

Request for Information 19/031 – Storage Tanks Construction Project

1. Petroleum and Energy Infrastructures Ltd. (“PEI”) hereby invites contractors with relevant experience and expertise (“Participants”), to provide a detailed response to this Request For Information (“RFI”) in connection with the provision of Design, Procurement & Construction services for 6 new vertical petroleum products storage tanks at PEI’s Eshel Terminal site in Israel (the “Project”). Once the RFI stage is concluded, PEI’s tender committee shall consider issuing a tender for the services and determine the terms thereof.
2. The 6 vertical petroleum products storage tanks will have an operational volume of 50,000m³ each with a total capacity of 300,000m³. Tank diameter will be approximately 60m. The tanks will be built in an area adjacent to the existing PEI terminal installations at the Eshel site. All civil works will be designed and executed by others including earth moving and site preparation works, drainage, landscaping, access roads, etc.
3. Participants in this RFI are kindly requested to provide the following information:
 - 3.1. Brief methodology description statement for main tasks.
 - 3.2. Approximate timeframe for such Project.
 - 3.3. Participant’s availability to participate in a tender process.
 - 3.4. Participant’s equipment availability.
 - 3.5. Information about Participant, including company profile, number of vertical storage tanks constructed (in accordance with API-650) by Participant in the past 5 years, diameter, capacity and storage material.

A preliminary layout is attached.
4. Any questions and/or inquiries shall be addressed in writing to liat sharon by E-mail: liat@pei.co.il, **no later than 02/06/2019.**
5. Responses to the RFI shall be submitted, in writing, in English or Hebrew, to the following E-mail address : liat@pei.co.il, **no later than 16/06/2019.**
6. Upon receiving a response, PEI will initiate a review and may contact the Participants to follow up with additional questions and clarifications, in writing or otherwise, may ask for site visits to facilities erected or operated by the Participant, or carry out professional inquiries regarding any Participant, including by way of contacting third parties. In addition, PEI may hold RFI sessions, either by videoconferencing or meetings which will be held in Israel, whether with all Participants or only with those deemed relevant at PEI’s sole discretion. As part of such RFI sessions, the Participants will have the opportunity to present their detailed responses.
7. This RFI is a preliminary process initiated by PEI’s tender committee, solely for the purpose of receiving information and its internal evaluation and consideration, and does not constitute a tender, a bid solicitation, a proposal or a request for proposals in any manner whatsoever. The issuance of this RFI is not intended to guarantee the initiation, execution or the implementation of the Project, its scope, its components or any part thereof.
8. Participation in this RFI shall not provide a Participant with any advantage, or confer upon a Participant any right with respect to the Project or any future proceedings

which will be conducted with respect thereto, if and to the extent conducted (including the pre-qualification process or the tender process), or be a pre-requisite for participating in such future proceeding. Participating in the RFI shall not constitute or be interpreted as constituting a recognition of a Participant's or any other entity's eligibility, qualification or competence to participate in any such future proceedings, if conducted.

9. PEI reserves the right not to proceed with this RFI, and may terminate or cancel this RFI or any other proceedings which are conducted with respect thereto, at any time as it shall deemed appropriate and Participants shall have no right of claim against PEI and anyone on its behalf in respect thereof.
10. Without derogating from the generality of the above, PEI may publish a new Request for Information and/or an invitation to pre-qualify or other proceedings with respect to the Project or any part thereof, publish a different project, inviting or not the Participants to take part in such process, or execute the Project in any other way deemed appropriate, all subject to and in accordance with applicable law.
11. PEI may use any information it receives from a Participant or any third party for any purpose it deems fit at its sole discretion, including forming specifications or any other documents, and may transfer any such information to any of its consultants or any person on its behalf. Without derogating from the foregoing or from the discretion granted to PEI, Participants may mark, in a clear, complete and legible manner, information contained in the response which is considered commercially sensitive or of a secret nature, and PEI will, to the extent allowed by law, refrain from disclosing such information. Please note that PEI is not requesting a proposal, detailed plans, marketing material, budgetary information or proprietary information in response to this RFI.
12. The Participants shall not be entitled to any payment for the information provided by them in this process. All expenses incurred by a Participant or anyone on its behalf shall be borne solely by the Participant.
13. This RFI is subject to the Israeli law including the Mandatory Tenders Law 5752-1992, Mandatory Tenders Regulations 5753-1993, and the obligation to disclose information in accordance with the provisions of Section 14A thereof. The courts of Jerusalem, Israel shall have exclusive jurisdiction in any and all disputes arising out of or relating to this RFI.

