Addendum No. 3 to IFB 21-41

CITY OF SOMERVILLE, MASSACHUSETTS
Department of Purchasing
JOSEPH A. CURTATONE
MAYOR

To: All Parties on Record with the City of Somerville as Holding
IFB 21-41 Conway Park Remediation and Renovation Project

From: Thupten Chukhatsang

Date: 2/22/2021

Re: Questions and Clarifications
Attachment: 1. Musco Pole Foundation Plans C1 and C2.

Addendum No. 3 to IFB 21-41

Please acknowledge receipt of this Addendum by signing below and including this form in your proposal package. Failure to do so may subject the proposer to disqualification.

NAME OF COMPANY / INDIVIDUAL: _____

ADDRESS:_____

CITY/STATE/ZIP:_____

TELEPHONE/FAX/EMAIL:_____

SIGNATURE OF AUTHORIZED INDIVIDUAL:_____

ACKNOWLEDGEMENT OF ADDENDA:

Addendum #1 _____ #2 _____ #3_____ #4 _____

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The following clarifications, modifications, deletions, and additions are hereby incorporated into and become part of the Contract Documents.

QUESTIONS AND CLARIFICATIONS

Question 1: The specifications include Section 01 14 19.13, Temporary Bypass Pumping System. This section contains some blanks and refers to existing stream beds and an existing culvert. Please clarify what stream and culvert that this system should be used and if this is only for the work performed by the EPA.

Response: Bypass pumping is not in the contractor's scope of work.

Question 2: Drawing Sheet L1.10 calls for a 6 foot temporary fence and the specification section 01 56 26, Paragraph 2.01.A calls for an 8 foot temporary fence, which is correct?

Response: Temporary construction fence shall be 6-foot height as shown on Sheet L1.10

Question 3: The IFB has different Estimated Contract Completion dates as follows:

Page 2 – Key Dates
Est. completion Date 11/01/2023

Page 3 – Key Project Information
Date of Substantial Completion – 12/17/2021
Date of Final Completion – 4/29/2022
Est. Contract Completion Date – 11/1/2023

Page 12 – 1.2 Bid Schedule
Est. Contract Completion Date – 11/1/2023

Page 22 – Project Schedule
Date of Substantial Completion – 12/17/2021
Date of Final Completion – 4/29/2022

What is the correct Substantial and Final Completion Dates?

Response: The schedule-related dates in the front end are clear and consistent. The date of substation completion is 12/17/2021, the date of final completion is 04/29/2022, and the estimated contract completion date is 11/01/2023. Bidders should note that the contract completion date extends beyond the final completion date because of the two-year vegetation establishment period that the contractor will be responsible for (referenced in section 32 90 00 - Trees, Shrubs, Groundcovers and Landscaping). The precise dates for each phase is flexible and will vary based on final contract award date and the contractor's intended timeline for mobilization. However, bidders should note that, per spec section 01 12 16 – Scope and Sequence of Work: "Contractor shall assume up to 3 months will be required to complete the Phase 2 scope of work. EPA contractor shall give Contractor 2 weeks' notice of anticipated demobilization date (Phase 2 end date) and the Contractor shall be expected to remobilize for Phase 3 activity within two weeks of Phase 2 end date." Per section 01 33 23 – Submittals, the contractor shall submit for approval a detailed project schedule prior to the start of construction activity.

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Question 4: Please tell us exactly where any excess topsoil from the site is to be disposed (facility type) as the basis of bid.

Response: According Section 02 61 00 all surplus excavated materials shall be transported for off-site disposal at an out-of-state landfill or treatment facility, which is permitted to accept PCB Remediation Waste with concentrations less than 50 mg/kg. As identified in Section 02 61 00 1.01 A, the EPA is responsible for excavating, removing, and backfilling remedial excavations for the removal of materials with PCB concentrations greater than 50 mg/kg.

Question 5: Is the fence at the rear of the site to be painted? This is a galvanized fence. Please clarify.

Response: Yes, the fence in the rear and the total extents of the picket fence on the eastern property limits is to be painted.

Question 6: What company is the manufacturer of the existing play equipment?

Response: The manufacturer of the existing play equipment is Playground Environments, which we understand is no longer in business. The playground was installed in the early 2000s.

Question 7: What company is the manufacturer of the decorative fence at the front of the project?

Response: The decorative fence at the front of the project is a custom fabricated fence. The manufacturer is unknown.

Question 8: Are the (2) park regulation signs to just mount to the fence? – we assume these are listed in spec 124000-2.01 G.

