

Memorandum

To: Yildiz Palumbo, NYSDEC
From: Rebecca A. Kinal, P.E.
Date: May 9, 2025
Re: Former Chesebrough Manufacturing Site
NYSDEC BCP Site No. C224302
cc: A. Obligado, J. O'Connell - NYSDEC
M. Sherwood, A. Ramirez – NYCSCA
A. Bosco - AKRF

I have reviewed the attached "Mass Soil Mixing Work Plan" (the Plan) prepared by Keller-North America for the Former Chesebrough Manufacturing site, located at 46 Verona Street, Brooklyn, New York ("the Site"). Based on my review, I certify that the Plan (inclusive of AKRF's edits and comments provided with the attachment) conforms to the NYSDEC-approved Remedial Action Work Plan and Remedial Design Report for the Site, dated July 2023 and November 2023, respectively.



Rebecca A. Kinal, P.E.

Attachments:

AKRF, Inc., *Memorandum Re: Review of ISS Plan Rev 2, Harbor MS – Brooklyn (K680)*, May 1, 2025.
Keller-North America, *Mass Soil Mixing – Work Plan, K680 Harbor MS, 46 Verona Street, Brooklyn, NY*,
Rev 2, April 28, 2025



Environmental, Planning, and Engineering Consultants

440 Park Avenue South
7th Floor
New York, NY 10016
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fax: 212 213-3191
www.akrf.com

Transmittal

To:	Mike Sherwood	From:	Rebecca Kinal/ Adrianna Bosco
Company:	NYCSCA	Date:	May 1, 2025
Address:	25-01 Jackson Avenue Long Island City, NY 11101	Project Number:	241090
Job Title:	Harbor MS – Brooklyn (K680)		
	LLW#: 132059		

We have enclosed the following:

☐ Report ☐ Specifications ☐ Drawing(s) ☐ CD/DVD ☒ Contractor Submittals

- ISS Plan Rev 2 (02223-001-02) – **Make Corrections Noted**

Sent Via:

☐ Messenger ☐ U.S. Mail ☐ Federal Express ☒ Email



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Memorandum

To: Mike Sherwood	From: Rebecca Kinal / Adrianna Bosco
Company: NYCSCA	Date: May 1, 2025
Project No.: 132059	Phone No.: 914.922.2362 / 646.388.9576
Re: Harbor MS – Brooklyn (K680)	
Review of ISS Plan Rev 2 – Make Corrections Noted	

AKRF, Inc. (AKRF) has reviewed the In-Situ Solidification (ISS) Plan (Revision 2) prepared by Keller-North America (Keller) on behalf of National Environmental Safety Company, Inc. (NESCO) for K680 (the “Site”), located at 46 Verona Street, Brooklyn, NY 11231. The ISS Plan is dated April 28, 2025. Resubmission is required only if the Contractor is unable to comply with the following noted corrections:

Construction Sequence - General

- Item 2 – Grout wash-out and excavator cleaning will be conducted on a designated decontamination pad to be constructed and operated in accordance with Section 02222-3.02-B.

Construction Sequence - Full Scale Production

- Item 5 – Vertical depth will be determined by GPS or other appropriate method and will be reported to NYCSCA on a daily basis for all cells completed.
- Item 7 – Odor control product and applicator will be on-site at the start of work and available for use to respond in real time to odors and/or other Community Air Monitoring Plan (CAMP) exceedances.
- Cores boreholes will be advanced to at least one foot below the target ISS depth. Exact core locations will be determined in consultation with NYCSCA and NYSDEC.

Grout Strength

- If testing results for a completed cell indicate a grout strength less than 50 psi, appropriate corrective actions will be taken in consultation with NYCSCA and NYSDEC.

Appendix B - COAPP

- Item 1, b – Cores boreholes will be advanced to at least one foot below the target ISS depth. Exact core locations will be determined in consultation with NYCSCA and NYSDEC.

- QC sampling will conform to the NYSDEC ISS Quality Assurance/Quality Control (QA/QC) Guidance Document, including (but not limited to) requirements for notification and NYSDEC approval.

Additional corrections are provided as marked-up edits on the attached submittal.

The Contractor should also note the following:

- All submittals related to ISS implementation will require additional review and approval by the NYSDEC prior to implementation. No delay claims, related to achieving NYSDEC approval of the submittals will be granted.
- All work must be completed in accordance with the Authority's Health and Safety requirements and regulations, the Health and Safety Plan included as Appendix E to the NYSDEC-approved Remedial Action Work Plan, and the Contractor's site-specific Health and Safety Plan, including odor control, which may prevent mixing of multiple cells simultaneously.
- In accordance with Section 02090-3.03-B, all petroleum-contaminated material and/or hazardous waste shall be loaded directly into trucks for transportation to the disposal facility, in lieu of stockpiling.

AKRF's review was limited to verifying environmental-related submittal requirements in NYCSCA standard specification section 02223. The comments above are intended only to provide clarification regarding the submittal. The comments should not be construed in any way as intent to limit the Contractor's responsibilities. The absence of a comment with respect to a specific contract requirement should not be interpreted as a suggestion to change a contract requirement.



900 3rd Avenue
New Hyde Park, NY 11040
Ph : 718-361-0044

Submittal

Job: 6387
K680
46 Verona Street
Brooklyn, NY

Spec Section No: 02223
Submittal No: 001
Revision No: 2
Sent Date: 4/28/2025

Spec Section Title:

Submittal Title: ISS Plan

Contractor:
National Environmental Safety Co.

Contractor's Stamp

McCloud Group, The

Architect's Stamp

Engineer's Stamp

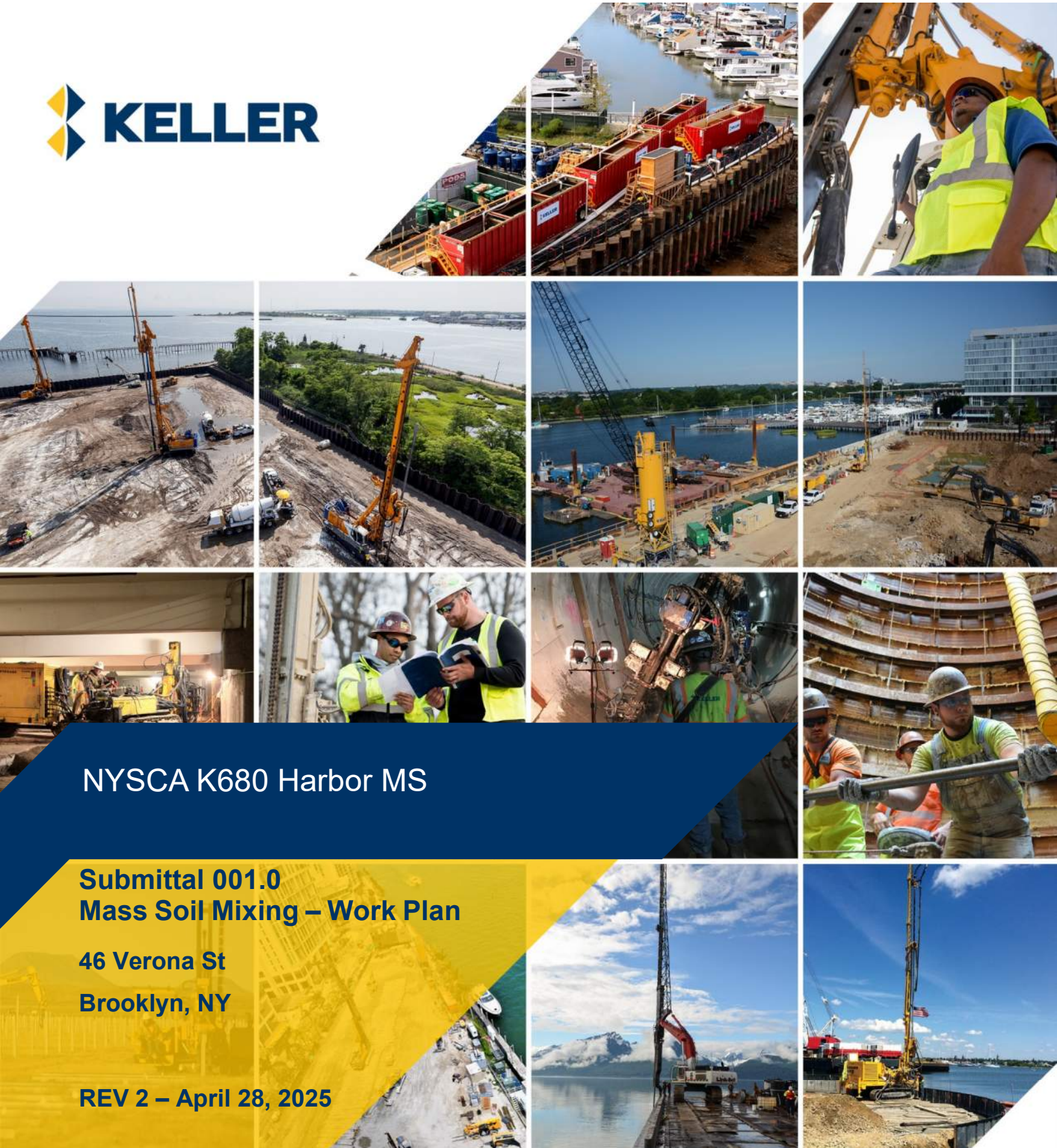
AKRF Inc.
440 Park Avenue South, New York, NY 10016

<input type="checkbox"/>	NO EXCEPTIONS TAKEN.
<input checked="" type="checkbox"/>	MAKE CORRECTIONS NOTED.
<input type="checkbox"/>	REJECTED: REVISE AND RESUBMIT.
<input type="checkbox"/>	REJECTED: NOT ACCEPTABLE FOR REVIEW.
<input type="checkbox"/>	NO ACTION TAKEN.

By: **A. Bosco**

Date: **5/1/25**

This review does not relieve the contractor or any subcontractor of responsibility for full compliance with contract requirements; for correctness of dimensions, clearances, and material quantities; for proper design of details; for proper fabrication and construction techniques; for proper coordination with other trades; and for providing all devices required for safe and satisfactory construction and operation.



NYSCA K680 Harbor MS

Submittal 001.0
Mass Soil Mixing – Work Plan

46 Verona St
Brooklyn, NY

REV 2 – April 28, 2025

Global strength and local focus

Table of Contents

1	Scope Commentary.....	3
2	Construction Sequence	4
3	Grout Strength.....	8
4	Grout Mix.....	8
5	Appendix A- ISS Layout Plan & Equipment Specs.....	9
6	Appendix B - Construction Quality Assurance Project Plan.....	12
7	Job Hazard Analysis.....	13
8	Atmos Shield 645 Specifications.....	14

1 Scope Commentary

This scope of work includes implementation of In Situ Solidification (ISS) to mix the contaminated soil. The work will take place from an approximate existing grade of elevation 9'-0".

ISS is performed by injecting a cementitious binder slurry into the soil and then mixed with a slotted bucket located at the end of an excavator arm. The slotted bucket excavator works individual cells that are approximately 4 FT in width and 16 FT in length. The cell layout plan (ID plan) is submitted under separate cover and attached in Appendix A. (labeled as "Areas" on the cell layout plan)

Soil mixing creates 'swell', which results in an overall raising of the grade since additional volume of material is introduced to the soil mass. The bottom of the treatment zone is approximately elevation -11'-0". The plan is to first pre-excavate the ISS area to elevation 5'-0", which is approximately 4 feet below grade. These pre-excavated soils will be stockpiled locally for future handling and disposal by the General Contractor (GC). During this work, the volume of the pre-excavated cell will swell. The final mixed product (soilcrete) will be allowed to harden in place, at least overnight, and any excess product will be excavated and disposed of as needed, by others. Barriers/caution tape will be placed around the treated areas until the soilcrete has cured in accordance with our safety standards.

The neat cement grout will be batched in proportions proposed within our grout mix design (See Section 4). The grout specific gravity will be checked at least 2 times per day using either a mud balance or other measuring device.

Keller will retrieve wet grab samples from at least 2 different mixed cells per shift while the mass is still fluid for UCS testing. This will be performed using either the excavator bucket or a sampling tool. A minimum six cylinders will be cast for samples retrieved per cell.

2 Construction Sequence

General

Grout washout and excavator cleaning will be conducted on a designated decontamination pad to be constructed and operated in accordance with Section 02222-3.02-B

1. Keller has included a list of major equipment and a site logistics plan showing equipment and materials laydown, staging locations under Appendix A.
2. Safety procedures of Keller's Mobilization, daily shutdown, and demobilization protocols have been covered in Keller's Job Hazard Analysis in Appendix C. The daily work procedure includes the following:
 - Start Up Excavator and Grout Plant to begin mixing grout and digging. Move to ISS Location.
 - Lay out ISS Cell utilizing wooden stakes.
 - Dig ISS Cell with excavator to the design elevation.
 - While digging cell, continuously pump grout into cell per the grout mix design.
 - Once the first cell is completed. Move to next cell and repeat steps.
 - At end of day, wash out grout plant and clean excavator. Shut down equipment.
3. Keller intends to use the Fire Hydrant on the northern sidewalk of Verona St. as our water source. Hydrant Permit to be pulled by NESCO.
4. Keller will be using Portland Limestone Cement (Type 1L) as an alternative to ASTM C150 Type I/II Portland Cement. If bench scale testing demonstrates that it will meet the specified performance requirements, Keller will continue to use Type 1L cement.
5. No SOE will be required for initial 4 FT precut due to the sequencing of the Cells. The entire ISS area will not be excavated at once. Excavation will happen locally at the ISS Cell Keller will be working on. Sloping and SOE will not be necessary.

Bench Scale Study

A test cell will be installed with the steps below where samples will be taken for bench scale testing. The test cell will be 16FT x 24FT (Group cell). See attached Sketch in Appendix A detailing where Keller intends to perform Bench Scale Studies. Keller will perform a Bench Scale Study in the petroleum contaminated ISS area and the hazardous lead contaminated area as well. Keller will collect wet grab samples and form 6" cylinders from the test cells to perform the following tests.

Bench scale test will include the following:

1. Strength: Minimum Unconfined Compressive Strength (UCS) of 50 PSI. ASTM D1633, Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens/ Unconfined Compressive Strength. Keller will collect one (1) set of wet grab sample from each Group cell. A total of 3 sets of each grab sample for 14-day and 28-day each will be collected for UCS break results.
2. Permeability: Maximum permeability of 1×10^{-6} cm/sec. ASTM D5084, Standard Test Methods for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter. One (1) grab sample will be collected from each Group Cell.
3. Leachability: Leachable lead concentrations of less than 5 mg/L. Samples will be collected and given to the GC for testing. SW-846 Test Method 311: Toxicity Characteristic Leach Procedure. One (1) grab sample will be collected from each Group Cell.