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14 | * For boxes marked with *, if blank, Mfr. shall determine and submit as per Annex L. For all lines, see Annex L for line-by-line instructions.

	14	<p>GENERAL Special Documentation Package Requirements: _____</p> <p>Measurement Units to be used in API Std 650: SI <input checked="" type="checkbox"/> US Customary <input type="checkbox"/></p> <p>1. Manufacturer* _____ Contract No.* _____ Address* <u>Hasadnaot 3, Herzlia</u> Mfg. Serial No.* _____ Year Built* _____ Edition & Addendum to API 650* <u>Edition 12, Addendum 3</u></p> <p>2. Purchaser <u>PEI</u> Contract No. _____ Address _____ Tank Designation <u>T 551 - T 556</u></p> <p>3. Owner/Operator <u>PEI</u> Location <u>Eshel</u></p> <p>4. Size Limitations* _____ Tank Diameter* <u>54m</u> Shell Height* <u>25.100m</u> Capacity: Maximum* <u>50000m3</u> Net Working* _____ Criteria:* <u>API 2350</u></p> <p>5. Products Stored: Liquid <u>Lead free gasoline/Engine Gas Oil/ Heating Gas oil/Jet fuel/Kerosene</u> Design Specific Gravity: <u>0.880</u> at <u>15 °</u> Minimum Design Specific Gravity: <u>0.720</u> at <u>15 °</u> Blanketing Gas <u>N.A.</u> Vapor Pressure - _____ PSIA at Max. Operating Temp. % Aromatic <u>לֹוּדָא עִם תַּשׁוּׁן</u> Suppl. Spec. _____ H₂S Service? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Suppl. Spec. _____ Other Special Service Conditions? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Suppl. Specs. _____</p> <p>DESIGN AND TESTING Purchaser to Review Design Prior to Ordering Material? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>6. Applicable API Standard 650 Appendices: * A <input type="checkbox"/> B <input type="checkbox"/> C <input checked="" type="checkbox"/> F <input type="checkbox"/> G <input type="checkbox"/> H <input type="checkbox"/> I <input type="checkbox"/> J <input type="checkbox"/> L <input checked="" type="checkbox"/> M <input type="checkbox"/> O <input type="checkbox"/> P <input type="checkbox"/> S <input type="checkbox"/> U <input type="checkbox"/> V <input type="checkbox"/> W <input type="checkbox"/></p> <p>7. Max. Design Temp. <u>45 C °</u> Design Metal Temp.* <u>45 C °</u> Design Liquid Level* <u>23475 mm</u> Design Internal Pressure <u>Hydrost.</u> Design External Pressure - _____ Internal Pressure Combination Factor <u>1</u> External Pressure Combination Factor - _____ Maximum Fill Rate <u>1000m3/hr</u> Maximum Emptying Rate <u>1000m3/hr</u> Flotation Considerations? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Flot. Suppl. Spec.* _____ Applied Supplemental Load Spec. _____</p> <p>8. Seismic Design? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Annex E <input type="checkbox"/> Alternate Seismic Criteria <u>SI413 & Soil report</u> Seismic Use Group <u>3</u> MBE Site Class <u>B</u> Vertical Seismic Design? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Vertical Ground Motion Accelerator A_v: <u>67% SDS</u> Basis of Lateral Acceleration (Select one): <input type="checkbox"/> Mapped Seismic Parameters? S_s _____ S₁ _____ S₀ _____; <input checked="" type="checkbox"/> Site-Specific Procedures?: MCE Design Required? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>; <input type="checkbox"/> Other (Non-ASCE) Methods _____ <input checked="" type="checkbox"/> Freeboard Required for SUG I Design Roof Tie Rods @ Outer Ring? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>9. Wind Velocity for non-U.S. sites, 50-yr wind speed (3-sec Gust)* <u>SI 414</u> Top Wind Girder Style* <u>Type "E" Fig. 5.24</u> Dimensions* <u>b= 610 mm(min)</u> Use Top Wind Girder as Walkway? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Intermediate Wind Girders? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Intermediate Wind Girder Style* _____ Dimensions* _____ Check Buckling in Corroded Cond.? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>10. Shell Design: 1-FI Mthd?* Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>; Variable-Des-Pi Mthd?* Yes <input type="checkbox"/> No <input type="checkbox"/> Alternate <input type="checkbox"/>; Elastic Anal. Mthd?* Yes <input type="checkbox"/> No <input type="checkbox"/> Alternate <input type="checkbox"/> Plate Stacking Criteria* Centerline-Stacked? Yes <input type="checkbox"/> No <input type="checkbox"/> Flush-Stacked? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Inside <input checked="" type="checkbox"/> Outside <input type="checkbox"/> Plate Widths (Shell course heights) and Thicknesses * Numbers below Indicate Course Number. 1. <u>2400x32 mm</u> 2. <u>2400x28mm</u> 3. <u>2400x26 mm</u> 4. <u>2400x22 mm</u> 5. <u>2400x20 mm</u> 6. <u>2400x16 mm</u> 7. <u>2400x14 mm</u> 8. <u>2400x10 mm</u> 9. <u>2400x10 mm</u> 10. <u>2400x10 mm</u> 11. <u>2400x10 mm</u> 12. _____ 13. _____ 14. _____ 15. _____ Joint Efficiency* <u>0.85</u> % Shell-to-Bottom Weld Type <u>inside & outside corner fillet</u> Shell-to-Bottom Weld Exam Mthd* <u>VE & MT/PT/VB</u> Exceptions to Seal-welded Attachments (see Section 5.1.3.7): <u>Intermittent welding is not permitted</u></p>
	14	<p>Approvals: _____ Revisions: <u>PO</u> Title: <u>T-551-556</u> By: <u>K.V.</u> Ck'd: <u>M.SH.</u> Date: <u>18.03.19</u> Drawing No.: _____ Sheet <u>1</u> of <u>8</u></p>