Response: Yes, the two (2) park regulations signs will be located to a fence or of an equal mounting type. Location is to be determined by Owner. Three (3) signs to be mounted to pedestals per detail 5/L5.09

Question 9: We can see a faint outline of the PIP surfacing on L1.21 – please confirm these limits shown include any roll down? If it does not please reflect on the plans.

Response: The limits of the PIP surfacing represented on L1.21 do not reflect the limit of the roll down below the fibar mulch. Limit of roll down edge shall extend 18-inches per detail 6/L5.03.

Question 10: Please provide a basis of bid fall height the PIP surfacing should meet.

Response: PIP surfacing shall be 4-inch minimum depth as basis of bid for fall height per detail 5/L5.03

Question 11: Are the asphalt and concrete materials from the existing site subject to any disposal restrictions?

Response: Asphalt and concrete, excluding the excavated materials as defined in Section 02 61 00, shall be handled in accordance with the local and state regulations**.**

Question 12: Are the plant materials to be demolished from the site subject to any disposal restrictions?

Response: Above ground vegetation is not subject to the requirements of TSCA or MCP; however, the below ground stump and root balls shall be handled in accordance with Section 02 61 00.

Question 13: Have all utilities been notified of this project and have all work orders and utility engineering been completed?

Response: Yes, all utilities have been notified and work orders and utility engineering has been completed.

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Question 14: Please provide a basis of bid invert C out for the new DMH #7 in Somerville Ave. Assuming this is the 60" pipe. Please clarify.
Response: Basis of bid invert C (out) at DMH #7 is elevation 11.3

Question 15: Please clarify Inverts A & B for DMH #7 – are these the new 6" and 12" pipes?
Response: Yes, Inverts A & B at DMH #7 are for the new 6" and 12" pipes accordingly**.**

Question 16: Please clarify the type of pad to be used for the synthetic turf system specified.
Response: Shock pack shall be SP-17™ by Brock® and as supplied by Brock International, Boulder CO 80301, ShockWwave Ecobase, www.nottssport.co.uk, UltraBaseMAX, www.ultrabasesystems.com, or approved equal.

Question 17: Please provide the project specific Stormtech design for the project.
Response: Basis of design for bid is the Stormtech 3500 chamber system or approved equal per sheet L1.40 and detail 1/L5.01.

Question 18: Can you provide the existing play equipment manufacturer?
Response: See response to Question #6.

Question 19: What is the age of the existing play equipment?
Response: See response to Question #6.

Question 20: Can you provide three approved manufactures for refurbishing the existing play equipment?
Response: No. The original manufacturer is no longer in business. The refurbishment is based on a means and methods as described in the specifications Sections 05 50 00 – Misc. Metals and Section 09 90 00 – Painting.

Question 21: Two different shock pads are called out in the spec: Page 433 says ProPlay-Sport20 manufactured by Schmitz and page 437 in spec says SP1-17 by brock. Please clarify.
Response: See response to Question #16.

Question 22: The two additional acceptable polypropylene shock pad products are ShockWwave Ecobase and UltraBaseMAX. Both companies have indicated they cannot meet the spec and will not be providing a quote. Can you provide other approved equal manufacturers and products?
Response: We reached out to the manufacturer's as of 02/18/2021 to determine why they believe they are not able to meet the specification. They indicated they can meet the specification.

Question 23: Please read all the dates in the front end of your documents. They have various completion dates in the inserts. See pages 2, 3, 12 & 22. All need to match and please include expected phasing dates. There are 4 phases according to the docs. We need to know what is the date Phase 1 is to be completed? What date Phase 2 is to be started and completed by EPA? And what date Phase 3 & 4 are to start and be completed? Some of the preliminary schedules seem to be missing items and dates.
Response: See response to Question #3.

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Question 24: Please provide an itemized list of all components of the playground to be disassembled, categorized, painted and reassembled on site.

Response: An itemized list will not be provided. Per Specification Section 09 90 00, Part 1, Item 1.01.A: "All equipment, hardware, bolts, accessories, chains, etc. shall be identified and cataloged for reassembly following refurbishment."

Question 25: Please confirm if the EPA's proposed geofabric to be installed during Phase 2 is to encompass soils greater than 50 ppm or the entirety of the site.

Response: The geofabric shall encompass all soils within the entirety of the site unless otherwise indicated on plans or within the specifications.

Question 26: Please confirm exact limits of topsoil stripping. Is this to include the area designated as remediation by the EPA?