Visual Inspection: Keller will mobilize a coring drill rig to collect core samples from the test cells to check the continuity of the mass mixing and to perform a visual inspection that shows no evidence of non-aqueous phase liquids. Due to the low strength of the mass mix, the core samples will only be collected for visual inspection. The wet grab samples will be collected in lieu of the core samples and be used for UCS testing.

Core samples will be collected at a rate of one sample for every 5,000 square feet of ISS treatment area, but not less than two core samples per treatment area. The first core sample will be completed during the Bench Scale Study which is within the first 25% of the treatment area. The final two core samples will be collected after the full-scale production is completed.


Full scale production will begin within the week that Bench Scale Studies have been completed and the Mix Design Report has been approved by all associated parties. Keller intends to begin full scale production if Bench Scale test results meet the project requirements.

Full Scale Production

1. Level working grade, including suitable working platform, to be prepared near existing grade (approximately elevation 9'-0").
4. Excavate existing soils across the entire ISS area to elevation 5'-0" which is approximately 4 Feet below grade. This is to create a containment area for ISS spoils.

To be performed in sections as indicated in #5 under "General" heading

Odor control product and applicator will be on-site at the start of work and available for use to respond in real time to odors and/or other CAMP exceedances.

5. Layout horizontal and vertical control monuments, including off-treatment area.
 - a. Use measuring tapes to layout and mark boundaries of individual cells.
6. Set up the excavator with the slotted bucket on the (rectangular) treatment cell area. These cells are typically 16FT wide and up to 24FT long (aka Group Cells). Keller may elect to install multiple adjacent cells simultaneously depending on site conditions. The shorter edge of the (rectangular) treatment cell will be closest to the excavator for any given cell. The excavator will relocate and adjust while mixing a cell to ensure adequate mixing throughout the cell.
7.  Atmos Shield 645 has been approved for use as odor control. Approved submittal can be found in Appendix D.
8. Batch neat cement grout slurry at the batching plant as per the grout mix design.
9. Pump (wet) grout slurry into the precut cell. The slotted bucket will then begin mixing the soil and grout by going into and out of the ground. The specified binder (reagent) quantities, based on the theoretical cell volume, will be introduced into the ground through a series of (or combination of) motions of the slotted bucket.
 - a. Keller will pre-determine the weight of each reagent to be injected into each treatment cell based on the cell size. A flow meter will be plumbed in-line with the grout line from the batch plant. The unit will record these parameters as they are injected into a particular cell and the volume will be noted by our field personnel.
 - b. The slotted bucket can be plunged vertically from the surface to the treatment depth, from one short edge of the cell to the other short edge of the cell. The arm of the excavator will be marked with the required depth to ensure that the mixing will reach the appropriate tip elevation.
 - c. The slotted bucket can be raked horizontally from the one short edge of the cell to the other short edge of the cell area, from the surface to the treatment depth.
 - d. Utilizing the slotted bucket, large obstructions such as cobbles & boulders will be segregated and removed from the ISS area for disposal.
 - e. Grout slurry injection will continue until the minimum amount of reagent is injected into a given cell, and the cell is thoroughly mixed from edge to edge, and top to bottom. The excavator operator with the mixing tool will have a direct line of communication to the pump used for slurry injection.

Cores boreholes will be advanced to at least one foot below the target ISS depth. Exact core locations will be determined in consultation with NYCSCA and NYSDEC.

10. The injection of grout slurry will cause the cell volume to swell. Excessive swell of the cell volume (mixture of grout and soil spoils) will be removed by Keller to be disposed by the GC.
 - a. Based on the observed swell due to grout slurry injection in a given cell, Keller shall modify the depth of the localized cut prior to ISS work in order to facilitate safe and efficient production work, account for swell, and minimize the amount of ISS volume that overflow a particular cell.
11. Adjacent cells may be mixed in wet-to-wet fashion. The mixing equipment will move between cells along (parallel to) the short edge of the cells.
12. Per the Key Notes on H-201.00, the ISS in Area 5, hazardous lead soil was delineated at elevations 4'-0" to 1'-0" (approximately 5 to 8 feet below grade). The entire ISS Treatment area shall terminate at elevation -11'-0".
13. Keller will collect grab samples at a rate of one set (set of 6 – 3 for 14 days and 3 for 28 days) for every Group cell which is approximately 212 cyds.

Core Sampling for Visual Inspection: Keller will mobilize a coring drill rig to collect core samples from the production cells to check the continuity of the mass mixing and to perform a visual inspection that shows no evidence of non-aqueous phase liquids. To meet the requirements of collecting one (1) core sample every 5000 square feet, a total of two (2) cores will be drilled; one in the lead contaminated area and second in the petroleum contaminated area for visual inspection. Due to the low strength of the mass mix, the core samples will only be collected for visual inspection. The wet grab samples will be collected during the mass mix in lieu of the core samples for UCS testing.

Once the minimum reagent quantities have been injected in a given cell, grout slurry injection may cease but mixing with the tool may continue based on visual observations of the cell (i.e., homogenization). This will be done to minimize additional swell due to slurry injection and reduce the likelihood of excessive grout strength due to excess binder content.

3 Grout Strength

If testing results for a completed cell indicate a CSI of less than 50 psi, appropriate corrective actions will be taken in consultation with NYCSCA and NYSDEC

For this project, the goal is to target a reagent ratio such that the 28-day soilcrete strength will be a minimum of 50 psi.

Based upon our experience, we will start the project with a dosage of 175 kg of reagent per cubic meter of treated soil using a specific gravity of 1.49. Once we start receiving soilcrete break data we will adjust the dosage, if necessary, to maintain a grout strength above 50 psi and below 500 psi. Please note that there maybe grout breaks above 500 psi; however, the statistical average for all the breaks is not expected to exceed this value.

4 Grout Mix

Portland Limestone Cement (Type I/II)

The grout mix for the project will be a neat cement grout batched onsite. The mix ingredients are water and cement (~~Type I/II~~). The grout proportions on a per cubic yard basis are listed below. Keller plans to select one of the three mixes below. Mixes will be selected based on workability of the soil-cement mixture once we are in the field. Final target reagent ratio will remain the same regardless of the mix used unless strengths are exceptionally high in the field (i.e., if we use the SG 1.49 mix, we will use more slurry; if we use the SG 1.55 mix, we will use less slurry).

Grout Mix (Per CY)				
	Water	Cement	Slag	Mix
Specific Gravity	1.00	3.15	2.90	
Weight (lbs)	1278.82	1278.82		2557.65
Volume (ft ³)	20.49	6.51		27.00
Density (lbs/ft ³)	62.40	196.56		94.73
	153.32			
Specific Gravity of Mix			1.52	
weight of water/weight of reagent			1.00	

Grout Mix (Per CY)				
	Water	Cement	Slag	Mix
Specific Gravity	1.00	3.15	2.90	
Weight (lbs)	1254.23	1356.31		2610.53
Volume (ft ³)	20.10	6.90		27.00
Density (lbs/ft ³)	62.40	196.56		96.69
	150.37			
Specific Gravity of Mix			1.55	
weight of water/weight of reagent			0.92	

Grout Mix (Per CY)				
	Water	Cement	Slag	Mix
Specific Gravity	1.00	3.15	2.90	
Weight (lbs)	1301.18	1208.40		2509.58
Volume (ft ³)	20.85	6.15		27.00
Density (lbs/ft ³)	62.40	196.56		92.95
	156.00			
Specific Gravity of Mix			1.49	
weight of water/weight of reagent			1.08	

Figure 1 - Grout Mixes

The grout will be introduced in one of the proportions above and the total volume will be as per the figure below. The grout:soil by volume ratio (0.30) provides a good indication of how viscous the mixed soil will be to facilitate homogeneous mixing (the higher the number, the more fluid the mixture). In the event

mixing proves difficult, we will introduce more of a leaner grout mix to decrease the viscosity of the mixed soil (increased grout:soil volume ratio) while still maintaining the target reagent ratio. The table below indicates the mix proportions that will be used for the project (mix proportions will be modified at Keller's discretion throughout the work).

Grout SG	Width (ft)	Length (ft)	Plan Area (sqft)	Treatment Thickness (ft)	Volume (cf)	Dry Reagent to Dry Soil by Weight	Dry Unit Weight of Soil (pcf)	Moisture Mass of Soil (pcf)	Dry Total Weight of Soil (tons)	Grout Volume Needed (cf)	Volume of Grout Needed (cy)	Volume of Grout Needed (liters)	Volume of Grout Needed (gallons)	Wt. of Grout (lbs)	w:c ratio	Wt of Water (lbs)	Wt of Cement (lbs)	Wt of Cement (tons)	Grout:Soil by Volume*	kg Reagent per cubic meter soil	Final Volume Soil+Grout (cf)	Final Thickness (ft)
Target: 175kg/m3 Treated Soil																						
1.52	4.00	16.00	64.0	11.60	742.40	14.2%	100.0	20.0	37.12	222.9	8.26	6312	1668	21143	1.00	10572	10572	5.29	0.30	175.0	965.32	15.08
1.52	4.00	1.00	4.0	11.60	46.40	14.2%	100.0	20.0	2.32	13.9	0.52	395	104	1321	1.00	661	661	0.33	0.30	175.0	60.33	15.08
1.49	4.00	16.00	64.0	11.50	736.00	14.5%	100.0	20.0	36.80	238.3	8.83	6749	1783	22160	1.08	11490	10671	5.34	0.32	175.0	974.35	15.22
1.49	4.00	1.00	4.0	11.50	46.00	14.5%	100.0	20.0	2.30	14.9	0.55	422	111	1385	1.08	718	667	0.33	0.32	175.0	60.90	15.22
1.55	4.00	16.00	64.0	11.75	752.00	14.0%	100.0	20.0	37.60	209.6	7.76	5934	1568	20269	0.92	9738	10531	5.27	0.28	175.0	961.56	15.02
1.55	4.00	1.00	4.0	11.75	47.00	14.0%	100.0	20.0	2.35	13.1	0.49	371	98	1267	0.92	609	658	0.33	0.28	175.0	60.10	15.02

Figure 2 - Calculations for Grout Volume

The treatment thickness represents the height of the mixing zone after pre-cutting but prior to grout placement. The final thickness of the cell is then estimated based on the volume of grout placed. Please note these calculations are based on projections from our experience; actual results may vary in the field due to in-situ soil conditions and onsite construction constraints, so we may need to adapt accordingly to facilitate the work.

The volume of grout needed is calculated based upon the dimension of the cell. The majority of the cells on the project will be 16FT long. There are instances where this value will be less; hence, there is a unit length provided in this table for this case. The volume of grout needed can be multiplied by the required cell length.

Should laboratory testing of early field samples result in strengths that consistently exceed our expectations, Keller may then reduce our target reagent per cubic meter soil from 175 kg/m³ to 150 kg/m³. This likely will be accomplished by injecting a lower specific gravity grout and (potentially) pumping more grout volume per cell.

Appendix A

ISS Layout Plan & Equipment Specs

THIS ITEM HAS BEEN ELECTRONICALLY SIGNED
AND SEALED USING A DIGITAL SIGNATURE.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

Review of Proposals and Designs

signs, sketches, specifications, and/or proposals ("Designs") prepared by Keller North America ("KNA") and/or its employees have been prepared for exclusive use by KNA and based upon, and in anticipation of, KNA performing the work called for in such Designs. KNA makes no warranties or guarantees as to the suitability of Design for use by others. The Designs are subject to protection under the Copyright Act of 1976 and the Architectural Works Copyright Protection Act of 1990. No control, reproduction, publication, or dissemination of such Designs without the prior written consent of an authorized representative of KNA is strictly prohibited. IA is, and shall continue to be, the sole owner of the signs.

COVER PAGE

K680 HARBOR MS

46 VERONA SIREI, BROOKLYN, NY 11231

[illegible]

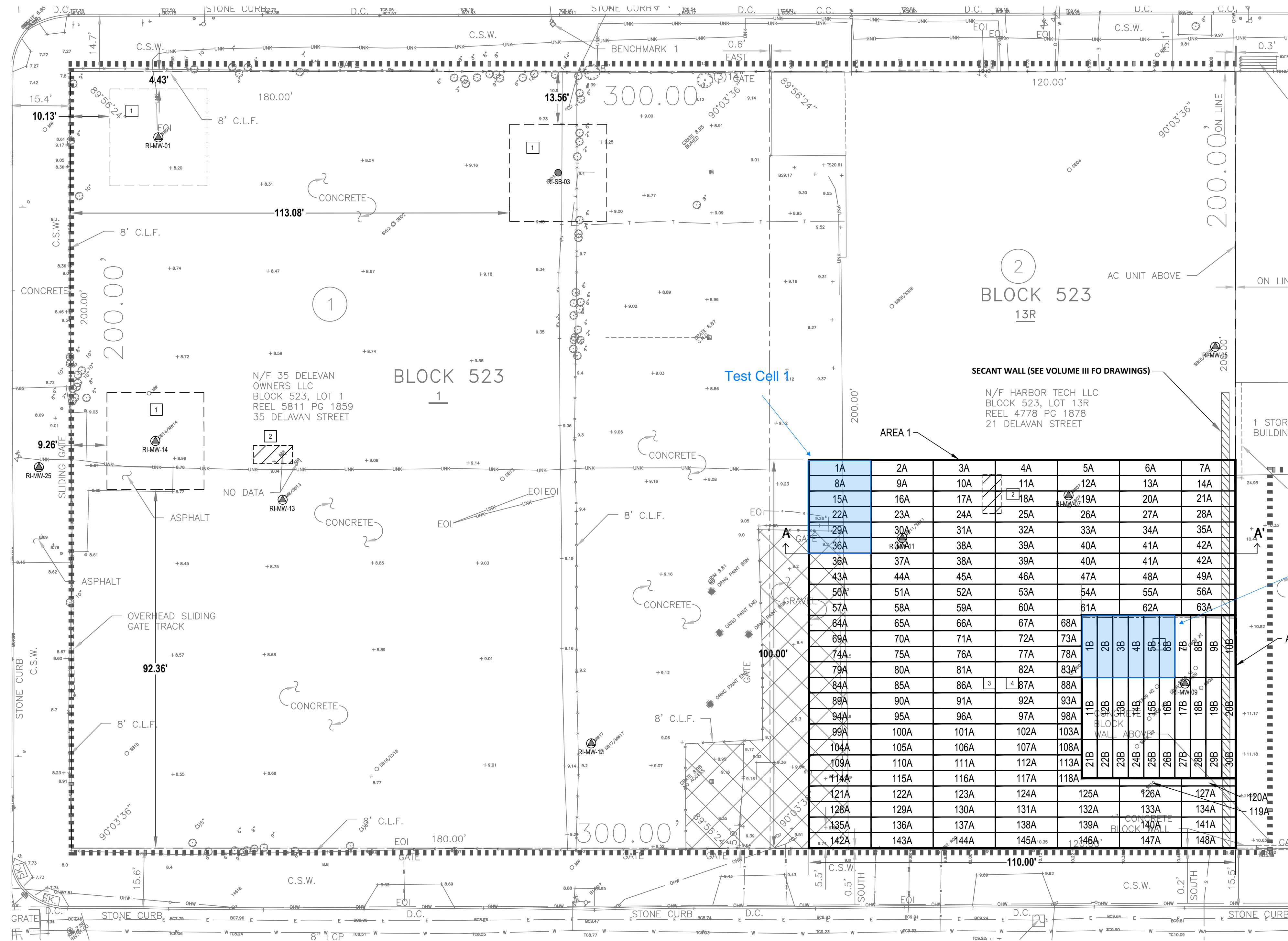
Design by: JN	Approved by: MM
Drawn by: SW	Checked by: MM

Project Number:	Date:
131XXXX	11/22/2024

Sheet No.

