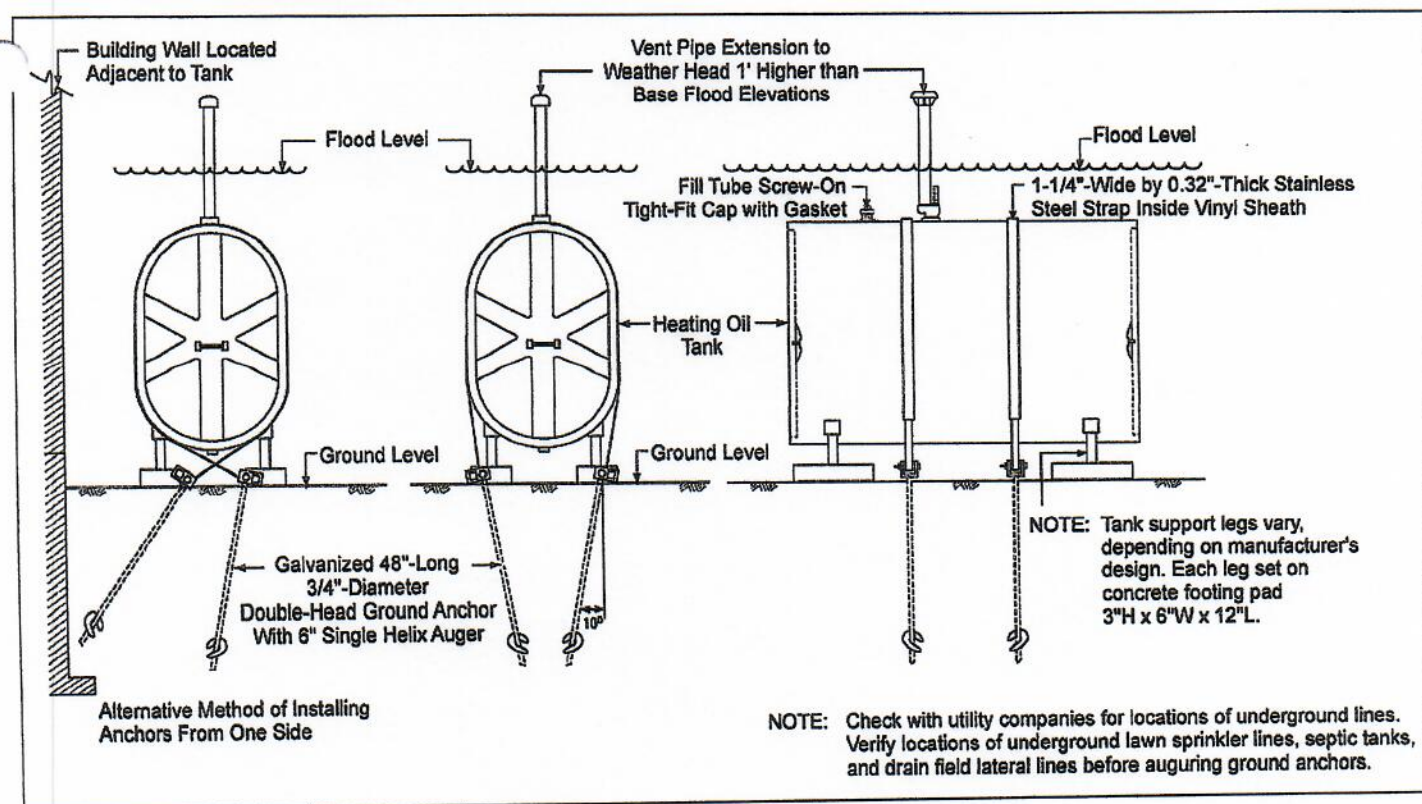
Propane is stored in pressurized vessels as liquefied petroleum gas (LPG), which can be extremely volatile and potentially explosive if the tank is ruptured and the escaping LPG is ignited by a spark. As shown in the second figure (next page), an inexpensive way to secure a horizontal outside propane tank is to install four ground anchors connected across the top of the tank with metal straps. Secure a vertical tank (120-gallon, 420 lb. size) with two ground anchors. Set each anchor on opposite sides of vertical tank. Attach a strap from each anchor to the collar secured around top of the tank. Attach another metal strap connected from one anchor to the other through tank base. The ground anchors and straps described below are the same products that are required by building codes to tie down mobile homes. These products are available from suppliers and installers that service the manufactured housing industry. Similar products can be used to anchor an outside heating oil tank. As is illustrated in the third figure (next page), one way to secure the oil tank is by running straps over it and attaching them to ground anchors.