Response: For confirmation, the entire site, including the designated area of EPA work shall be stripped of topsoil.

Question 27: Item 16 of the Scope and Sequence of Work states to coordinate with Comcast, Verizon & RCN for the temporary relocation of overhead communication lines. Who is responsible for carrying the associated cost for the work to be performed by the various communication companies?

Response: The utility companies are carrying the associated cost associated with temporary relocation of overhead communication lines. Contractor is responsible for purchase and installation of the new utility pole and associated conduits, pull strings, trenching, pull boxes, and all necessary to allow for the various utility companies to relocate (temporary and permanent) the communication lines.

Question 28: Drawing ED100, calls for a new pole to be provided and installed in the SW corner of the proposed field. Which of the 3 utility companies (Comcast, Verizon & RCN) is to provide the utility pole?

Response: Contractor is to furnish and install a utility pole.

Question 29: Please confirm that at a minimum the site superintendent is required to be on site while Phase 2 work under the EPA's direction is being undertaken since the Contractor is responsible for maintenance and upkeep for the incidental items as described under Phase 2 (separate from the EPA's scope of work).

Response: The site superintendent is not required to be on site, but available by telephone as needed.

Question 30: Please confirm that the EPA's Contractor will be only be on site for work relative to the remediation of PCB impacted soils greater than 50 ppm.

Response: For confirmation, EPA's contractor will only be on site for work relative to remediation of PCB impacted soils greater than 50 ppm.

Question 31: Please confirm that additional soil sampling and analysis will be performed by the EPA to confirm removal of all PCB impacted soils of 50 ppm or greater prior to the Contractor remobilizing for Phase 3 scope of work.

Response: For confirmation, the additional soil sampling and analysis will be performed by the EPA to confirm removal of all PCB impacted soils of 50 ppm or greater prior to the contractor remobilizing for Phase 3 and 4 scope of work.

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Question 32: Please provide the water usage rate to be charged to the Contractor during the contract, if applicable.

Response: Water usage rates will be subject to minimum usage billing at the end of the usage period, at the then-current commercial billing rates. Contractor shall provide City of Somerville meter to monitor usage. Contractor shall provide water unit price on unit price bid form.

Question 33: It cannot be determined how much water the EPA will use during Phase 2, and if the Contractor is to pay for the water (Specification Section 01 52 13, Paragraph 1.07.B), it cannot be determined how much cost to carry for the water used by the EPA. Will the water fee be waiver by the City of Somerville during this time? If not, please provide an amount of water that will be used by the EPA.

Response: See response to Question #32.

Question 34: Specification Section 01 52 13, Paragraph 1.07.A mentions that the Contractor is to provide all piping for the EPA's use. Please provide drawings/details of the piping to be provided to the EPA.

Response: Contractor is responsible for obtaining necessary permits and meeting the requirements for piping of the permit for hydrant use and install a City of Somerville meter. Contractor is responsible for installing the piping per permit requirements.

Question 35: Section 3.09 calls for the Contractor to arrange for a qualified service representative from the company manufacturing or supplying certain equipment to perform post installation inspection prior to operation. Since the equipment under this contract is to be refurbished, please provide a list of all manufacturers for the existing playground equipment to be reinstalled after removal.

Response: For clarification, contractor shall hire a third party CPSI (Certified Playground Safety Inspector) inspector to perform installation inspection prior to operation. The exiting playground manufacturer is no longer in business.

Question 36: Contract documents include section 01 14 19.13 Temporary Bypass Pumping System. The specification calls for the Contractor to design and supply a bypass pumping system, but it is not made clear what we are bypassing as a blank line exists not stating the type of liquid (i.e. drainage, sewer). Further, under design requirements a flow rate is not provided and left blank and on page 01 14 19.13-4 it is called out under Performance Requirements that the system is to "intercept the river flow" and "return it to the existing stream bed." The site is well above the existing water table (10'-15' BGS) and the proposed drainage is a combination perforation drain/cultic system. Please confirm that a temporary bypass system is not required under this contract.

Response: See response to Question #1

Question 37: Is the EPA office trailer provided by the Contractor only for the 3 months of Phase 2? If it is to be onsite longer than the 3 months, please provide a duration.

Response: Contractor shall provide trailer for entire duration of the project, not including the 2-year plant maintenance and warrantee period.

Question 38: Please confirm that the Contractor is not to provide an office trailer for the City of Somerville.

Response: For confirmation, the contractor is to provide one (1) trailer for both EPA and City of Somerville. No additional trailer required for the City of Somerville.