K-0

SHEET 1 OF 2



OVERALL PLAN
SCALE: 1/16" = 1'-0"



DRAWING REFERENCE(S)			
DRAWING No.	COMPANY & TITLE(S):	DATE:	REV.
FO101.00	TECTONIC ENGINEERING CONSULTANTS - SECANT WALL PLAN	4/19/2024	ISSUED FOR BID
FO201.00	TECTONIC ENGINEERING CONSULTANTS - SECANT PILE DETAILS	4/19/2024	ISSUED FOR BID

LEGEND:

AREA 1 SOIL MIX
SECTIONS 4'x16'

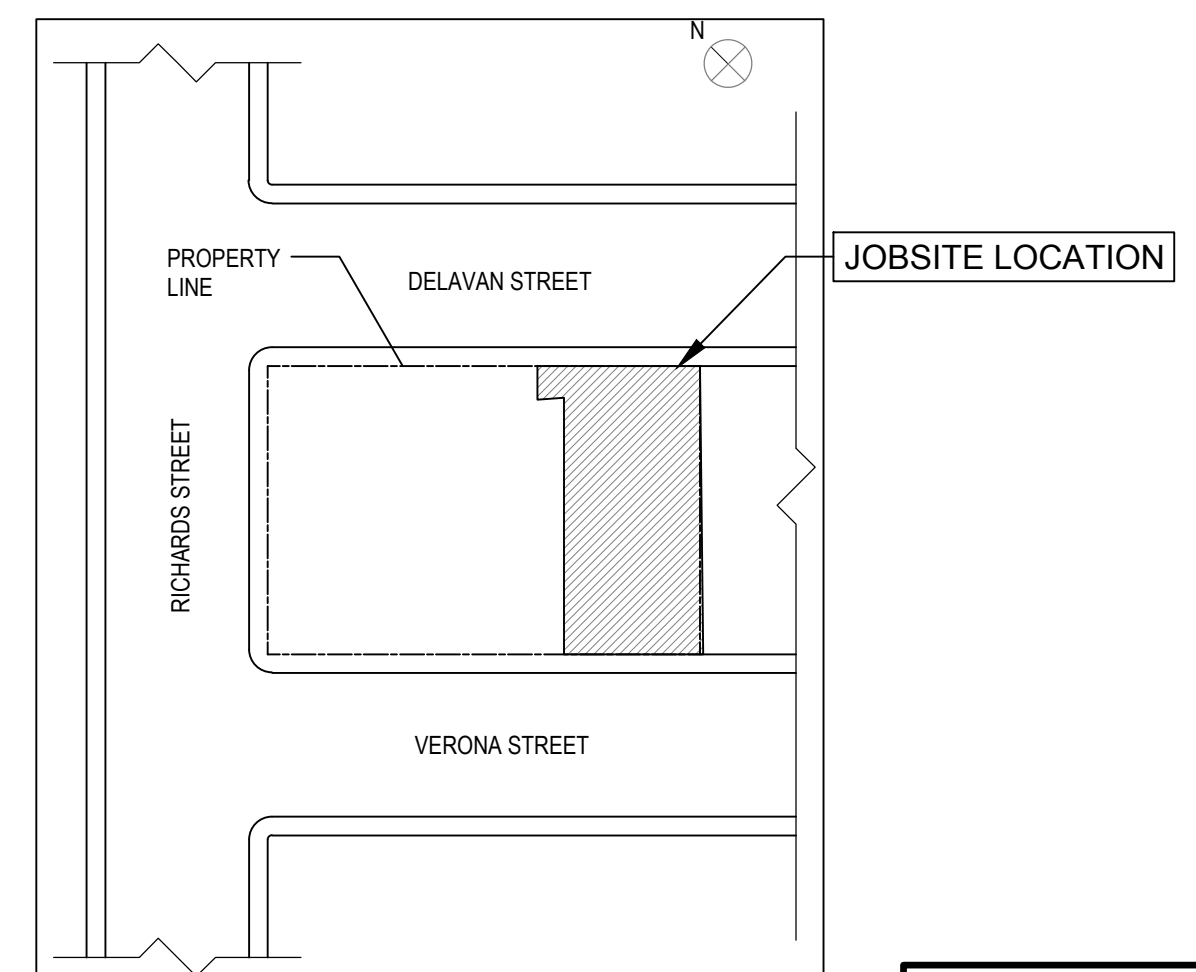
AREA 1 SOIL
MIX NUMBER

AREA 2 SOIL MIX
SECTIONS 16'x4'

REFERENCES

1

MIX NUMBER



GRAVES-MMA JV

Shop Drawing Submittal Comment Sheet / Transmittal

Project: <u>K680 Early Work Package</u>	Submitted By: <u>NESCO</u>	
Date Received: <u>01/16/2025</u>	Submittal No. / Trans ID: <u>02223-002-001</u>	
Date Returned: <u>01/30/2025</u>	Submittal Title: <u>ISS Equipment and Logistics Plan</u>	
To: Timothy Brojer McCloud Group 4709 30 th Street -Suite 602 Long Island City, NY 11101	From: Brian Gow Graves-MMA JV Architects, PLLC 3297 Route 66, Studio B Neptune, NJ 07753	<input checked="" type="checkbox"/> First Review <input type="checkbox"/> Second Review <input type="checkbox"/> Third Review <input type="checkbox"/> Fourth Review

General Comments:

- 1. Refer to engineer’s comments.

GRAVES-MMA JOINT VENTURE

REVIEWED

GRAVES-MMA JV ARCHITECTS, PLLC

3297 Route 66, Studio B
Neptune, New Jersey 07753
t: 732.918.2300 | f: 732.918.2351

CLIENT: NYC SCA
LLW#: 127569 & 132059
MMA No.: 105-21-003



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Transmittal

To:	Anna Ramirez	From:	Rebecca Kinal/ Adrianna Bosco
Company:	NYCSCA	Date:	January 30, 2025
Address:	25-01 Jackson Avenue Long Island City, NY 11101	Project Number:	241090
Job Title:	Harbor MS – Brooklyn (K680)		
	LLW#: 132059		

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- ISS Equipment and Logistics Plan (02223-002-000) – **No Exceptions Taken**

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	Review of ISS Equipment and Logistics Plan – No Exceptions Taken		

AKRF, Inc. (AKRF) has reviewed the ISS Equipment and Logistics Plan prepared by Keller North America, Inc. (Keller) for K680 (the “Site”), located at 46 Verona Street, Brooklyn, NY 11231. The ISS Equipment and Logistics Plan is dated January 3, 2025. The Plan includes the proposed equipment information and specifications, and logistics plan to be utilized during the ISS implementation. The submittal has been stamped “No Exceptions Taken”.

The Contractor should note the following:

- The ISS Equipment and Logistics Plan should be included as an appendix to the ISS Plan.
- All work must be completed in accordance with the Authority’s Health and Safety requirements and regulations, the Health and Safety Plan included as Appendix E to the NYSDEC-approved Remedial Action Work Plan, and the Contractor’s site-specific Health and Safety Plan.

AKRF’s review was limited to verifying environmental-related submittal requirements in NYCSCA standard specification section 02223. The comments above are intended only to provide clarification regarding the submittal. The comments should not be construed in any way as intent to limit the Contractor’s responsibilities. The absence of a comment with respect to a specific contract requirement should not be interpreted as a suggestion to change a contract requirement.



900 3rd Avenue
New Hyde Park, NY 11040
Ph : 718-361-0044

Submittal

Job: 6387
K680
46 Verona Street
Brooklyn, NY

Spec Section No: 02223
Submittal No: 002
Revision No: 0
Sent Date: 1/16/2025

Spec Section Title:

Submittal Title: ISS Equipment and Logistics Plan

Contractor:
National Environmental Safety Co.

Contractor's Stamp

McCloud Group, The

Architect's Stamp

Engineer's Stamp

AKRF Inc. 440 Park Avenue South, New York, NY 10016	
<input checked="" type="checkbox"/>	NO EXCEPTIONS TAKEN.
<input type="checkbox"/>	MAKE CORRECTIONS NOTED.
<input type="checkbox"/>	REJECTED: REVISE AND RESUBMIT.
<input type="checkbox"/>	REJECTED: NOT ACCEPTABLE FOR REVIEW.
<input type="checkbox"/>	NO ACTION TAKEN.
By: A. Bosco	Date: 1/28/2025
<small>This review does not relieve the contractor or any subcontractor of responsibility for full compliance with contract requirements; for correctness of dimensions, clearances, and material quantities; for proper design of details; for proper fabrication and construction techniques; for proper coordination with other trades; and for providing all devices required for safe and satisfactory construction and operation.</small>	

SUBMITTAL

ISS

EQUIPMENT

K680
46 VERONA ST.
BROOKLYN, NY

January 3, 2025

TABLE OF CONTENTS

Equipment

1. ISS Mixing Equipment
 - a. Scheltzke MPS510
 - b. CAT 349 Excavator
 - c. Batch Mixer Agitank
 - d. Batch Moyno

Mix-Pump-Unit fully-automatic

MPS 510-D-C-AUT

with diesel engine John Deere 55kW (EU 3b / Tier 4f)



Technical Data

Drive Diesel-hydraulic
 Drive Power Diesel engine John Deere 4045TFC03, 55 kW [75 HP] at 2.200 rpm, max. Torque 304 Nm at 1.600 rpm, speed limit at 1.800 rpm, 4-cylinder in-line with turbo charger, 4,5 l displacement, water and intercooled, electrical injection
 Exhaust emission EU Step 3b / U.S. EPA Tier 4 final
 Fuel consumption +/- 14 l Diesel/h. [3,7 gal U.S.]
 Fuel tank made of steel, approx. 150 l volume [40 gal U.S.]

Connections
 Electrical 12 V / 24 V DC
 Hydraulic quick couplings for two screw-conveyors
 quick couplings for external storing tank
 Water inlet G 2 BSPP AG DN 50 - C-coupling
 G 1 BSPP IG DN 25 - GEKA

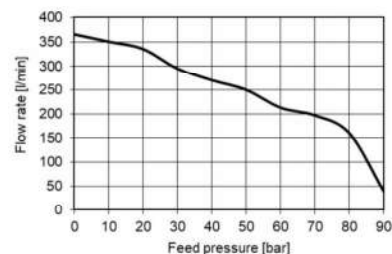
Outlet
 Pressure line G 1 1/4 BSPP IG DN 32 - RD 55
 Circulation line G 1 BSPP IG DN 25 - RD 32

Dimensions (L x W x H) 3.800 x 2.250 x 2.250 (mm)
 Weight approx. 5.100 kg

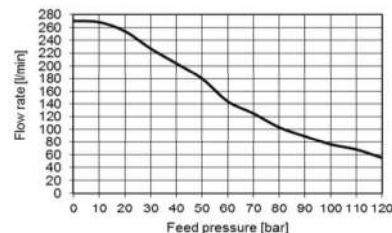
Application Fully automatic mixing and pumping of cement-, micro-cement, fly ash and bentonite suspensions at fillings, flushings, groutings, piling and vibrating jobs, Soil-Mixing WSM and Cutter-Soil-Mixing CSM

Performance Mixer Hand feed up to 8,0 m³/h
 with weighing system Feed per screw-conveyor up to 13,0 m³/h

Delivery Pump (RA = Ring Area)
 Pressure max. 90 bar¹⁾ [max. 1.305 psi]¹⁾
 Flow rate max. 365 l/min.¹⁾ [max. 96 gal U.S.]¹⁾



Delivery Pump (PA = Piston Area)
 Pressure max. 120 bar¹⁾ [max. 1.740 psi]¹⁾
 Flow rate max. 270 l/min.¹⁾ [max. 71 gal U.S.]¹⁾



Mix-Pump-Unit fully-automatic

MPS 510-D-C-AUT

with diesel engine John Deere 55kW (EU 3b / Tier 4f)



Standard Features

Framework

skid steel frame, partially enclosed and with partition panel, floor and oil pan, central towing device, lashing points for truck load securing, fork lift guides crosswise, machine room sound proofed, lockable doors, finishing 2K-paint RAL 5005 (signal blue) or on customer desire unicoloured

Diesel Drive

diesel engine John Deere 4045TFC03, 55,0 kW [75 HP] at 2.200 rpm, 4-cylinder in-line water cooled, speed limit at 1.800 rpm (infinitely variable speed adjustment), starter battery 12 V, exhaust silencer approx. 30 dB/A, control voltage 24 V DC (for valves and remote control), operating hour meter

Hydraulic

oil tank volume 170 l [45 gal U.S.], axial piston pump and gear pumps, oil cooler with thermostat, main and control oil filter, oil filling and ventilation filter, electrical oil filter pollution control, oil level and temperature indicator, manometer for hydraulic and control oil pressure, pressure and flow infinitely variable

Delivery Pump

vertical two-plunger pump Ø 110 mm, flow rate per double stroke V = 4,5 l [1,18 gal U.S.], pump valves (suction- and pressure line) self-acting (ball valves), circulation and pump-down valves manually actuated, flow rate adjustment electro-proportional, automatic grease system for plunger sealing sleeves and manually with plunger oil, protective grid with safety function

Delivery Pressure Measurement

manometer 0-100 bar [1.450 psi] Ø 100 mm completely with stainless steel membrane, electronic pressure sensor 0-100 bar [1.450 psi] 4-20 mA G ½ BSP AG

Water tank with Water Dosage

made of stainless steel (brushed), water storing and dosing tank V = 380 l [100 gal U.S.], fixed overflow pipe, water connection C-coupling with flushing connection and butterfly valve DN 50 pneumatically controlled, water tank inlet valve DN 50 and water tank outlet valve DN 100 pneumatically controlled, fully-automatic water metering with fluid level indicator

Mixing Tank (Colloid Mixer) with Weighing

made of stainless steel (brushed), round tank with conical floor, volume 450 l [119 gal U.S.], effective volume 400 l [106 gal U.S.], mixer drive hydraulic motor (rotation speed infinitely variable), two tank covers, each hinged and lockable with screw conveyor inlets and safety end switches, cover for screw conveyor inlet with inspection flap, hopper with bag ripper, circulation and pump down valves DN 80 pneumatically controlled, transport locking screws

Tools in Mixing Tank

3 fast turning mixing tools on one common drive shaft with pump down function, 2 mixing blades Ø 250 mm, 1 pumping wheel Ø 210 mm, drive shaft bearing above mixer fluid level (No stuffing box, so dry running possible w/o any problems!)