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* If box is blank, Manufacturer shall determine and submit as per Annex L.

11. Open-Top and Fixed Roofs: (See Sheet 6 for Floating Roofs) Open Top? * Yes No
 Fixed Roof Type* _____ Roof Support Columns*: Pipe Or Structural Shape _____
 Cone Slope* _____ Dome or Umbrella Radius* _____ Weld Joints* _____
 (Lap, Butt, Other)
 Seal Weld Underside of: Lap-Joints? Yes No ; Seal Weld Underside of Wind Girder Joints? Yes No
 Gas-tight? Yes No Joint Efficiency* _____ %
 Thickness* _____ In. Snow Load * _____ App. Suppl. Load Spec.* _____ Column Lateral Load _____
 Normal Venting Devices* _____ Emergency Venting Devices* _____
 Free Vents in Areas Where Snow and Ice May Block Vent* _____
 For Non-Frangible Roofs: Seal Weld Roof Plates to Top Angle on the Inside? Yes No ; Weld rafters to Roof Plates Yes No
 Roof-to-Shell Detail* _____ Radial Projection of Horizontal Component of Top Angle* Inward Outward

12. Bottom: Thickness* 10/12mm Style Cone down to center Slope* 1% Weld Joint Type* Single-welded full-fillet lap joint &
 Provide Drip Ring? Yes No Alternate Spec. _____
 Annular Ring? Yes No Annular Ring: Minimum Radial Width* _____ Thickness* 12mm