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Question 39: Please provide the estimated volume of material to be hauled off site under Phase 2 by the EPA.
Response: It is estimated to be approximately 2,250 CY.

Question 40: Please provide the estimated depths of excavation (below ground surface) under Phase 2 to better gauge the level of dewatering (if any).
Response: Estimated depth of excavation approximately 13-ft below grade.

Question 41: Contract Specification 02 61 00-11 calls for the Contractor to stockpile all material to be disposed of off-site under Phases 1, 3 & 4 in no greater than 250 CY yet the material to be stockpiled for the EPA's reuse appears to be unlimited. Given the site is not a large site and that all areas of the site will be impacted at one time, please consider revising the stockpiling requirement for efficient usage of the site while earthwork, stockpiling, soil analysis and approval from disposal facilities is ongoing.
Response: Increase from 250 CY to 500 CY, but it is the contractors to construct and maintain each stockpile in accordance with the contract specifications and including dust control requirements.

Question 42: Will a NPDES permit be required prior to discharge under this contract?
Response: A NPDES permit is not required.

Question 43: Please confirm if reinforcement under this contract is to be epoxy coated or plain steel.
Response: For confirmation, all reinforcement under contract shall be epoxy coated.

Question 44: Please confirm the length of the proposed seat wall mockup is to be 6 feet in length.
Response: For confirmation, the length of proposed seat wall mock-up shall be 6-feet minimum length per note #1, detail 2/L5.02

Question 45: Please confirm that the first 2 courses of proposed retaining wall blocks are to be below finish grade.
Response: Two (2) courses of retaining wall blocks are the basis of design. Should the submitted and approved designed, engineered, and stamped segmental block system indicate that two courses are not required, the Owner's Representative may alleviate the contractor of that requirement.

Question 46: Contract documents call out the Musco light system for the stadium lighting under this contract. Four poles will be 60' tall and 4 poles are to 70' tall. The detail on sheet E501 depicts a generic pole foundation standard for Musco supplied sports lighting yet there are no dimensions with respect to the depth of foundation and diameter. Contract specification section 26 56 58 – 6 calls for the design of the foundation drawings to be submitted at the time of bid to allow for accurate pricing. Please provide parameters to accurately price the foundation installation/excavation for the Musco lighting system (depth of foundation, diameter, and weight of precast foundation).
Response: Refer to attachment: Musco Pole and Foundation Plans C1 and C2 included herein.

Question 47: Please provide as-builts of existing retaining wall proposed to be removed in its entirety. If as-builts cannot be provided, please provide estimated overall height of the structure.

Response: There are no as-builts for the existing retaining wall to be proposed in its entirety. Refer to Appendix A. Retaining Wall Replacement Memo.

Question 48: Please clarify if the Contractor owns watering trees on site for a 2 year duration after completion of the project along with temporary fence to be installed and maintained for 2 years and during the water and plant establishment period. This will go considerably past the anticipated contract completion date.

Response: This is correct. The maintenance and establishment period extends beyond the anticipated completion date.

Question 49: Please confirm that any required castings for the project shall be labeled "SOMERVILLE DRAIN" not "FRAMINGHAM DRAIN" as listed under section 33 39 13-5 Precast Manholes and Catch Basins.

Response: Any required castings for the project shall be in City of Somerville standards.

Question 50: Specification Section 01 57 19, paragraph 3.06.A indicates that additional catch basin protection not shown on the plan may be required by the Engineer. Please provide an additional quantity of silt sacks to be provided in the lump sum price.

Response: Contractor shall assume up to 10 additional silt sacks included in their lump sum price.

Question 51: Please provide the required flow rate of the dewatering treatment system that is to be provided by the Contractor to the EPA for their use.

Response: Contractor shall estimate the flow required based on the information provided.

Question 52: If the Contractor is to pay for the maintenance of the dewatering system during the EPA's use, it cannot be determined how much treatment materials will be required to be provided and disposed. Please provide unit rate payment items for the supply and disposal of these items.

Response: Contractor is to make own estimate of material use and disposal costs required to meet specifications. Contractor shall provide lump sum price as bid item 4 on unit price sheet to be included in the bid form submission.

Question 53: During the EPA's use of the dewatering system, will they or the City of Somerville be the responsible party to make sure that all water discharge is within the acceptable limits? Will the EPA perform all the discharge water sampling?

Response: Per specification Section 02 71 00, 1.101, C, EPA is responsible for performing the sampling of the discharge water.