Storing Tank with Fluid Level Control

made of stainless steel (brushed), round tank with straight floor, volume 1.500 l [396 gal U.S.], effective volume 1.400 l [369 gal U.S.], agitator drive hydraulic motor (rotation speed infinitely variable), foldable and lockable tank covers with safety end switches and inspection flap, suspension inlet DN 65 with inlet basket, suspension outlet DN 40 with pneumatically controlled valve and suction basket, cleaning cover

sidewise, slowly turning agitator with a floor scraper and stream screen, fluid level control per ultrasonic sensor, hydraulic connections for external storing tank, safety folding grate

Operating Elements

battery main switch, control lights CONTROL VOLTAGE and OIL COOLER OPERATION, button EMERGENCY-STOP, switch REMOTE CONTROL ON/OFF, buttons HIGH PRESSURE CLEANER ON and HIGH PRESSURE CLEANER OFF, switch DRAINING SUSP./WATER / ALL VALVES, switch LIGHT ON/OFF for inside rod lamp and switch LIGHT ON/OFF for outside working lamps, rotary knob for max. DELIVERY PRESSURE adjustment, valve for shutting/adjusting the mixer speed, valve for shutting/adjusting the agitator speed, **Connection Options:** socket REMOTE CONTROL 14-pin with EMERGENCY-STOP bridge plug, socket EXTENSION REMOTE CONTROL, socket 24 V SCREW CONVEYOR 1 and 2, sockets 12 V VIBRATOR 1 and 2, sockets ULTRASONIC SENSOR and MIXTURE MONITORING, socket CHARGER 12V, socket ETHERNET

Engine Panel

LCD 7" colour display with lateral function keys for displaying and querying all relevant engine information such as engine speed, fuel consumption, fuel tank display, water temperature, oil and boost pressure, battery voltage, operating hours, date/time etc., ignition lock, warning lamps for LOW COOLING WATER and AIR FILTER POLLUTION, switch for RPM SETTING 0-1-2

Control Panel with Touch-Screen

warning lights WARNING and FAULT, button ACCEPT, button EMERGENCY-STOP, buttons FILL WATER TANK and EMPTY WATER TANK, buttons MIXER CIRCULATION and EMPTY MIXER, buttons MIXER/AGITATOR ON/OFF and SCREW CONVEYOR ON/OFF, button START MIXTURE, buttons PUMP OFF, SUSPENSION and WATER, switches RECEPT -/+ and COMPONENTS -/+, socket USB, potentiometers FLOW RATE and MIXING TIME, **Optional:** switches WATER INTERNAL/EXTERNAL or PUMPING/CIRCULATION

Touch-Screen for visualization of the operating parameters for the production of mixtures, as well as pumping of the suspension to the consumer. The following parameters are displayed and can be called up: Display of the current flow rate and the current delivery pressure, preselection counter flow rate target/actual, batch and preselection counter mixtures target/actual, current filling level of the mixing and storage tank, input of several recipes, display of error messages, display in different languages and much more.

Automatic Mode: production of the mixtures automatically or in manual mode, infinitely variable setting of the mixing time, automatic pumping in circulation and pump-off, automatic control of the screw conveyor, all shut-off flaps are pneumatically controlled

Accessories (included)

documentation, special tools for operation and maintenance, cable remote control 15 m and cable reel 100 m, radio remote control, circulation hose, high pressure cleaner 4,0 kW, 950 rpm, 200 bar [3.045 psi] (industrial device, fixed installed) with water inlet filter, air compressor (industrial device, fixed installed), corded LED rod lamp inside, LED work lamps for mixing and storing tank outside

Further devices, special equipments and accessories on request!

HIGH+SHEAR[®]

Grout Systems

AGITATION TANKS



- HIGH+SHEAR[™] AGITATION TANKS ARE ELECTRIC DRIVE AND COME IN A VARIETY OF PADDLE SPEEDS AND TORQUES.

CAPACITY		
LITERS	GALLONS	CUBIC FEET
6000	1,585	211.8
5000	1320	176
4000	1056	141
3000	792	105
2000	528	70
1500	396	53
1000	364	35

COLCRETE
ENGINEERED

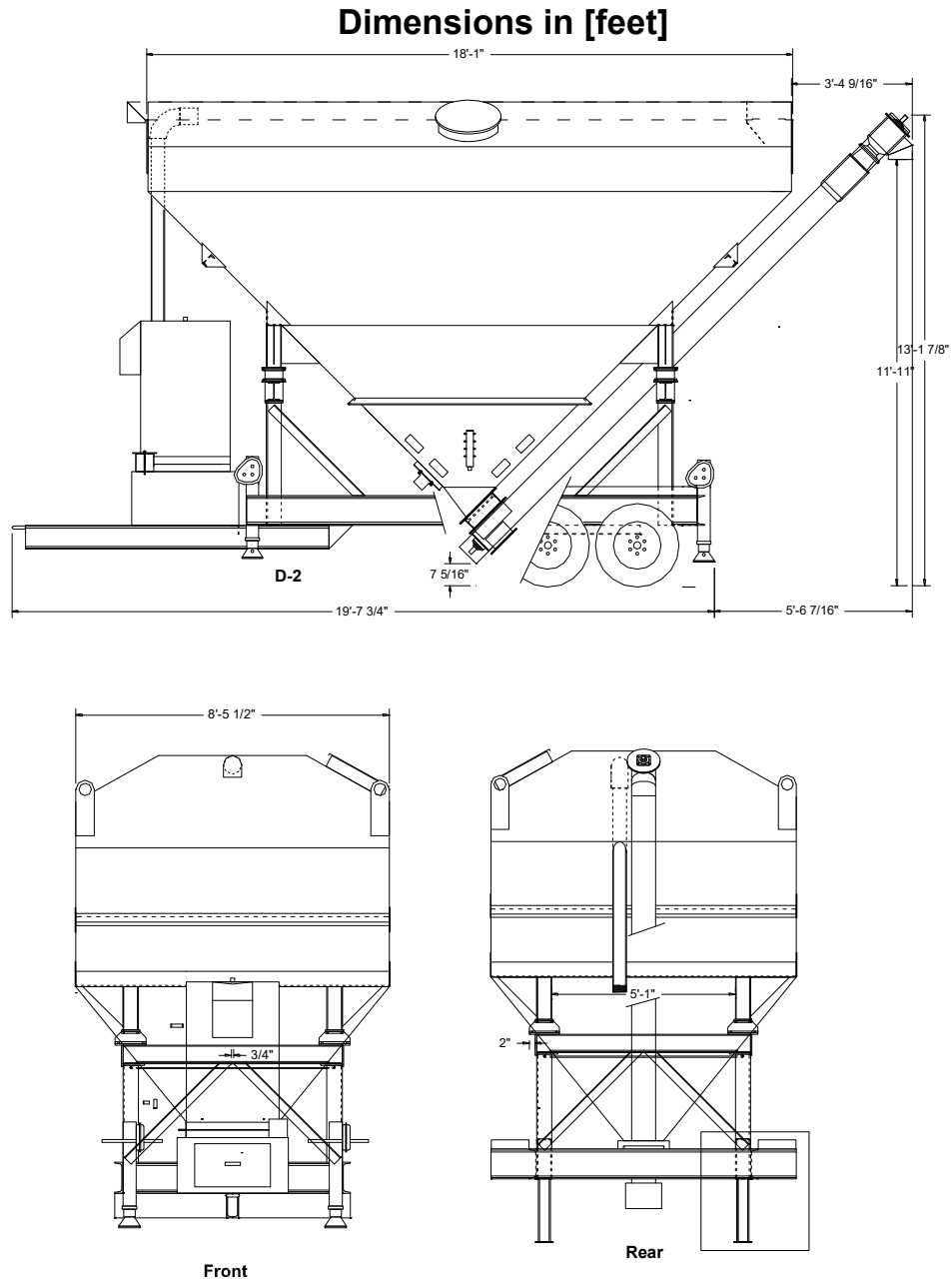


DTL
BILLING TECHNIQUE

LAWRENCE, PA
OAKLAND, CA
1-800-525-0851
BILLINGTECHNIQUE.COM
GITANKRev2/99

3.0 TECHNICAL SPECIFICATIONS

3.1 Dimensions



3.2 Equipment Specifications

Base Machine

- 800 Cubic Foot Capacity
- 7" Discharge Screw
- 5 HP Motor W/Gear Box
- Aeration Pads
- Electric Vibrator
- Slide Gate Assembly
- 2 – 6,000 lb. Axles
- Electric Brakes and Lights
- Silo Vent with 150 Sq. Ft. Filter & Relief Valve
- Weight 8,700 Lbs.



320D L

Hydraulic Excavator



Engine		
Engine Model	Cat® C6.4 ACERT™	
Net Flywheel Power	110 kW	148 hp

Weights

Operating Weight – Std. Undercarriage	20 330 kg	44,820 lb
• Reach boom, R2.9B1 (9 ft 6 in) Stick, 0.9 m ³ (1.18 yd ³) Bucket, 600 mm (24 in) Shoes		

Operating Weight – Long Undercarriage	21 570 kg	47,554 lb
---------------------------------------	-----------	-----------

- Reach boom, R2.9B1 (9 ft 6 in) Stick, 0.9 m³ (1.18 yd³) Bucket, 800 mm (32 in) Shoes

Engine

Engine Model	Cat® C6.4 ACERT™	
Net Flywheel Power	110 kW	148 hp
Net Power – ISO 9249	110 kW	148 hp
Net Power – SAE J1349	110 kW	148 hp
Net Power – EEC 80/1269	110 kW	148 hp
Bore	102 mm	4.02 in
Stroke	130 mm	5.12 in
Displacement	6.4 L	389 in³

- The 320D meets U.S. EPA Tier 3 emissions requirements.
- Net flywheel power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler and alternator.
- No engine power derated below 2300 m (7,500 ft).

Weights

Operating Weight – Std. Undercarriage	20 330 kg	44,820 lb
---------------------------------------	-----------	-----------

- Reach boom, R2.9B1 (9 ft 6 in) Stick, 0.9 m³ (1.18 yd³) Bucket, 600 mm (24 in) Shoes

Operating Weight – Long Undercarriage	21 570 kg	47,554 lb
---------------------------------------	-----------	-----------

- Reach boom, R2.9B1 (9 ft 6 in) Stick, 0.9 m³ (1.18 yd³) Bucket, 800 mm (32 in) Shoes

Service Refill Capacities

Fuel Tank Capacity	410 L	108 gal
Cooling System	25 L	6.6 gal
Engine Oil	30 L	8 gal
Swing Drive	8 L	2.1 gal
Final Drive (each)	8 L	2.1 gal
Hydraulic System (including tank)	260 L	69 gal
Hydraulic Tank	120 L	32 gal
Hydraulic Tank (Including suction pipe)	138 L	36 gal

Swing Mechanism

Swing Speed	11.5 rpm	
Swing Torque	61.8 kN·m	45,612 lb ft

Drive

Maximum Drawbar Pull	205 kN	46,311 lb
Maximum Travel Speed	5.5 kph	3.4 mph

Hydraulic System

Main Implement System – Maximum Flow (2x)	205 L/min	54 gal/min
Max. pressure – Equipment	35 000 kPa	5,076 psi
Max. pressure – Equipment – Heavy	35 000 kPa	5,076 psi
Max. pressure – Travel	35 000 kPa	5,076 psi
Max. pressure – Swing	24 500 kPa	3,553 psi
Pilot System – Maximum flow	32.4 L/min	9 gal/min
Pilot System – Maximum pressure	3900 kPa	566 psi
Boom Cylinder – Bore	120 mm	4.7 in
Boom Cylinder – Stroke	1260 mm	49.6 in
Reach Stick Cylinder – Bore	140 mm	5.5 in
Mass Stick Cylinder – Bore	140 mm	5.5 in
Reach Stick Cylinder – Stroke	1518 mm	59.8 in
Mass Stick Cylinder – Stroke	1504 mm	59.2 in
B1 Family Bucket Cylinder – Bore	120 mm	4.7 in
B1 Family Bucket Cylinder – Stroke	1104 mm	43.5 in
CB2 Family Bucket Cylinder – Bore	135 mm	5.3 in
CB2 Family Bucket Cylinder – Stroke	1156 mm	45.5 in

Sound Performance

Performance	ANSI/SAE J1166 APR 90
-------------	-----------------------

- When properly installed and maintained, the cab offered by Caterpillar, when tested with doors and windows closed according to ANSI/SAE J1166 OCT 98, meets OSHA and MSHA requirements for operator sound exposure limits in effect at time of manufacture.
- Hearing protection may be needed when operating with an open operator station and cab (when not properly maintained or doors/windows open) for extended periods or in noisy environment.

Standards

Brakes	SAE J1026 APR90
Cab/FOGS	SAE J1356 FEB88

Dimensions

All dimensions are approximate.