13. Foundation: Furnished by* Others Type* _____
 Soil Allow. Bearing Pressure* _____ Per Spec.* _____ Anchors: Size* _____ Qty* _____
 Foundation Design Loads: Base Shear Force: Wind* _____ Seismic* _____ Overturning Moment: Wind* _____ Seismic* _____
 Ring Forces: Weight of Shell + Roof New* _____ Corroded* _____ Roof Live Load* _____ Internal Pressure* _____
 Partial Vacuum* _____ Wind* _____ Seismic* _____ Hydrotest Exemption design per 7.3.6, Item 2) a) _____
 Bottom Forces: Floor Wt. New* _____ Corroded* _____ Product Wt.* _____ Water Wt.* _____ Internal Pressure* _____
 Partial Vacuum* _____ Other Foundation Loads* _____ Min. Projection of Fdn. Above Grade: _____

14. Exemption from hydrotest? Yes No Responsibility for Heating Water, if Required: Purchaser Manufacturer
 Hydro-Test Fill Height* Max. designed Settlement Measurements Required? Yes No Extended Duration of Hydro-Test: _____
 Predicted Settlement Profile is Attached
 Responsibility for Setting Water Quality: Purchaser TBD Manufacturer Supplemental Test Water Quality Spec. _____
 Test Water Source & Disposal Tie-In Locations TBD Hydro-Test Annex J Tank? Yes No
 Post-Pressure-Test Activities Required of the Manufacturer: Broom Clean Potable Water Rinse Dry Interior
 Other Per 7.3.7.2 (4,5,6,7)

15. Inspection by TBD in Shop; PEI in Field
 Supplemental NDE Responsibility _____ Supplemental NDE Spec. _____
 (Purch., Mfg., Other)
 Positive Material Identification? Yes No PMI Requirements: Per QA specification
 Max. Plate Thickness for Shearing per 6.1.2
 Must Welds not exceeding 6 mm (1/4 in.) Be Multi-Pass? Yes No Must Welds greater than 6 mm (1/4 in.) Be Multi-Pass? Yes No
 Leak Test Mthd: Roof* per C.4 Shell* hydrostatic test per 7.3.6 Shell Noz./Manhole Reinf. Plt.* Pneumatic pressure test per 7.3.5
 Bottom* Vacuum box test per 7.3.3 Floating Roof Components* per C.4
 Modify or Waive API Dimensional Tolerances (see 7.5)? No Yes Specify: _____
 Specify Additional Tolerances, if any, and Circumferential and Vertical Measurement Locations:
 - Allowable Plumbness: _____ Measure and Record at a Minimum of _____ Locations or Every _____ m (ft) around the Tank, at the Following Shell Heights: (select one box): 1/3 H, 2/3 H and H Top of Each Shell Course Other: _____
 - Allowable Roundness: ** _____ Measure Radius and Record at a Minimum of _____ Locations or Every _____ m (ft) around the Tank, at the Following Shell Heights (select one box):
 Top of Tank, H 1/3 H, 2/3 H and H Top of Each Shell Course Other: _____

**See Data Sheet Instructions for the Maximum Allowable Additional Radial Tolerance.

Approvals:	Revisions: <u>PO</u>	Title: <u>T-551-556</u> By: <u>K.V.</u> CK'd: <u>M.SH.</u> Date: <u>18.03.19</u> Drawing No.: _____ Sheet <u>2</u> of <u>8</u>
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<p>16. Coatings: לקבל דרישות/הנחיות מתש"ן</p> <p>Internal Coatings by: _____ Per Spec.* _____ (Not Req'd., Others, Tank Mfg.)</p> <p>External Coating by: _____ Per Spec.* _____ (Not Req'd., Others, Tank Mfg.)</p> <p>Under-Bottom Coating by: _____ Per Spec.* _____ (Not Req'd., Others, Tank Mfg.)</p>		
<p>17. Cathodic Protection System? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Per Spec.* <u>API 651</u></p>		
<p>18. Leak Detection System? Yes <input type="checkbox"/> No <input type="checkbox"/> Per Spec.* <u>TBD acc. API 650 Annex I</u> לוודא עם תש"ן</p>		
<p>19. Release Prevention Barrier? Yes <input type="checkbox"/> No <input type="checkbox"/> Per Spec.* _____</p>		
<p>20. Tank Measurement System: Required? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Remote Capability Required? Yes <input type="checkbox"/> No <input type="checkbox"/> <u>TBD</u> By: _____ Per Spec.* _____</p>		
<p>21. Weight of Tank: Full of Water* <u>53763 ton</u> Empty* <u>862.2 ton</u> Shipping* _____ Brace/Lift Spec.* _____</p>		
<p>22. References*: <u>API Std 650, Annex L</u></p>		
<p>23. Remarks*:</p>		
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* If box is blank, Manufacturer shall determine and submit as per Annex L.