Question 54: Please clarify which type of sports netting the City wants, as the products listed vary greatly.

Response: For clarification, basis of design shall be pole-to-pole tension netting system, 6.625" x 0.280" single piece steel posts with welded attachment tabs, 30-FT. height above finished grade with black powder coat finish. Netting shall be, 4 ply ultra-cross dyneema knotless UHMWPE netting, 1 ¾" square mesh with sewn rope binding on perimeter edges. or approved equal.

Question 55: Please confirm the height of the sports netting is 20ft.

Response: For confirmation, sports netting shall be 30-ht. per specification Section 11 66 00 – Athletic Equipment, section 2.01.E

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Question 56: Is sports netting to be a tensioned system?
Response: Yes, the sports netting is to be a tensioned system per specification Section 11 66 00 – Athletic Equipment, section 2.01.E

Question 57: What diameter and types of poles does the City want?
Response: For clarification, netting system requires 6.625-inch dia. single piece steel posts with welded attachments and black powder coat finish.

Question 58: What type of actual netting does the City want? Knotted nylon #36 or Knotless Dyneema?
Response: For clarification, netting system shall be UltraCross Dyneema netting per Section 11 66 00 – Athletic Equipment, section 2.01.E.

Question 59: Please provide a linear footage of portable outfield fencing we are to provide to the City.
Response: For bidding purposes only, contractor shall provide 365-LF of outfield fencing. Contractor shall verify exact length in field.

Question 60: Please clarify what type of portable outfield fencing the City wants, as the products listed vary greatly.
Response: Basis of design shall be Model # SFPT4, Seasonal Fence System, with free-standing base as manufactured by Sportsfield Specialties, Inc. 41155 State Highway 10, PO Box 231, Delhi, NY 13753 (888) 975-3343, www.sportsfieldspecialties.com or approved equal.

Question 61: Please clarify what type of portable pitchers mounds the City wants, as the products vary greatly.
Response: Basis of design shall be Model # PPLLBIT, Brown Synthetic Infill Turf as manufactured by Sportsfield Specialties, Inc. 41155 State Highway 10, PO Box 231, Delhi, NY 13753 (888) 975-3343, www.sportsfieldspecialties.com or approved equal.

Question 62: How many portable pitcher's mounds are we to supply?
Response: Contractor shall provide two (2) total pitcher's mounds.

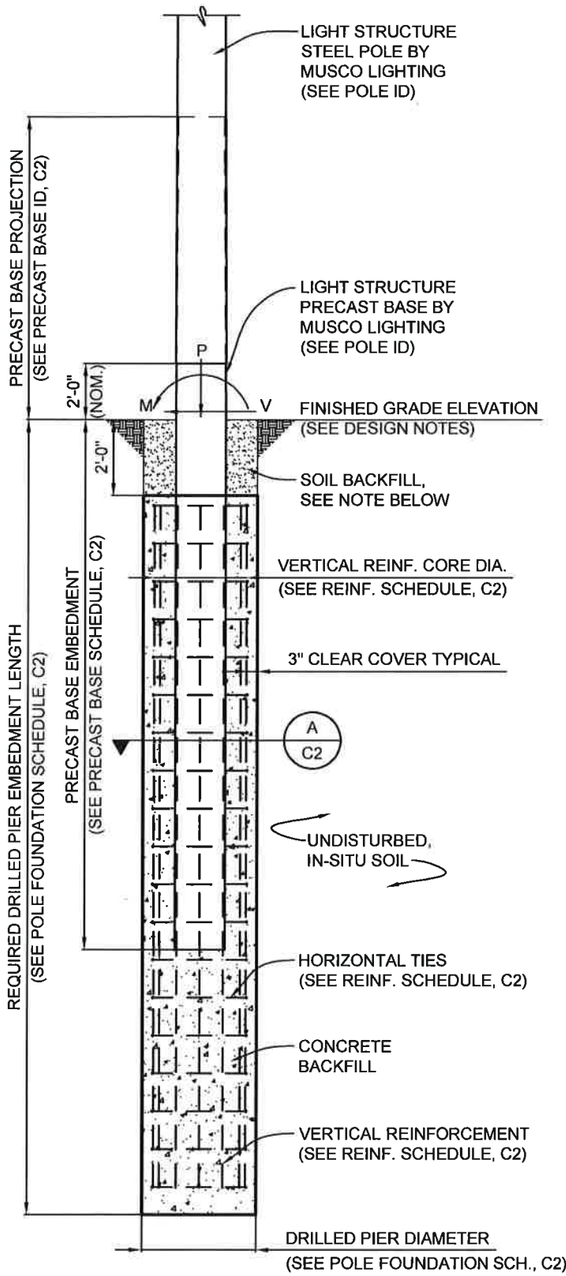
Question 63: Is the Unit price area on the Bid Form in section 4.0 to represent our entire bid?
Response: Yes.