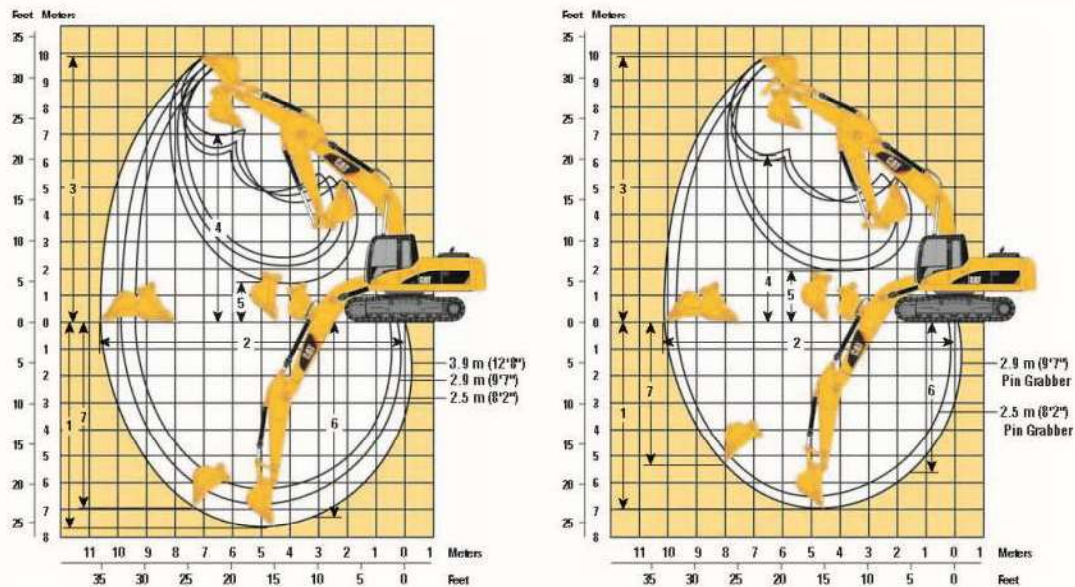


Boom Options	Reach 5.68 (18'7")	Reach 5.68 (18'7")	Reach 5.68 (18'7")	Mass 5.2 m (17'1")	Super Long Reach 8.85 m (29'1")
Stick Options	R3.9B1 m (12'8")	R2.9B1 m (9'7") Std/SA	R2.5B1 m (8'2") Std/SA	M2.4CB2 m (7'10")	6.28 m (20'7")
1 Shipping Height	*3740 mm (12'3")	3030 mm (9'11")	3050 mm (10'0")	3280 mm (10'9")	3190 mm (10'6")
2 Shipping Length	9440 mm (31'0")	9460 mm (31'0")	9460 mm (31'0")	9050 mm (29'8")	12 680 mm (41'7")
3 Tail Swing Radius	2750 mm (9'0")	2750 mm (9'0")	2750 mm (9'0")	2750 mm (9'0")	2750 mm (9'0")
4 Length to Center of Rollers					
Standard	3265 mm (10'9")	3265 mm (10'9")	3265 mm (10'9")	3265 mm (10'9")	n/a
Long	3650 mm (12'0")	3650 mm (12'0")	3650 mm (12'0")	3650 mm (12'0")	3650 mm (12'0")
5 Track Length					
Standard	4075 mm (13'4")	4075 mm (13'4")	4075 mm (13'4")	4075 mm (13'4")	n/a
Long	4455 mm (14'7")	4455 mm (14'7")	4455 mm (14'7")	4455 mm (14'7")	4455 mm (14'7")
6 Ground Clearance	450 mm (1'6")	450 mm (1'6")	450 mm (1'6")	450 mm (1'6")	450 mm (1'6")
7 Track Gauge					
Standard	2200 mm (7'3")	2200 mm (7'3")	2200 mm (7'3")	2200 mm (7'3")	n/a
Long	2380 mm (7'10")	2380 mm (7'10")	2380 mm (7'10")	2380 mm (7'10")	2380 mm (7'10")
8 Transport Width	800 mm Shoes	700 mm Shoes	600 mm Shoes		800 mm Shoes
Standard	3000 mm (9'10")	2900 mm (9'6")	2800 mm (9'2")	2800 mm (9'2")	2800 mm (9'2")
Long	3180 mm (10'5")	3080 mm (10'1")	2980 mm (9'9")	2980 mm (9'9")	2980 mm (9'9")
9 Cab Height	2950 mm (9'8")	2950 mm (9'8")	2950 mm (9'8")	2950 mm (9'8")	2950 mm (9'8")
10 Counterweight Clearance	1020 mm (3'4")	1020 mm (3'4")	1020 mm (3'4")	1020 mm (3'4")	1020 mm (3'4")

* Removing the bucket and quick coupler changes the shipping height to 3390 mm (11'1").

Reach Excavator Working Ranges

Reach (R) boom configuration

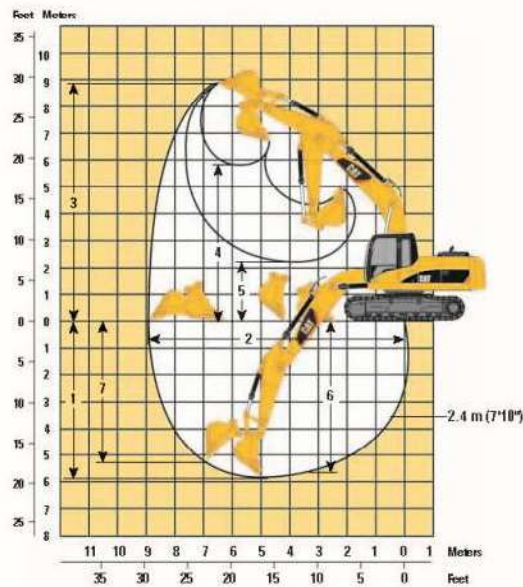


Boom Options	Reach 5.68 m (18'7")	Reach 5.68 m (18'7")	Reach 5.68 m (18'7")	Reach 5.68 m (18'7")	Reach 5.68 m (18'7")
Stick Options	R3.9B1 m (12'8")	R2.9B1 m (9'7")	R2.5B1 m (8'2")	R2.9B1 m (9'7")	R2.5B1 m (8'2")
Bucket	1.0 m³ (1.31 yd³)	1.0 m³ (1.31 yd³)	1.0 m³ (1.31 yd³)	Pin Grabber Quick Coupler with 1.0 m³ (1.31 yd³)	Pin Grabber Quick Coupler with 1.0 m³ (1.31 yd³)
1 Maximum Digging Depth	7660 mm (25'2")	6720 mm (22'1")	6300 mm (20'8")	6980 mm (22'11")	6560 mm (21'6")
2 Maximum Reach at Ground Level	10 760 mm (35'4")	9860 mm (32'4")	9460 mm (31'0")	10 120 mm (33'2")	9730 mm (31'11")
3 Maximum Cutting Height	9940 mm (32'7")	9490 mm (31'2")	9290 mm (30'6")	9720 mm (31'11")	9520 mm (31'0")
4 Maximum Loading Height	6940 mm (22'9")	6490 mm (21'4")	6290 mm (20'8")	6230 mm (20'5")	6030 mm (19'9")
5 Minimum Loading Height	1230 mm (4'0")	2170 mm (7'1")	2590 mm (8'6")	1910 mm (6'3")	2330 mm (7'8")
6 Maximum Depth Cut for 2440 m (8') Level Bottom	7270 mm (23'10")	6370 mm (20'11")	5950 mm (19'6")	5680 mm (18'8")	5290 mm (17'4")
7 Maximum Vertical Wall Digging Depth	6970 mm (22'10")	6060 mm (19'11")	5650 mm (18'6")	5380 mm (17'8")	4990 mm (16'4")

All measurements are approximate

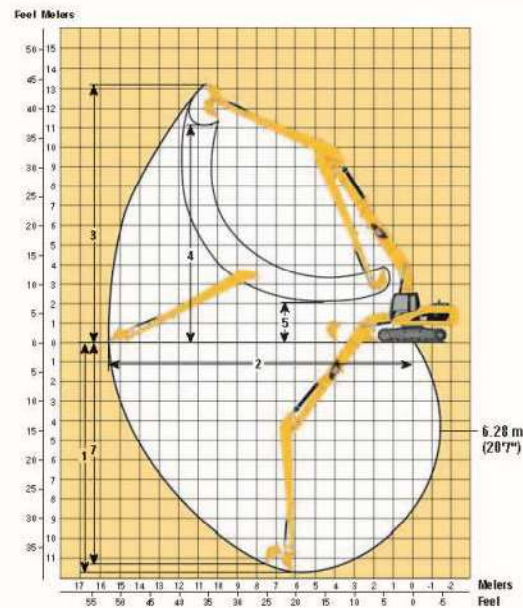
Mass Excavator Working Ranges

Mass (M) boom configuration



Reach Excavator Working Ranges

Reach (R) boom configuration



Boom Options

Stick Options

Bucket

1 Maximum Digging Depth

2 Maximum Reach at Ground Level

3 Maximum Cutting Height

4 Maximum Loading Height

5 Minimum Loading Height

6 Maximum Depth Cut for
2440 m (8') Level Bottom

7 Maximum Vertical Wall Digging Depth

Mass

5.2 m (17'1")

M2.4CB2 m (7'10")

1.35 m³ (1.77 yd³)

5890 mm (19'4")

8960 mm (29'5")

8930 mm (29'4")

5720 mm (18'9")

2230 mm (7'4")

5660 mm (18'7")

5360 mm (17'7")

Super Long Reach

8.85 m (29'1")

6.28 m (20'7")

0.46 m³ (0.80 yd³)

11 740 mm (38'6")

15 590 mm (51'2")

13 240 mm (43'5")

11 150 mm (36'7")

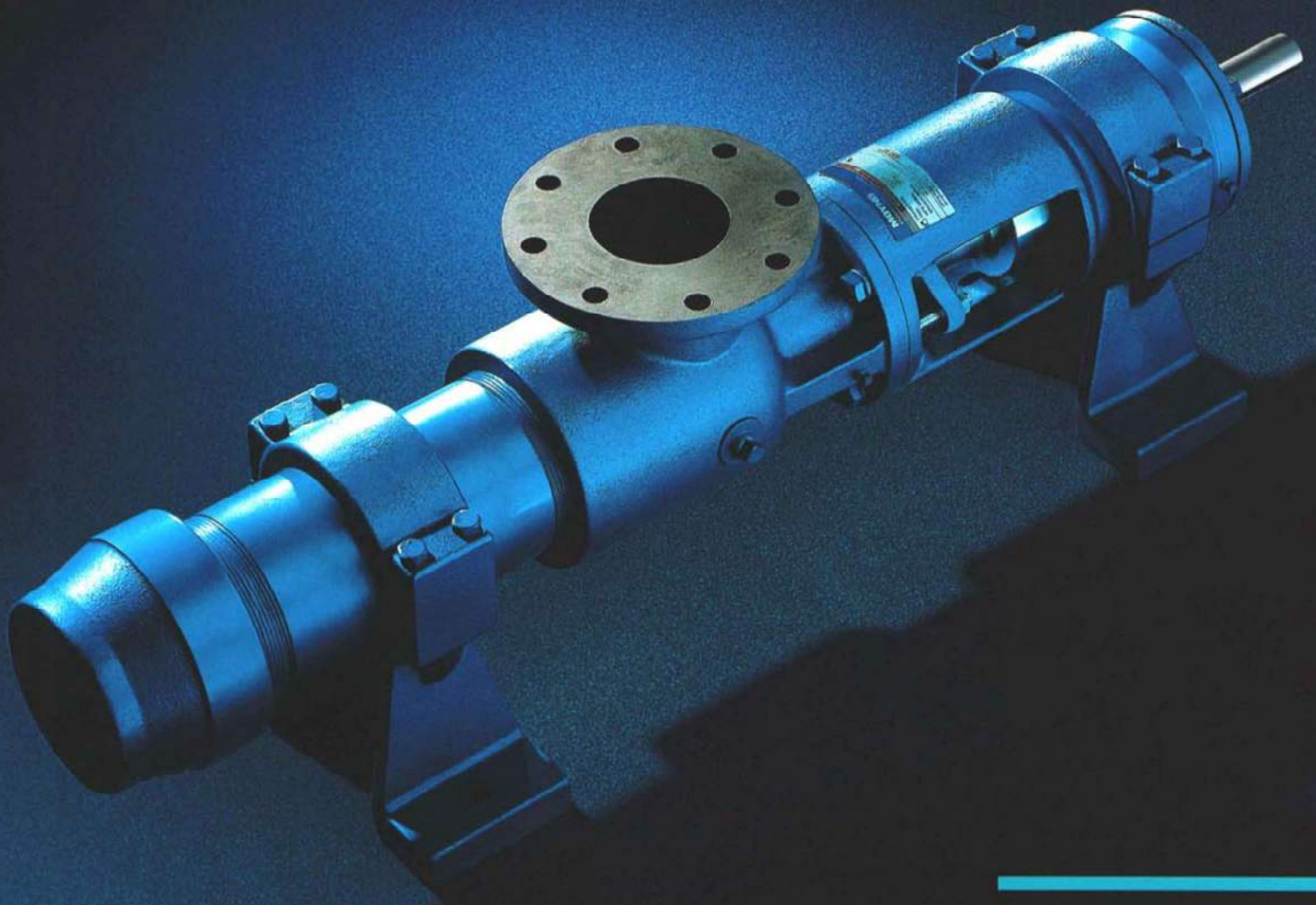
2100 mm (6'11")

11 300 mm (37'1")

All measurements are approximate

Moyno® L-Frame Pumps

Classic Pumping Performance



MOYNO

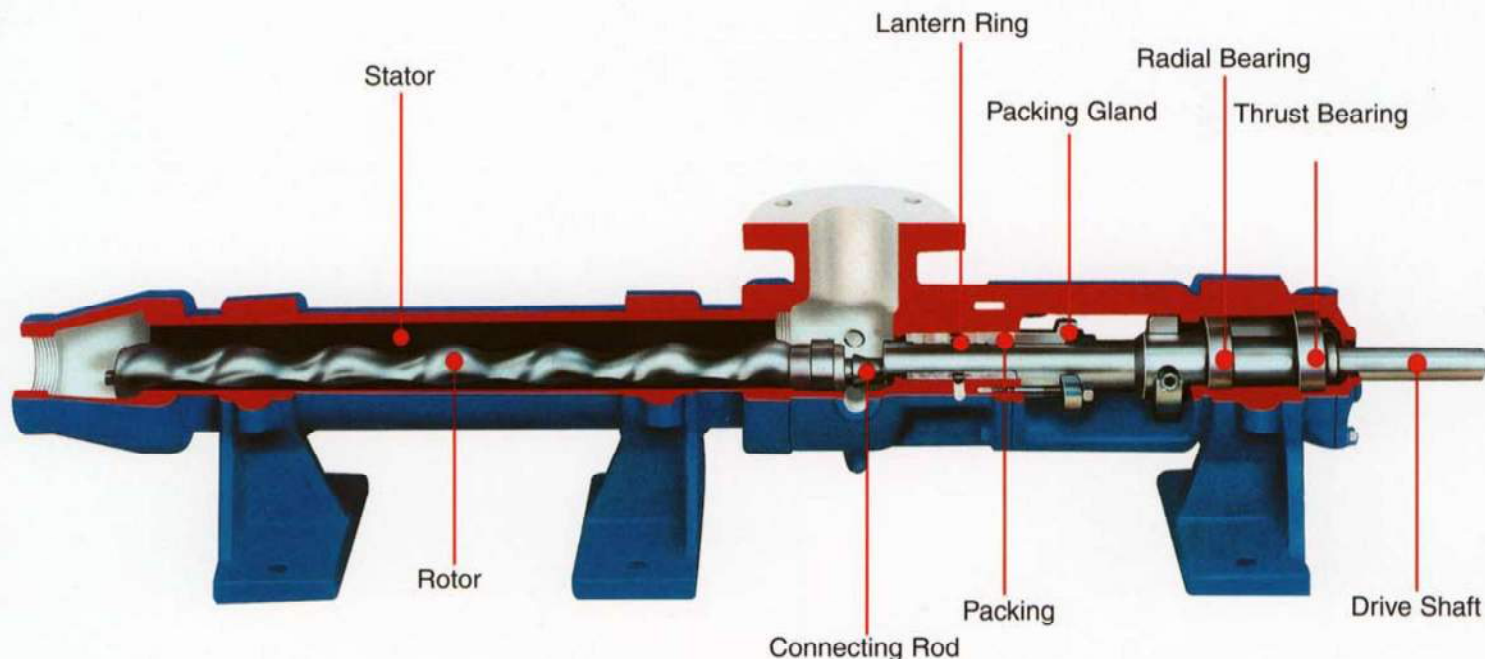
Always the Right Solution™

Moyno® L, J & JS Pumps

Proven Performers Withstanding the Test of Time

For nearly 50 years, Moyno L, J & JS pumps have stood the test of time meeting thousands of application challenges. Performance-enhancing and cost-saving features provide outstanding benefits that maximize operating efficiency, and save time and money.