FLOATING ROOF DATA

30. Floating Roof Selection

Design Basis: Annex C Or Annex H

Type of Roof: (External or Internal): Single Deck Pontoon* Double Deck*

(Internal Only): Tubular Pontoon* Metallic Sandwich Panel*

Other _____ Supplemental Spec.: _____

31. Seals *By vendor*

Primary Seal: Shoe Envelope Wiper/Compression Plate Other _____ Supplemental Spec.: _____

Shoe Mechanism: Mfg. Std. Other _____

Electrically Isolate Mechanism from Shoes? Yes No Wax Scrapers Required? Yes No

Minimum Shoe Thickness* _____ Carbon Steel Shoes to be Galvanized? Yes No

Secondary Seal: Shoe Envelope Wiper None Other _____ Supplemental Spec.: _____

32. Data for All Floating Roofs: *TBC by vendor*

Overflow Openings in Shell Acceptable? Yes No Shell Extension? Yes No

Roof-Drain Check Valves Required? Yes No Roof-Drain Isolation Valves Required? Yes No

Freeze Protection for Roof Drains Required? No Yes Supplemental Requirements: _____

Roof-Drain Piping to External Nozzles: Mfg. Std. Armored Flexible Pipe Swivels in Rigid Pipe Other _____

Foam Dam? Yes No Supplemental Spec. _____

Minimum Deck Thickness* 6mm

Bulkhead Top Edges to be Liquid-Tight? Yes No Seal-weld Underside of Roof? Yes No

Electrical Bonding: Shunts: Yes No Cables: Yes No Supplemental Spec. _____

Qty of Non-Guide-Pole Gauge Wells Required 1 Qty of Sample Hatches Required 1

Guide Pole for Gauging? Yes No Slots in Guide Pole? Yes No Datum Plates? Yes No Striking Plates? Yes No

Guide Pole Emissions-Limiting Devices: Sliding Cover Pole Wiper Pole Sleeve Float Float Wiper Pole Cap *TBC*

Qty. of Roof Manholes* 2 on deck Alternative High-Roof Clearance Above Bottom: 2m

28 on pontoons
Alternative Low-roof Clearance Above the Highest Obstruction and the Floating Roof: 1.5m

Removable Leg Storage Racks? Yes No ; Leg Sleeves or Fixed Low Legs

33. Additional Data for External Floating Roofs:

Weather Shield? Yes No Suppl. Spec. *by seal vendor*

Rolling Ladder Req'd? Yes No Field Adjustable Legs? Yes No

Design Rainfall Intensity 33.8 In./Hr. (mm/hr) Based on a 60 Minute Duration Associated with the 10 year Storm

Design Accumulated 24-Hour Rainfall 250 In. (mm) Based on the 100 year Storm

Out-of-Service Drains Required? Yes No Supplemental Specification _____

Distortion and Stability Determinations Required? Yes No Supplemental Specification _____

Landed Live Load* _____

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34. Additional Data for Internal Floating Roofs:

Two-Position Legs? Yes No Cable-Supported Roof? Yes No Fixed-Roof Inspection Hatches Required?: Yes No

Internal Roof Drain Required? Yes No Omit Distribution Pads Supporting Uniform Live Loads? Yes No

Corrosion Gauge Required? Yes No Fixed Ladder Required?: Yes No ; Type of Roof Vent: * _____

Modified Minimum Point Load? Yes No Supplemental Specification _____

Mfr. to Leak Test * ___ % of Compartments in Assembly Yard in Erected Position Unknown; see separate contract terms