For clarification: Specification Section 12 40 00-Sit Furnishings, Section 2.01.A-Backed Benches: ADD Item D. Model # 870 (backed bench with side armrests) with metal slats, wall mount bench as manufactured by Maglin Site Furniture, 3-468 Innovation Way, 999 18th Street, Suite 3000, Denver CO 80202 (800) 716-5506, www.maglin.com

Attachments:

1. Musco Pole Foundation Plans C1 and C2.

END OF ADDENDUM NO. 3



POLE FOUNDATION ELEVATION

SCALE: NOT TO SCALE

SOIL BACKFILL NOTE:
THE TOP TWO FEET OF ANNULUS SHALL BE BACKFILLED WITH SOIL, WITH A CLASSIFICATION OF CLASS 5 (TABLE 1806.2) OR BETTER. COMPACTION, 95% FOR COHESIVE SOIL AND 98% FOR A COHESIONLESS SOIL BASED UPON STANDARD PROCTOR TESTING (ASTM D698).

POLE IDENTIFICATION

POLE DESIGNATION	POLE TYPE	PRECAST BASE TYPE	FIXTURE CONFIGURATION (FIX. PER XARM)	FIXTURE AND ACCESSORIES EPA (FT^2)
A1 - A4	LSS60A	2B	4 (3)	11.1
B1, B4	LSS70C	4B	6 (5)	17.0
B2, B3	LSS70C	4B	7 (6)	15.6

- EACH POLE HAS (1) MUSCO LED FIXTURE AT 15'-6" INCLUDED IN SCHEDULE.

CONCRETE/REINFORCEMENT NOTES

CONCRETE SHALL COMPLY WITH THE FOLLOWING ASTM STANDARDS:
MIXTURE WITH ASTM C-94, PORTLAND CEMENT WITH ASTM C-150 TYPE 1-A, AGGREGATES (0.75" MAX) WITH ASTM C-33 AND BE IN CONFORMANCE WITH ACI 318.

CONCRETE SHALL BE AIR-ENTRAINED (COMPLY WITH ASTM C-260), HAVE A MAXIMUM WATER -CEMENT RATIO, w/cm = 0.45 AND HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 4,500 PSI.

DESIGN SLUMP LIMITS ARE 4" MINIMUM AND 6" MAXIMUM. THE JOB SITE SLUMP MAY BE INCREASED BY THE USE OF A WATER REDUCING AGENT MEETING ASTM C494-92.

CONCRETE REINFORCEMENT SHALL COMPLY WITH ASTM A615 GRADE 60 AND BE IN CONFORMANCE WITH ACI 315 & 318.

CONCRETE DRILLED PIERS MUST ATTAIN 3,000 PSI STRENGTH PRIOR TO POLE INSTALLATION AND FIXTURE MOUNTING.

THE DEPTH EQUAL TO THE PRECAST BASE EMBEDMENT SHALL BE THOROUGHLY CONSOLIDATED BY MECHANICAL VIBRATION DURING PLACEMENT.

INSTALLATION NOTE:
CONCRETE TO BE PLACED IN A CONTINUOUS POUR OR A COLD JOINT WILL BE ACCEPTABLE AT THE BOTTOM OF THE PRECAST BASE. TWO POUR: WITH THE REINFORCEMENT IN PLACE, THE CONCRETE BELOW THE BOTTOM OF THE PRECAST BASE MAY BE POURED AND ALLOWED TO SET UP LONG ENOUGH TO SUPPORT WEIGHT OF PRECAST BASE. THEN THE PRECAST BASE MAY BE SET IN PLACE AND THE REST OF THE CONCRETE CONCRETE BACKFILL POURED. DEPENDING ON THE DEPTH TO GROUND WATER AT THE TIME OF INSTALLATION, THE TWO POUR METHOD UTILIZING A COLD JOINT MAY NOT BE FEASIBLE.

DESIGN NOTES

DESIGN PARAMETERS:
WIND: V_{ult} = 127 MPH, V_{asd} = 98 MPH (EXPOSURE C, RISK CATEGORY II) PER MASSACHUSETTS STATE BUILDING CODE - 780 CMR, 9TH EDITION (IBC 2015 / ASCE 7-10).