- Low total cost of ownership
- Non-pulsating metered flow for accurate process control
- Long life even handling abrasive fluids
- Vibration-free for quiet operation
- Compression fit between rotor and stator for high volumetric and mechanical efficiency
- Easy, on-site maintenance
- Handle fluid temperatures to 350°F



Moyno L, J & JS pumps now feature a wide variety of new Ultra-Shield® rotor coatings and Ultra-Flex® stator elastomers.

- Steady flow under wide NPSH variations
- Handle solids up to 1" in diameter
- Reversible rotation
- High suction lift to 28 feet
- No pistons, valves or timing gears to wear out or gum up
- High pressure capability
- Positive displacement for predictable uniform flow
- Self-priming to prevent vapor or air lock
- Low shear pumping
- Handle viscosities over 1,000,000 cps

Moyno® L, J & JS Pumps

Application Versatility for Effective Process Solutions

Wastewater Treatment

Polymer transfer
Chemical feed
Sampling
Lime slurry

Petroleum

Crude oil
Polymers

Food

Ground meat emulsions
Fats and lard
Chunked fruits and fruit slurries
Tomato sauce and paste
Grain mash and spent grains

Textile

Adhesives
Pigments

General Chemical

Chemicals
Pastes and gels
Soap/Detergents
Paint

Mining

Ore slurries
Water disposal

Coal Industry

Drilling muds
Coal/water and coal/oil slurries
Recovery agents
Burner feed

Pulp & Paper

Paper
Starch
Clays
Sizing

Building Materials

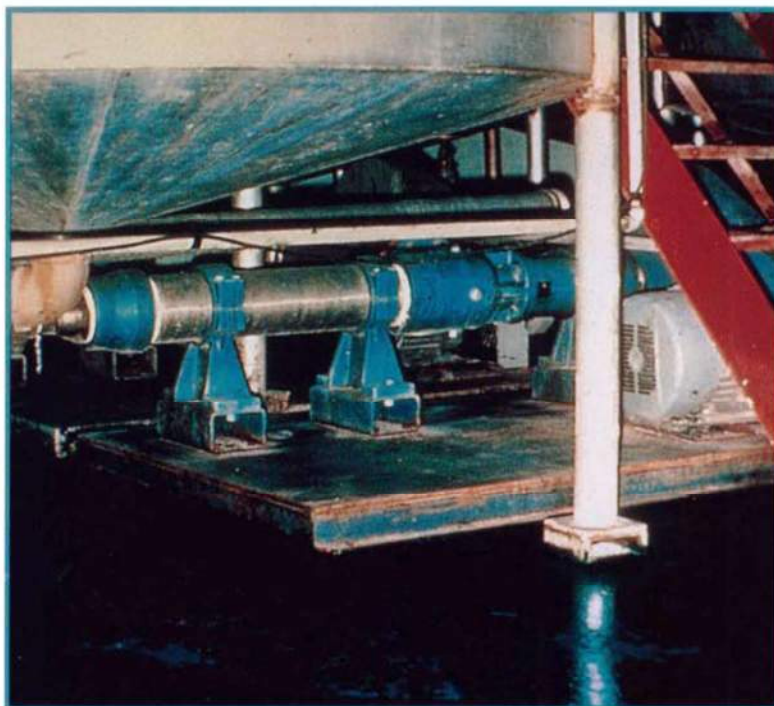
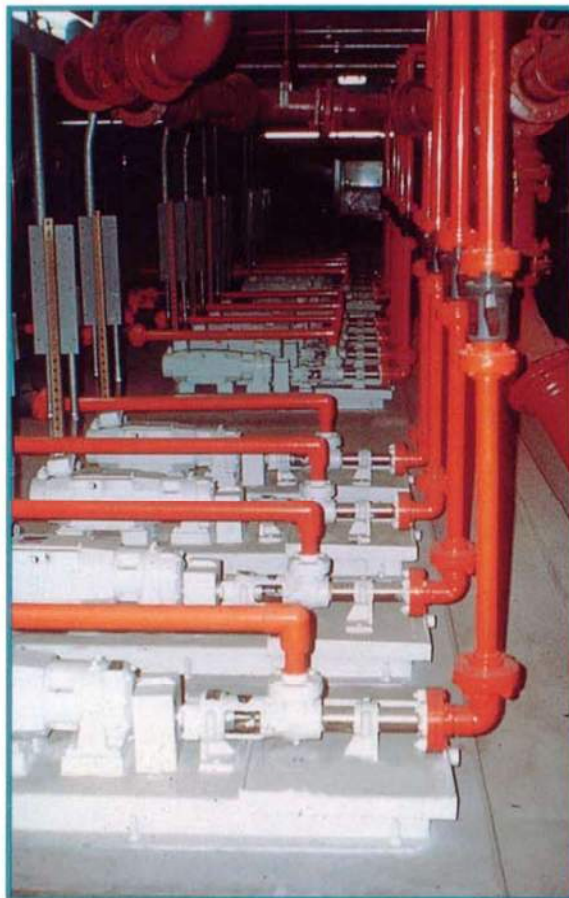
Mortar
Grout
Asphalt
Gypsum
Roofing compounds
Metal working
Coolants
Coatings
Lubricants
Sealants

Plastics and Elastomers

Polymers
Latex
Additives

General

Oil/water separations
Mastics
High-pressure water



Moyno® L, J & JS Pumps

Versatile, Rugged Pumps for Reliable Performance

L Series Standard Flange Pumps

- Capacities to 450 gpm
- Pressures to 2,100 psi
- Simple pin-type universal joint drive assembly for easy maintenance
- Modular design
- Wide selection of materials of construction



J Series Open Throat Pumps

- Capacities to 450 gpm
- Pressures to 250 psi
- Designed for viscous and solids-laden fluids
- Wide open unobstructed suction hopper configuration
- Auger assembly for positive feed of viscous materials



JS Series Bridge Breaker Pumps

- Capacities to 450 gpm
- Pressures to 250 psi
- Handle semi-dry, caked materials, high solids content materials and suspended solids up to 1" in diameter
- "Bridge Breaker" finger mechanisms project from counter-rotating shafts mounted directly above the pump's auger feed
- Handle vertical discharges of over 100 feet



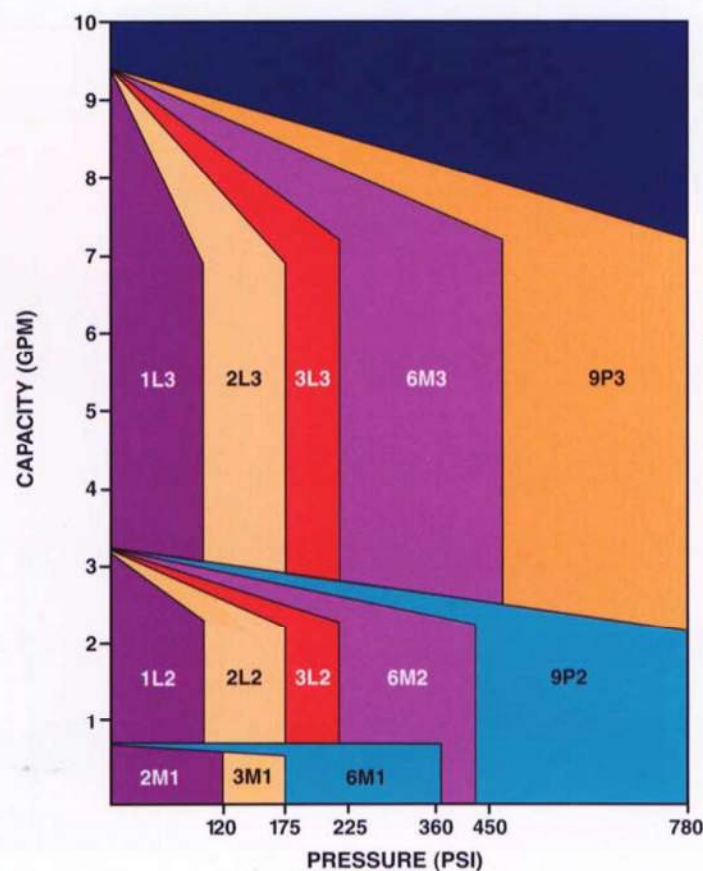
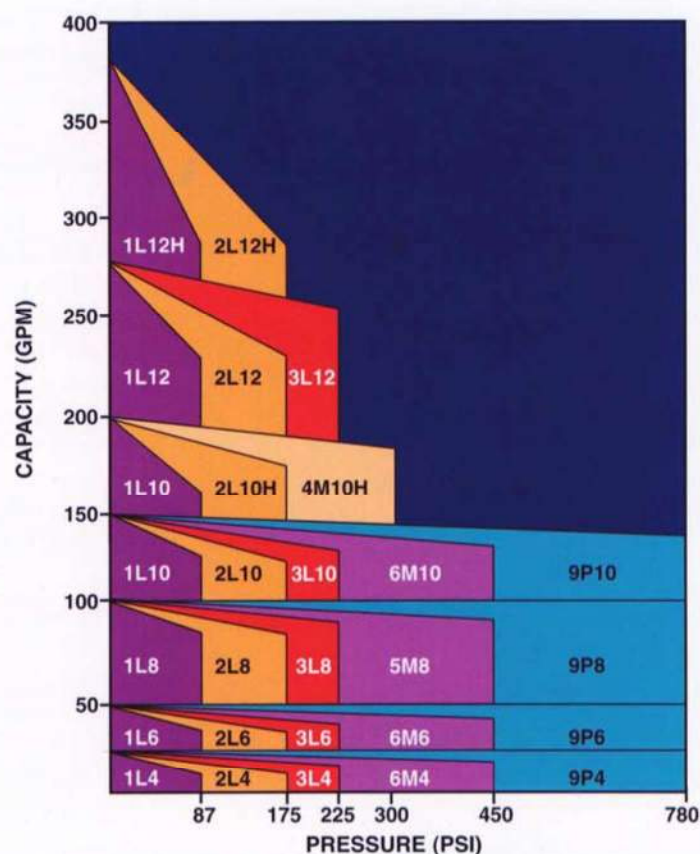
Moyno® L, J & JS Pumps

Extensive Performance Range and Options for Your Applications

Moyno® L, J and JS Series Pumps are available with a wide variety of drive options, packings, motors and controls to meet your exact application needs.

Options

- Variety of drives and mounting configurations
- Mechanical seals or packing
- Electronic pump controls
 - Open and closed loop systems
 - Variable speed control
 - Metering and batching control
 - Fluid detection control
- Jacketing for critical process temperature control
- Tachometers, gauges and other accessories



Materials of Construction		
	Standard Materials	Special Materials [†]
Pump Body	Cast Iron 316 Stainless Steel	Carpenter 20 Hastelloy*, Monel***
Internals, Including Rotor	Alloy Steel 316 Stainless Steel	Carpenter 20 Hastelloy**, Monel***
Stators	EPDM (to 260°F) Fluoroelastomer (to 350°F) Nitrile (to 210°F) Natural Rubber (to 185°F)	Viton**, Thiokol**** Hypalon**, Teflon** White Nitrile, Urethane Alloy Steel, 416 Stainless Steel

*Hastelloy is a trademark of Cabot Corp.

**Hypalon, Teflon and Viton are trademarks of E.I. DuPont de Nemours and Company.

***Monel is a trademark of Inco Alloy International®.

****Thiokol is a trademark of Thiokol Chemical Corp.

[†]Other materials and special configurations available upon request.

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- 24-hour service and support
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- Preventative maintenance programs and service contracts
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Genuine Moyno
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Moyno, Inc.
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U.S.A.
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Facsimile:937-327-3572
Web site: www.moyno.com

Note: Information contained herein is subject to change without notice. Before making a final product selection, please contact a Moyno representative.

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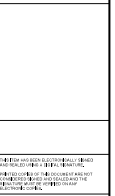
MIXING EQUIPMENT

The cut sheets included represent typical equipment that Keller intends to mobilize for the project. Actual equipment used may vary based on availability at the time of mobilization.

Attachment A Site Logistic Plan



KELLER
100 STICKLE AVENUE
ROCKAWAY, NJ 07866
973-627-2100
www.Keller-na.com



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11231

AGE
OR MS
BROOKLYN, NY

OVER P,
HARBOR
STREET, BRO

VERONA ST
K680
CO

No.	Description	Date

Design by: JN	Approved by: MM
Drawn by: GAV	Checked by: MM
Project Number: _____ Date: _____	

1131XXXX 11/22/2024
 Sheet No.
K-0

Appendix B

Construction Quality Assurance Project Plan

Cores boreholes will be advanced to at least one foot below the target ISS depth. Exact core locations will be determined in consultation with NYCSCA and NYSDEC.

CQAPP

1. Sample Collection methods, frequency, and testing procedures
 - a. Collection Methods: Keller will retrieve wet grab samples from at least 2 different mix cells per shift while the mass is still fluid for UCS testing. Testing will be performed using either the excavator bucket or a sampling tool. A minimum of six cylinders will be cast for samples retrieved per cell.
 - b. Procedure: Keller will mobilize a coring drill rig to collect core samples from the test cells to check to continuity of the mass mixing and to perform visual inspection that shown no evidence of non-aqueous phase liquids.
 - i. Due to low strength of the mass mix, the core samples will only be collected for visual inspection. The wet grab samples will be collected in lieu of the core samples for UCS Testing
 - c. Frequency: Keller will collect grab samples at a rate of one set (set of 6 - 3 for 14 days and 3 for 28 days) for every Group cell which is approximately 212 cyds of mixed material.