Roof Erector's Flotation Test: w/ tank hydro at completion of roof at later date _____ Not required

Flotation Test Media: Water Product (see H.6.6.1) Water Quality: Potable Other See Supplemental Spec _____

Flotation Test: Duration _____ Fill Height: _____

Flotation Test Items provided by Purchaser (see H.6.7): None List Attached

Responsible Party for Inspecting Roof during Initial Fill: Purchaser Other _____

TABLE 5 FLOATING ROOF MATERIALS *by vendor*

Component	Material*/Thickness*	C.A./Coating*	Component	Material*/Thickness*	C.A./Coating*
Deck Plate			Datum Plate		
Inner Rim Plate			Tubular Pontoon		
Outer Rim Plate			Pontoon Bulkhead		
Foam Dam			Submerged Pipe		
Sandwich Panel Face Plate			Guide Pole		
Sandwich Panel Core			Secondary Seal		
Gauge Well			Secondary Seal Fabric		
Drain Sumps			Wiper Tip		
Opening Sleeves			Wax Scraper		
Floating Suction Lines			Weather Seal		
Primary Fabric Seal			Envelope Fabric		
Foam Log Core			Shoe Mechanisms		
Landing Legs			Primary Seal Shoe		
Landing Leg Bottom Pads			Removable Covers		
Manhole Necks			Rolling Ladder		
Vents			Inlet Diffusers		

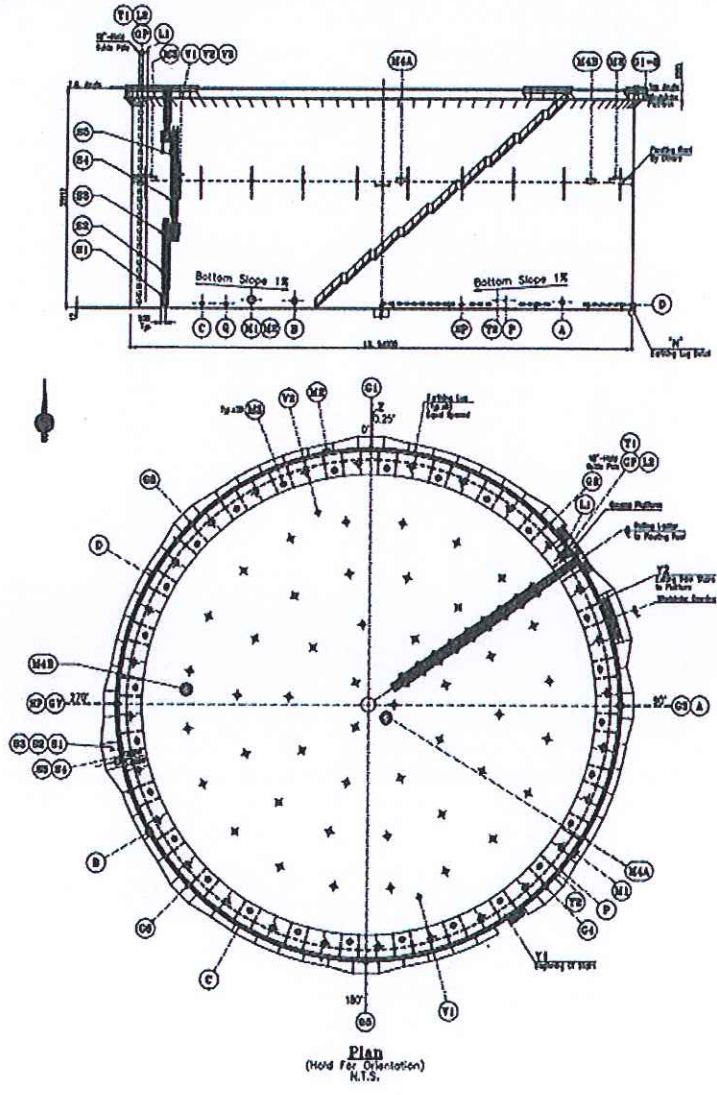
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Tank Plan and Sketches:



Notes:

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