GEOTECHNICAL PARAMETERS:
ALLOWABLE END BEARING SOIL PRESSURE: 3,000 PSF (NATIVE SANDS)
ALLOWABLE LATERAL SOIL BEARING PRESSURE:
0 PSF/FT (GRADE TO -2'-0"); PER REFERENCED GEOTECH REPORT (BELOW -2'-0")
IN ACCORDANCE WITH MASSACHUSETTS STATE BUILDING CODE - 780 CMR, 9TH EDITION, CHAPTER 18.

DESIGN SOIL PARAMETERS ARE AS NOTED. ACTUAL ALLOWABLE SOIL PARAMETERS MUST BE VERIFIED ON SITE. REFERENCE SOILS AND FOUNDATION REPORT, NO. 2170709, PREPARED BY WESTON & SAMPSON; READING, MA.

A GEOTECHNICAL ENGINEER OR REPRESENTATIVE OF IS RECOMMENDED (NOT REQUIRED) TO BE AVAILABLE AT THE TIME OF THE FOUNDATION INSTALLATION TO VERIFY THE SOIL DESIGN PARAMETERS AND TO PROVIDE ASSISTANCE IF ANY PROBLEMS ARISE IN FOUNDATION INSTALLATION.

ENCOUNTERING SOIL FORMATIONS THAT WILL REQUIRE SPECIAL DESIGN CONSIDERATIONS OR EXCAVATION PROCEDURES MAY OCCUR. POLE FOUNDATIONS WILL NEED TO BE ANALYZED ACCORDING TO THE SOIL CONDITIONS THAT EXIST. IF ANY DISCREPANCIES OR INCONSISTENCIES ARISE, NOTIFY THE ENGINEER OF SUCH DISCREPANCIES. FOUNDATIONS WILL THEN BE REVISED ACCORDINGLY. REVISIONS WILL BE ANALYZED PER RECOMMENDATIONS DIRECTED BY A LICENSED ENGINEER.

ALL EXCAVATIONS MUST BE FREE OF LOOSE SOIL AND DEBRIS PRIOR TO FOUNDATION INSTALLATION AND CONCRETE BACKFILL PLACEMENT. TEMPORARY CASINGS OR DRILLERS SLURRY MAY BE USED TO STABILIZE THE EXCAVATION DURING INSTALLATION. CASINGS MUST BE REMOVED DURING CONCRETE BACKFILL PLACEMENT. CONCRETE BACKFILL MUST BE PLACED WITH A TREMIE WHEN SLURRY OR WATER IS PRESENT WITHIN THE EXCAVATION OR WHEN THE FREE DROP EXCEEDS 6'-0".

CONTRACTOR MUST BE FAMILIAR WITH THE COMPLETE SOIL INVESTIGATION REPORT AND BORINGS, AND CONTACT THE GEOTECHNICAL FIRM (IF NECESSARY) TO UNDERSTAND THE SOIL CONDITIONS AND THE POSSIBILITY OF GROUND WATER PUMPING AND EXCAVATION STABILIZATION OR BRACING DURING PRECAST BASE INSTALLATION AND PLACEMENT OF CONCRETE BACKFILL.

GENERAL NOTES:
FIXTURES MUST BE LOCATED TO MAINTAIN 10'-0" MINIMUM HORIZONTAL CLEARANCE FROM ANY OBSTRUCTION. ENGINEER MUST BE NOTIFIED IF FOUNDATIONS ARE NEAR ANY RETAINING WALLS OR WITHIN / NEAR ANY SLOPES STEEPER THAN 3H : 1V. POLES, FIXTURES, PRECAST BASES, ELECTRICAL ITEMS AND INSTALLATION PER MUSCO LIGHTING.