QC sampling will conform to the NYSDEC ISS Quality Assurance/Quality Control (QA/QC) Guidance Document, including (but not limited to) requirements for notification and Department approval.

Appendix C

Job Hazard Analysis

GRAVES-MMA JV

Shop Drawing Submittal Comment Sheet / Transmittal

Project: <u>K680 Early Work Package</u>	Submitted By: <u>NESCO</u>	
Date Received: <u>02/03/2025</u>	Submittal No. / Trans ID: <u>02223-003-001</u>	
Date Returned: <u>02/11/2025</u>	Submittal Title: <u>Mass Soil Mixing – Job Hazard Analysis</u>	
To: Timothy Brojer McCloud Group 4709 30 th Street -Suite 602 Long Island City, NY 11101	From: Brian Gow Graves-MMA JV Architects, PLLC 3297 Route 66, Studio B Neptune, NJ 07753	<input checked="" type="checkbox"/> First Review <input type="checkbox"/> Second Review <input type="checkbox"/> Third Review <input type="checkbox"/> Fourth Review

General Comments:

- 1. Refer to engineer’s comments.

GRAVES-MMA JOINT VENTURE

REVIEWED

GRAVES-MMA JV ARCHITECTS, PLLC

3297 Route 66, Studio B
Neptune, New Jersey 07753
t: 732.918.2300 | f: 732.918.2351

CLIENT: NYC SCA
LLW#: 127569 & 132059
MMA No.: 105-21-003



Environmental, Planning, and Engineering Consultants

440 Park Avenue South
7th Floor
New York, NY 10016
tel: 212 696-0670
fax: 212 213-3191
www.akrf.com

Transmittal

To:	Mike Sherwood	From:	Rebecca Kinal/ Adrianna Bosco
Company:	NYCSCA	Date:	February 11, 2025
Address:	25-01 Jackson Avenue Long Island City, NY 11101	Project Number:	241090
Job Title:	Harbor MS – Brooklyn (K680)		
	LLW#: 132059		

We have enclosed the following:

☐ Report ☐ Specifications ☐ Drawing(s) ☐ CD/DVD ☒ Contractor Submittals

- Mass Soil Mixing – Job Hazard Analysis (02223-003-001) – **No Action Taken**

Sent Via:

☐ Messenger ☐ U.S. Mail ☐ Federal Express ☒ Email



Environmental, Planning, and Engineering Consultants

440 Park Avenue South
7th Floor
New York, NY 10016
tel: 212 696-0670
fax: 212 213-3191
www.akrf.com

Memorandum

To: Mike Sherwood	From: Rebecca Kinal / Adrianna Bosco
Company: NYCSCA	Date: February 11, 2025
Project No.: 132059	Phone No.: 914.922.2362 / 646.388.9576
Re: Harbor MS – Brooklyn (K680)	
Review of Mass Soil Mixing – Job Hazard Analysis – No Action Taken	

AKRF, Inc. (AKRF) has reviewed the Mass Soil Mixing – Job Hazard Analysis prepared by Keller-North America (Keller) for K680 (the “Site”), located at 46 Verona Street, Brooklyn, NY 11231. The Job Hazard Analysis includes: personal protective equipment (PPE) requirements, potential hazards, and hazard control measures, which will be implemented during the in-situ solidification (ISS) program. The submittal has been stamped “No Action Taken”.

The Contractor should note the following:

- The Contractor must prepare a site-specific Health and Safety Plan (HASP) in accordance with Section 02222-3.02-2 and submit it for review and approval by the NYCSCA Safety Division. The JHA should be incorporated into the Contractor’s HASP as appropriate.
- All work must be completed in accordance with the Authority’s Health and Safety requirements and regulations, the Health and Safety Plan included as Appendix E to the NYSDEC-approved Remedial Action Work Plan, and the Contractor’s approved site-specific Health and Safety Plan.

AKRF’s review was limited to verifying environmental-related submittal requirements in NYCSCA standard specification section 02223. The comments above are intended only to provide clarification regarding the submittal. The comments should not be construed in any way as intent to limit the Contractor’s responsibilities. The absence of a comment with respect to a specific contract requirement should not be interpreted as a suggestion to change a contract requirement.



900 3rd Avenue
New Hyde Park, NY 11040
Ph : 718-361-0044

Submittal

Job: 6387
K680
46 Verona Street
Brooklyn, NY

Spec Section No: 02223
Submittal No: 003
Revision No: 0
Sent Date: 2/3/2025

Spec Section Title:

Submittal Title: Mass Soil Mixing - Job Hazard Analysis

Contractor:

National Environmental Safety Co.

Contractor's Stamp

McCloud Group, The

Architect's Stamp

Engineer's Stamp

AKRF Inc. 440 Park Avenue South, New York, NY 10016	
<input type="checkbox"/>	NO EXCEPTIONS TAKEN.
<input type="checkbox"/>	MAKE CORRECTIONS NOTED.
<input type="checkbox"/>	REJECTED: REVISE AND RESUBMIT.
<input type="checkbox"/>	REJECTED: NOT ACCEPTABLE FOR REVIEW.
<input checked="" type="checkbox"/>	NO ACTION TAKEN.
By: A. Bosco	Date: 02/11/2025
This review does not relieve the contractor or any subcontractor of responsibility for full compliance with contract requirements; for correctness of dimensions, clearances, and material quantities; for proper design of details; for proper fabrication and construction techniques; for proper coordination with other trades; and for providing all devices required for safe and satisfactory construction and operation.	

PROJECT MANAGER:	SUPERVISOR:	SAFETY REP:
PROJECT START DATE:	DATE SUBMITTED:	
LOCATION OF WORK:	CONTACT:	
PROJECT REVISION:	JOB NAME & NUMBER:	
<p>PPE, Minimum: Hard Hat, Safety-Toe Boots, Safety Glasses, Task Appropriate Gloves, and High Visual/Retro-Reflective Clothing.</p> <p>PPE, Additional – As Needed: Hearing Protection, Face Shield, Fall Restraint &/or Fall Arrest Systems, Respiratory Protection</p>		

PARTICIPANTS IN THE DEVELOPMENT OF RISK ASSESSMENT AND JHA			
<i>Name/Title</i>	<i>Signature</i>	<i>Name/Title</i>	<i>Signature</i>
HSEQ Safety Director			

DOCUMENT CHANGE HISTORY				
REVISION #	DATE	DESCRIPTION OF CHANGES/ IMPROVEMENTS	REVIEWED BY:	APPROVED BY:

PART 1 – HAZARD ANALYSIS

Section A: Batch Grout

Item	Activity/Task	Potential Hazards	Hazard Control Measures/Procedures	Responsibility
1	Cement Truck Operations	Struck-By Equipment, Crushed By Equipment, Slips, Trips and Falls, Pinch Points	<ul style="list-style-type: none"> • Spot trucks when backing to pig or field bin • Drivers shall wear PPE in accordance with Keller requirements (safety vest, glasses, hardhat, work boots) • Provide staging area for trucks onsite if more than one is present for unload • Notify drivers of the proper access roads and lanes prior to coming onsite 	Supervisor, Worker
2	Fill Silo with Dry Cement/Binder	Struck By, Fall, Non-Respirable Dust	<ul style="list-style-type: none"> • Use appropriate fall protection when climbing silo/tank • Inspect grout supply truck prior to connecting to silo and initiating pump process (gauges are present, no weak welds on tank, truck driver trained to operate pump) • The truck driver shall be instructed by Keller representative as to the current silo capacity and unloading procedures to prevent blowouts or other damage • Ensure appropriate connections between truck and silo • Monitor silo while filling to prevent from being overfilled. Do not wait for dry cement/binder to come out of the top of the silo. Utilize bin fill indicators to monitor binder in the silo from the ground when applicable • All tools shall be tethered when climbing silo 	Supervisor Worker
3	Grout Pump	Over pressurized lines, Caught In, Noise	<ul style="list-style-type: none"> • Ensure all pressurized pneumatic lines are whip-checked • Do not remove guards, unless LOTO procedures have been followed • Utilize hearing protection while in the vicinity of the pump when in excess of 85dBA • Check for leaks and tighten any loose fittings at all hose and pipe connections. • Check for worn or damaged hoses • Identify all emergency stops and ensure they are operational • Do not feel for pressure leaks with bare hands • Check pressure gauges daily 	Worker Supervisor
4	Clearing Blockages	Over pressurized lines, Struck by, Foreign objects	<ul style="list-style-type: none"> • Gradually back the pressure off the pump • Shutdown the pump 	Worker, Supervisor

Item	Activity/Task	Potential Hazards	Hazard Control Measures/Procedures	Responsibility
		in eye, grout burns	<ul style="list-style-type: none"> • Utilize LOTO procedures • A face shield is required when breaking the line • Wash out the hose and change out if needed 	
5	Transferring Dry Cement/Binder from Silo to Batching plant	Non-Respirable dust, Fall, Caught In, Foreign objects in Eye, Grout burns, Electrocution	<ul style="list-style-type: none"> • An inverted funnel should be attached to the transfer hose of the silo extending far enough into the opening of the mixing tank to prevent airborne dust (must allow air to enter into the system) • Do not put hands or arms into any mixing equipment unless it is locked out • Use engineering controls to minimize silica exposure. If Action Level is exceeded, requirements of the OSHA silica standard shall be followed • Eye wash shall be readily available • Always stand on the work platform. Never stand in a position that would allow you to fall into the mixing tank. Mixing tank should be kept clean to prevent the formation of plugs • Ground the generator as per manufacturer specifications and ensure electrical panel is closed and all plugs are properly connected • Batch Plant area must remain free of debris and trash • All electrical connections must be visually checked to ensure proper connection • All electrical connections shall be installed and maintained by qualified personnel • Electrical cords shall be run overhead • Elevate batch plant area slightly to allow water to drain from batch area • Access steps or cribbing will be clear of obstructions to avoid tripping or falling • Ensure a supply of vinegar or PH Neutralizer is within batch plant vicinity and thoroughly wash any grout off the skin with vinegar • Check slick lines for wear, blisters or cracks. Lay slick line so that it is protected from damage by moving vehicles and mark to prevent tripping personnel. Arrange in an orderly fashion. Use proper scaffolding or other stable platform when handling grout header at heights greater than six feet 	Worker Supervisor
6	Wash Out/Maintenance	Caught in, Foreign Object, Grout Burn	<ul style="list-style-type: none"> • Goggles and safety glasses or safety glasses with foam inserts shall be worn if a splashing hazard is present • Do not wash yourself off with high pressure water lines • Keep two hands on pressure washer nozzle when washing out • Ensure bleed off hose is secured and prevented from whipping at the open end 	Worker Supervisor

Item	Activity/Task	Potential Hazards	Hazard Control Measures/Procedures	Responsibility
			<ul style="list-style-type: none"> Chain on the guardrail shall be latched when performing operations from the platform Equipment shall be locked out from accidental ignition should an employee need to chip out the inside of the mixing tank If chipping occurs, the employee should wear a face shield and be equipped with at least an N95 dust mask if the material being chipped is dry and engineering controls on infeasible 	

Section B: Mass Mixing

Item	Activity/Task	Potential Hazards	Hazard Control Measures/Procedures	Responsibility
1	Conduct Daily Inspection of Mass Mixing Excavator/ Equipment	Pinch Points, Falls, Crushing, Struck-By, Caught-in between, Electrocution, Ergonomic, Overhead Hazards, Slips, Trips, Cuts	<ul style="list-style-type: none"> Conduct a Daily inspection of all self-propelled equipment; this shall be documented on the equipment inspection sheet Use specific inspection sheets for each piece of equipment Any broken or damaged equipment shall be reported to the supervisor immediately. A course of action will then be decided depending on the situation. Wear gloves when inspecting Report all issues via the weekly equipment report. All safety issues must be immediately reported to the Ops Manager and/or Shop Manager to determine the best course of action 	Supervisor, Worker
2	Tracking Mass Mixing Excavator and Mobile Equipment	Noise, Slips, Trips and Falls, Struck-By, Crushed By Equipment, Over Turning Equipment, Caught In-between, Pinch Points, Falls, Electrical (Focus 4 Hazards)	<ul style="list-style-type: none"> Radio communication must be maintained between spotter and drill operator Only authorized operators will be permitted to operate corresponding equipment Equipment will have documented shift daily inspections General contractor to strip, compact, add stone and recompact the job site. Use spotter when moving or tracking equipment Keep unauthorized persons off the worksite. Only one qualified signal person will give signals to the operator All personnel shall be aware of any overhead electrical wires or other obstructions in the path of suspended loads. Proper distances will be maintained and marked if necessary Discuss sequencing of cells during the DTA 	Supervisor, Worker
3	Preconditioning Mass Mixed Cells	Struck-By Equipment, Crushed By Equipment, Slips, Trips and Falls, Struck-By Debris,	<ul style="list-style-type: none"> Place layout flags along the outside perimeter of proposed cell Ensure no personnel enter the work area of the preconditioning hoe without radio contact with the operator 	Supervisor, Worker

Item	Activity/Task	Potential Hazards	Hazard Control Measures/Procedures	Responsibility
		Asphyxiation, Over-turned Rig	<ul style="list-style-type: none"> Operator to maintain 360-degree awareness at all times and use spotters when necessary 	
4	Installing Mass Mixed Cells	Struck-By Equipment, Crushed By Equipment, Slips, Trips and Falls, Struck-By Debris, Asphyxiation, Over-turned Rig	<ul style="list-style-type: none"> Check for and tighten any loose fittings at all hose and pipe connections Ensure spotter and other ground personnel remain outside of the barricaded area If in close proximity to a structure/equipment, then no personnel should stand between the mobile equipment and structure/equipment All required guards shall be in place prior to operation Check for worn or damaged hoses Pressure gauges should be checked daily Only authorized personnel shall be allowed within the working vicinity of the drill Only one qualified signal person will give signals to the operator All personnel shall be aware of overhead operations while within the direct vicinity of the mixing operation Tool connection to excavator arm will be inspected daily Tool nozzles shall be checked and cleaned daily at a minimum Ensure cells are barricaded (see next step) Cells must remain barricaded for the predetermined cure time, or until samples taken during mixing show the material has achieved adequate set Utilize whip-checks for all pressurized hoses 	Supervisor, Worker
5	Barricading Mass Mixed Cells	Struck-By Equipment, Crushed By Equipment, Slips, Trips and Falls, Struck-By Debris, Asphyxiation, Over-turned Rig	<ul style="list-style-type: none"> Place signs that read "Danger – Wet Slurry" around the mixing area As mass mixing progresses, ensure barricades are erected directly behind the operation Barricades must be set up 6' feet back from the edge of the cell and reach at least 3' feet above the existing grade They must be highly visible. Use yellow caution tape Once cell is complete, ensure barricade fully encompasses the cell Do not remove the barricade until the cell is cured 	Supervisor, Worker
6	Excavator Operations	Struck-By Equipment, Crushed By Equipment, Slips, Trips, and Falls	<ul style="list-style-type: none"> Excavator backup alarms must be in working order Because of constant swinging of the excavator bucket, personnel will be cleared from area where spoils are being managed 	Supervisor, Worker