Anchoring a fuel tank.



Anchoring an outside propane tank.



Anchoring an outside heating oil tank.

BENEFITS OF UTILIZING THIS MITIGATION STRATEGY

- Helps to prevent damage and contamination to a structure and neighboring structures
- Helps to protect public health and safety, as well as those of the structure's occupants, in addition to protecting the environment

TIPS

Keep these points in mind when you anchor a fuel tank:

- ✓ If you prefer not to do this work yourself, you can have a handyman or contractor anchor your tank.
- ✓ Extend all filling and ventilation tubes above the 100-year flood level so that flood waters cannot enter the tank.
- ✓ Close all connections when flood warnings are issued.

ESTIMATED COST

Anchoring a 1,000-gallon fuel tank to a concrete base will cost approximately \$300 to \$500.

OTHER SOURCES OF INFORMATION

FEMA 259, *Engineering Principles and Practices for Retrofitting Flood Prone Residential Buildings*, January 1995, <http://www.fema.gov/library/viewRecord.do?id=1645>. (New FEMA 259 will be available in the Fall of 2011.)

FEMA 348, *Protecting Building Utilities from Flood Damage*, Chapter 3, November 1999, <http://www.fema.gov/library/viewRecord.do?id=1750>.

FEMA P-499, *Home Builder's Guide to Coastal Construction*, "Protecting Utilities," Technical Fact Sheet No. 8.3, December 2010, <http://www.fema.gov/library/viewRecord.do?id=2138>.

FEMA 461, *Anchoring Home Fuel Tanks* (DVD), <http://www.fema.gov/library/viewRecord.do?id=2021>.

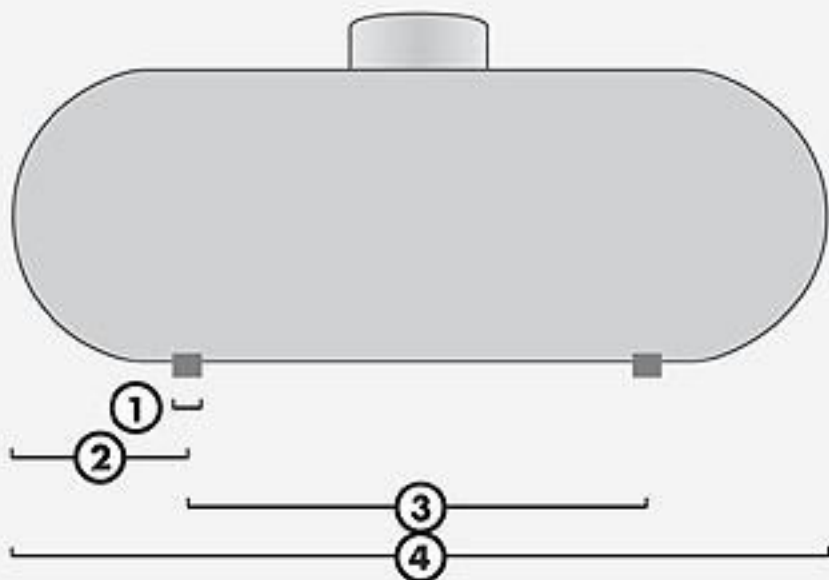
FEMA, *Anchoring Home Fuel Tanks* (Video), <http://www.youtube.com/watch?v=gVTSWXnLmC4>

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Tank Specifications

Height from Top of Tank to Dome Top

AG	7.50
AG/UG	10.75
AG/UG Long	14.75
UG (SNR)	14.75
UG (LNR)	26.75



Tank Size (in gallons)	120	150	250	320	475	500	1000
Dimensions	24x67	24x82	30x92	30x114	37x113	37x120	41x190
Approximate Weight (in pounds)	260	380	480	620	920	940	1800
Shell Thickness	0.140	0.140	0.175	0.175	0.218	0.218	0.238
Head Thickness	0.138	0.138	0.148	0.148	0.184	0.184	0.201
① Leg Width	2.5	2.5	2.5	2.5	3	3	3
② Leg Distance from Edge of Shell	6.5	2.75	1.75	6	4	4	4
③ Leg Distance from Center to Center	34.5	59	60	60	60	60	141.5
④ Shell Width	50	67	64	87	75	81	149

All dimensions are in inches unless otherwise noted. Dimensions may vary +/- 1".