COMMONWEALTH OF MASSACHUSETTS
KYLE G. LACINA
STRUCTURAL
No. 46148
REGISTERED PROFESSIONAL ENGINEER
12-29-2020

CONWAY PARK
FIELD LIGHTING
SOMERVILLE, MA

MUSCO Lighting
CORPORATE: 100 1ST AVE WEST
OSKALOOSA, IA 52577
(800) 825-6020

STRUCTURAL ENGINEERS, P.C.
114 NICHOLAS DRIVE
MARSHALLTOWN, IOWA 50158
PHONE NUMBER: 641-752-6334
EMAIL: MSL.INFO@SEPC.BIZ

DRAWING TITLE: POLE AND FOUNDATION
SCALE: SEE PLAN
NOTES: SCAN #188812G

PROJECT NUMBER 188812

DATE 24 DECEMBER 2020

DRAWING NUMBER C1
OF TWO

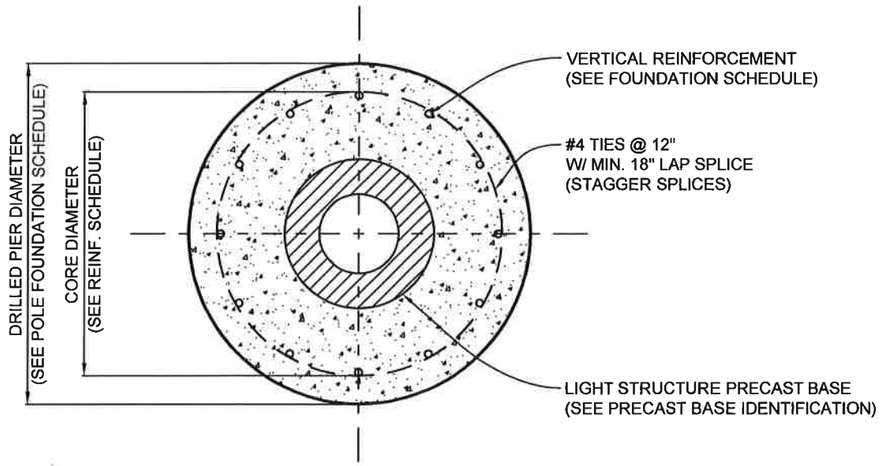
POLE FOUNDATION SCHEDULE

POLE DESIGNATION	FORCES (1.)			DRILLED PIER			REINFORCING		
	MOMENT (M) FT-LBS	SHEAR (V) LBS	VERTICAL (P) LBS	DIAMETER INCHES	EMBEDMENT DEPTH (4.)	CONCRETE BACKFILL YD^3 (2.)	CORE DIAMETER INCH (3.)	VERTICAL REINFORCING	HORIZONTAL TIES
A1, A2	40,638	1,095	1,067	36	19'-0"	4.3	29	12 - #6	#4 @ 12"
A3, A4	40,638	1,095	1,067	36	14'-0"	3.0	29	12 - #6	#4 @ 12"
B1, B4	82,762	1,849	2,091	36	19'-0"	3.9	29	12 - #6	#4 @ 12"
B2, B3	79,722	1,808	2,121	36	19'-0"	3.9	29	12 - #6	#4 @ 12"

1. ASD LOAD COMBINATION D + 0.6W.
   VERTICAL FORCE IS WEIGHT OF DRESSED POLE (DOES NOT INCLUDE PRECAST BASE WEIGHT).
2. MINIMUM CONCRETE BACKFILL VOLUME, SITE CONDITIONS MAY REQUIRE ADDITIONAL BACKFILL.
3. CORE DIAMETER EQUAL TO INSIDE DIAMETER OF TIES.
4. EMBEDMENT DEPTH LISTED IS A MINIMUM. DRILLED PIERS MUST PENETRATE 5'-0" MINIMUM INTO NATIVE SANDS. FILL DEPTH VARIES ACROSS THE SITE.

PRECAST BASE IDENTIFICATION

PRECAST BASE TYPE	PRECAST BASE WEIGHT	PRECAST BASE LENGTH	PROJECTION ABOVE GRADE	STANDARD EMBEDMENT	OUTSIDE DIAMETER
2B	1,690 LBS	17'-3"	7'-3"	10'-0"	12.00"
4B	3,490 LBS	22'-0"	8'-0"	14'-0"	15.75"
REFERENCE POLE ID TABLE ON SHEET C1 FOR POLE TO PRECAST BASE TYPES					



A PIER DETAIL
SCALE: NOT TO SCALE

COMMONWEALTH OF MASSACHUSETTS
KYLE G. LACINA
STRUCTURAL
No. 46148
REGISTERED PROFESSIONAL ENGINEER
12-24-2020

CONWAY PARK
FIELD LIGHTING
SOMERVILLE, MA

musco Lighting
CORPORATE: 100 1st AVE WEST
OSKALOOSA, IA 52577
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DRAWING TITLE: POLE AND FOUNDATION
SCALE: SEE PLAN
NOTES: SCAN #188812G

PROJECT NUMBER 188812

DATE 24 DECEMBER 2020

DRAWING NUMBER C2
OF TWO