Item	Activity/Task	Potential Hazards	Hazard Control Measures/Procedures	Responsibility
			<ul style="list-style-type: none"> • Maintain spoil piles outside of barricaded area • Prior to tracking, the operator(s) ensure no personnel are behind the machine and that the tracks are clear and in good working order • Prior to tracking, the operator(s) must ensure avoidance of freshly mixed cells by remaining outside of the barricaded area 	
7.	Managing Contaminated Surfaces and Equipment	Contact with petroleum-contaminated surfaces or equipment, Slips/ trips/falls on slippery surfaces caused by petroleum residue, Environmental contamination from petroleum residue left onsite, Equipment malfunction due to buildup of contaminants	<ul style="list-style-type: none"> • Inspect equipment surfaces for petroleum buildup at regular intervals throughout the day • Use absorbent materials, such as pads or mats, to wipe down equipment immediately after contamination • Designate a cleaning station with appropriate materials (e.g., absorbents, scrapers, or biodegradable cleaning agents) to handle contaminated surfaces onsite • Ensure workers wear petroleum-resistant gloves and boots with slip-resistant soles when working around contaminated surfaces • Maintain spill kits at the cleaning station and near equipment in use for immediate containment of petroleum residue • Conduct final checks of cleaned equipment to confirm removal of contaminants before moving to other site locations or storage areas • Monitor nearby areas for any contamination that may spread during cleaning and address immediately to minimize environmental impact 	Supervisor, Worker
8.	Cleaning of Excavator and Tooling	Chemical exposure to petroleum or cleaning agents Slips/ trips/ falls due to spills or wet surfaces Inhalation of fumes Contaminated runoff/environmental hazards Cuts or abrasions from tools or equipment	<ul style="list-style-type: none"> • Use appropriate PPE, including chemical-resistant gloves, goggles or foam lined glasses, and respiratory protection if fumes are present • Perform cleaning in a designated, well-ventilated area (outdoors is sufficient in this case) • Place spill containment barriers (e.g., absorbent mats, secondary containment trays) to manage runoff • Ensure all cleaning agents are stored and handled according to manufacturer instructions • Use non-sparking tools if working near petroleum residues • Dispose of contaminated materials (e.g., rags) following environmental and local regulations 	Supervisor, Worker
9.	Daily shutdown	Contact with hot surfaces	<ul style="list-style-type: none"> • Ensure equipment is parked on stable, level ground away from active work areas 	

Item	Activity/Task	Potential Hazards	Hazard Control Measures/Procedures	Responsibility
	of equipment	<p>or equipment components,</p> <p>Slips/trips/falls around equipment during shut down</p> <p>Exposure to petroleum contamination on equipment surfaces</p> <p>Environmental contamination from leaks or spills during shut down</p>	<ul style="list-style-type: none"> • Shut down equipment following manufacturer guidelines to avoid unintentional movement • Conduct a visual inspection of equipment for leaks, damages, or petroleum residue before leaving the site • Allow equipment to cool before performing any cleaning or maintenance tasks to prevent burns • Wipe down contaminated surfaces with absorbent materials or approved cleaning agents • Use appropriate PPE, including gloves and boots resistant to petroleum and sharp edges • Ensure all tools, hoses, and accessories are safely stored to prevent tripping hazards around the equipment • Maintain communication with crew members to verify all equipment has been properly shut down and inspected at the end of the shift 	

Acknowledgement

All workers involved in the tasks listed in the previously read JHA are to sign below to acknowledge their understanding of the proper hazard control measures

Worker Name (print)	Worker Signature	Date
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
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10.		
11.		
12.		
13.		
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15.		
16.		
17.		

18.		
19.		
20.		

Appendix D

Atmos Shield 645 Specs

GRAVES-MMA JV

Shop Drawing Submittal Comment Sheet / Transmittal

Project: <u>K680 Early Work Package</u>	Submitted By: <u>NESCO</u>	
Date Received: <u>11/19/2024</u>	Submittal No. / Trans ID: <u>02200-001-001</u>	
Date Returned: <u>12/04/2024</u>	Submittal Title: <u>Odor Suppression Foam</u>	
To: Timothy Brojer McCloud Group 4709 30 th Street -Suite 602 Long Island City, NY 11101	From: Brian Gow Graves-MMA JV Architects, PLLC 3297 Route 66, Studio B Neptune, NJ 07753	<input checked="" type="checkbox"/> First Review <input type="checkbox"/> Second Review <input type="checkbox"/> Third Review <input type="checkbox"/> Fourth Review

General Comments:

- 1. Refer to engineer’s comments.

GRAVES-MMA JOINT VENTURE

REVIEWED

GRAVES-MMA JV ARCHITECTS, PLLC

3297 Route 66, Studio B
Neptune, New Jersey 07753
t: 732.918.2300 | f: 732.918.2351

CLIENT: NYC SCA
LLW#: 127569 & 132059
MMA No.: 105-21-003



Environmental, Planning, and Engineering Consultants

440 Park Avenue South
7th Floor
New York, NY 10016
tel: 212 696-0670
fax: 212 213-3191
www.akrf.com

Transmittal

To:	Mike Sherwood	From:	Rebecca Kinal/ Adrianna Bosco
Company:	NYCSCA	Date:	December 4, 2024
Address:	25-01 Jackson Avenue Long Island City, NY 11101	Project Number:	241090
Job Title:	Harbor MS – Brooklyn (K680)		
	LLW#: 132059		

We have enclosed the following:

☐ Report ☐ Specifications ☐ Drawing(s) ☐ CD/DVD ☒ Contractor Submittals

- Tank Closure Plan (02115-001-00) – **No Exceptions Taken**

Sent Via:

☐ Messenger ☐ U.S. Mail ☐ Federal Express ☒ Email



Environmental, Planning, and Engineering Consultants

440 Park Avenue South
7th Floor
New York, NY 10016
tel: 212 696-0670
fax: 212 213-3191
www.akrf.com

Memorandum

To:	Mike Sherwood	From:	Rebecca Kinal / Adrianna Bosco
Company:	NYCSCA	Date:	December 4, 2024
Project No.:	241090	Phone No.:	914.922.2362 / 646.388.9576
Re:	Harbor MS – Brooklyn (K680)		
	Review of Odor Suppression Foam – No Exceptions Taken		

AKRF, Inc. (AKRF) has reviewed the Odor Suppression Foam submittal prepared by National Environmental Safety Company, Inc. (NESCO) for K680 (the “Site”), located at 46 Verona Street, Brooklyn, NY 11231. The Odor Suppression Foam submittal is dated October 19, 2024 and was received by AKRF on November 27, 2024. The submittal provides a technical data sheet for odor control foam, Atmos Shield 645 and pneumatic foam unit NTC/8. The submittal has been stamped “No Exceptions Taken.”

The Contractor should note the following:

- The Contractor shall have all materials, products, equipment and accessories required for implementing odor control measures on-site at the start of work
- The Contractor should apply odor suppression measures as directed by the NYCSCA IEH representative and in accordance with specification sections 02090 and 02222.

AKRF’s review was limited to verifying submittal requirements in NYCSCA standard specification section 02115. The comments above are intended only to provide clarification regarding the submittal. The comments should not be construed in any way as intent to limit the Contractor’s responsibilities. The absence of a comment with respect to a specific contract requirement should not be interpreted as a suggestion to change a contract requirement.



900 3rd Avenue
New Hyde Park, NY 11040
Ph : 718-361-0044

Submittal

Job: 6387
K680
46 Verona Street
Brooklyn, NY

Spec Section No: 02200
Submittal No: 001
Revision No: 0
Sent Date: 11/19/2024

Spec Section Title:

Submittal Title: Odor Suppression Foam

Contractor:

National Environmental Safety Co.

Contractor's Stamp

McCloud Group, The

Architect's Stamp

Engineer's Stamp

AKRF Inc. 440 Park Avenue South, New York, NY 10016	
<input checked="" type="checkbox"/>	NO EXCEPTIONS TAKEN.
<input type="checkbox"/>	MAKE CORRECTIONS NOTED.
<input type="checkbox"/>	REJECTED: REVISE AND RESUBMIT.
<input type="checkbox"/>	REJECTED: NOT ACCEPTABLE FOR REVIEW.
<input type="checkbox"/>	NO ACTION TAKEN.
By: A. Bosco	Date: 12-04-2024
This review does not relieve the contractor or any subcontractor of responsibility for full compliance with contract requirements; for correctness of dimensions, clearances, and material quantities; for proper design of details; for proper fabrication and construction techniques; for proper coordination with other trades; and for providing all devices required for safe and satisfactory construction and operation.	

Atmos Shield 645

The Odor Control Foam

Atmos Shield 645 foam concentrate produces a thick, long lasting foam barrier for immediate suppression of dust, odors, and volatile organic compounds (VOCs). Atmos Shield 645 provides superior emissions control for a period of up to 24 hours. It has been specified for use at Superfund and other hazardous waste sites across the United States and Canada. The product is designed for use exclusively in Atmos Technologies' Pneumatic Foam Units.



Features

- Zero PFOS / PFAS
- Biodegradable
- Non-Hazardous
- Non-Reactive
- Use at any ambient temperature

Benefits

- Immediate setup & control of VOCs
- Requires only water dilution
- Vary duration with dilution level
- No clean-up
- Will not add to soil volume

Applications

Primary applications for Atmos Shield 645 is for control of odors, VOCs, and dust during active excavation and for overnight coverage of contaminated soils at hazardous waste sites. Wintergreen or vanilla can be added to customize the scent.

The product can also be applied on liquid surfaces, such as lagoons and retention ponds.

PNEUMATIC FOAM UNIT NTC / 8

Atmos Technologies' most compact and portable foam generating system designed for small remediation applications. The NTC/8 can be mounted on the tongue of most standard air compressors and can be drum or auxiliary tank fed.



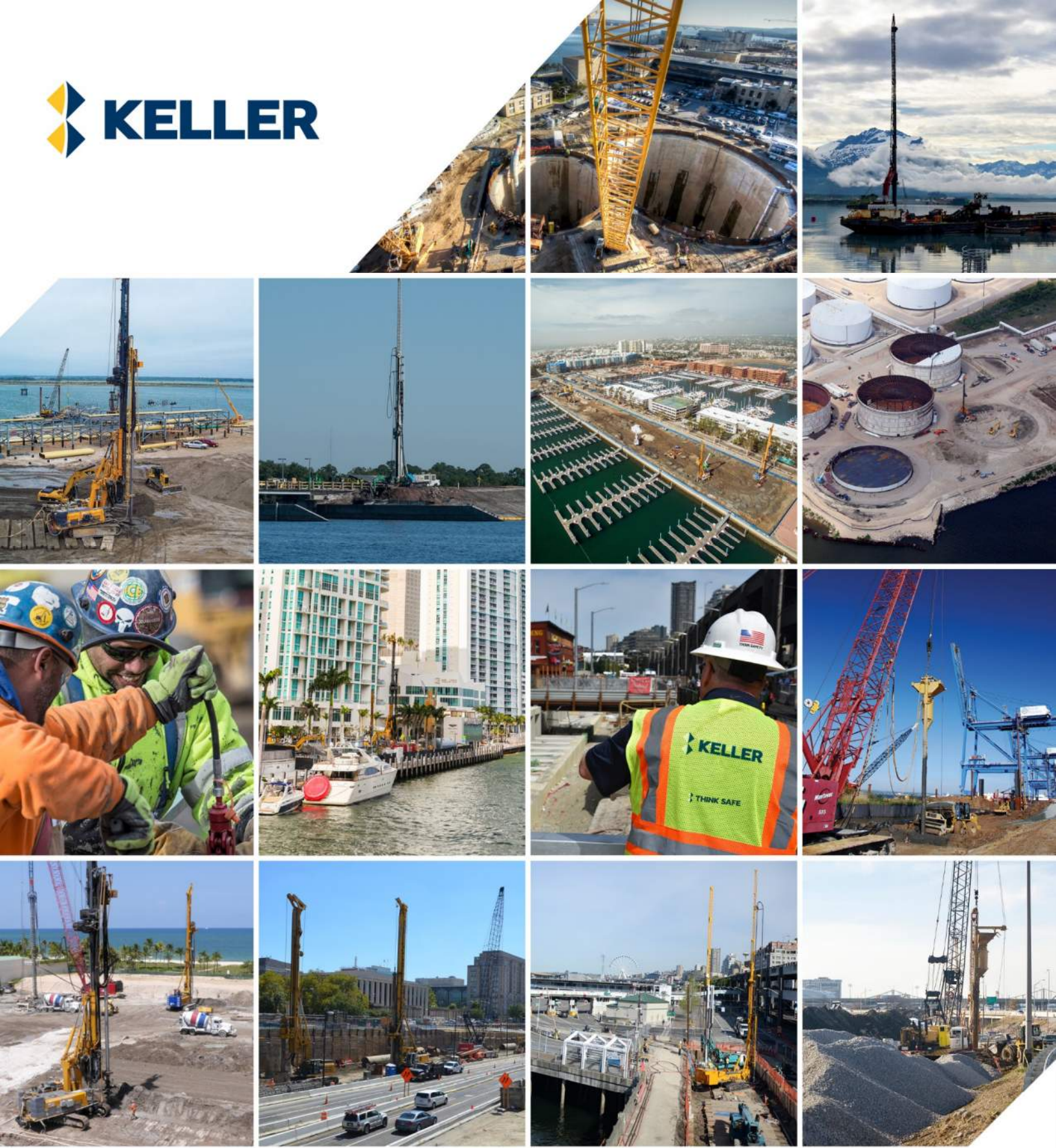
This system is completely air driven and comes equipped with pump, foam generator, hose and pick-up tube. The unit requires a source of compressed air.

Features

- Simple to operate
- Minimal clean-up after use
- Remote control for one person operation
- Durable, rugged construction
- Electrical system is powered by a 12 volt battery
- Minimal preparation

Specifications

- Coverage Rate.....90 Sq. Ft./Min. @3" depth
- Compressed Air Required.....120 CFM @ 100 PSI
- Size.....36"L x 23"W x 26"H
- Weight.....375 Pounds
- Hose.....100 Feet of 1" Diameter
- Products.....AC-645 and All AC-900 Series Long Duration Foam



Global strength and local focus