QUESTIONS AND ANSWERS REGARDING
MSCAA PROJECT 18-1415-01
AIRFIELD SIGNAGE REPLACEMENT – CONSTRUCTION
MAY 27, 2021

1	Can the new foundations be pre-cast?
	Response: Precast foundations are acceptable for applications with new foundations surrounded by turf provided material, dimensions, arrangement, and elements of foundations comply with requirements of the contract documents. Ensure foundations are cast such that: • Top of foundation provides positive drainage away from sign and runway/taxiway. • Frangible couplings meet 3” maximum height limitations of AC 150/5340-13A and AC 150/5220-23A. • Signs are plumb and aligned with pavement geometry. • Signs are located as specified. The contractor may opt to remove and replace foundations in lieu of modifying existing foundations. This is a contractor choice and must be reflected in the cost of bid items L-105-8.3 and L-125-5.2. Quantities must remain per the contract documents. Inspection of precast foundations by RPR required upon delivery on site and installation.

2	How many existing signs are fluorescent (containing mercury)?
	Response: There are 23 existing fluorescent signs listed below. Sign # Location IJ 05-06 Y @ A IJ 05-04 A @ Y GH 05-18 C GH 05-25 A @ C GH 08-02 Y1 @ Y IJ 07-10 Y2 @ Y IJ 07-08 Y2 @ Y IJ 07-02 Y @ Y2 IJ 07-06 Y @ D IJ 07-04 D @ Y IJ 07-01 Y @ D IJ 06-01 Y IJ 06-02 Y IJ 05-07 Y @ A CD 09-03 N @ T EF 09-16 P @ P1 EF 09-15 P1 @P EF 09-19 P1 @ T EF 09-25 P2 @ T EF 09-26 P2 @ P GH 09-02 Y1 GH 07-04 Y2 GH 07-03 D
3	The drawings and specifications indicate MSCAA Proj No. 18-1415-00, however the bid solicitation is 18-1415-01. Which is correct?
	Response: The drawings and specifications should read 18-1415-01
4	Bid Sheet line item #11 L-110-5.2 reads “Flowable fill encased electrical conduit 1-way 2” C Installed under Turf.” Plan Sheet 174 details of 1-way 2” conduit in turf and does not show backfill with flowable fill. What is the requirement for flowable fill (CLSM) for 1 W 2” Conduit in Turf?
	Response: Refer to Specification L-110 for backfill requirement of conduit under unpaved turf. Refer to Specification Item P-153 Controlled Low-Strength Material (CLSM) requirements. Pay items updated in Addendum #1 to remove the words “flowable fill encased” from pay item L-110-5.2 to reflect that CLSM flowable fill is an option to the contractor for conduits in unpaved turf per L-110.

5	Plan Sheet 171 Detail Note 9 calls for "Foundation Modification shall be designed for sign to withstand 200 MPH. Design to be sealed by civil or structural engineers licensed in the state of Tennessee." On the new signs there is not a modification, what needs to be designed? The sign manufacturer supplies all hardware, signs, frangible couplings, floor flanges, and tethers designed to 200 MPH. On the modified sign bases what needs to be designed?"
	Response: Refer to sheet 170 for requirements of modified sign foundations. Foundation modifications required "to be sealed by civil or structural engineers licensed in the state of Tennessee."
6	Bid sheet line item #8 L-108-5.1 calls for #8 5KV type B cable. Plan Sheet 13 Note 60 calls for L-824 type C cable. Specification 108-2.2 calls out type C. Which type of #8 5KV cable should be used?
	Response: Sheet 003 Line Item L-108-5.1 should read "…TYPE **C** CABLE…" Refer to Addendum #1.
7	On Plan Sheet 12 Line types call out to furnish two types of trenches. 2" Sch 40 concrete encased PVC and HDPE by directional drill. Plan sheet 174 shows two types of trenches. 1W2" Conduit in Turf and 1 way 2" in paved shoulder. Is the dashed line on the proposed area Plan Sheets 75 to 133 for trench in turf concrete encased? How deep is the concrete encasement?
	Response: Drawings updated in Addendum #1 to identify conduit in unpaved turf vs P-153 CLSM encased conduit trenched through existing pavement. Details revised for conduit trenched through existing pavement (Flowable Fill CLSM encased). Refer to revised Sheet 003 for LF quantities of L-110-5.1 and L-110-5.2. Refer to revised sheet 174 for trench details and sheet 177 for directional bore details.
8	On the proposed area plan sheets 75 to 133, they show a new pull can to be installed in the paved shoulder numerous times. What kind of trench is required from the can to the turf area? Is this a cut and patch? Is this a directional bore? If this is a cut and patch is there a detail of the patch? Do we assume it is concrete encased?
	Response: Drawings updated in Addendum #1 to identify conduit in unpaved turf vs P-153 CLSM encased conduit trenched through existing pavement. Details revised for conduit trenched through existing pavement (Flowable Fill CLSM encased). Refer to revised Sheet 003 for LF quantities of L-110-5.1 and L-110-5.2. Refer to revised sheet 174 for trench details and sheet 177 for directional bore details.

9	Concerning the schedule, what are the work hours? Plan sheet 7-10 show typical examples of construction areas and how to close and barricade the area. When an area is closed off can the area be closed for an extended period of several days or does the area need to be opened nightly? Can several areas be closed off at one time?
	Response: Work hours will fluctuate daily depending on flight operations, but generally, contractor should have access to AOA daily from 8:00am-2:30pm. Mondays are generally more flexible and should allow for longer work hours. It may be possible to have multiple areas closed off at one time, but that largely depends on flight operations. Closed areas will need to be reopened at the end of each workday. Anticipate access to staging area24/7/365.
10	Are there any locations where directional bore or underground work is expected to cross underground utilities?
	Response: Refer to layout plans for known existing utilities. Refer to Sheet 013, Notes 36 through 38 and Spec Section L-104 for coordination requirements with existing underground utilities and contacting utility locating services 811 one call and FAA/MEM locating utilities. Contractor required to coordinate these efforts with the Airport RPR.
11	Who is responsible for providing and putting out barricades?
	Response: Contractor is responsible for furnishing and installing barricades.
12	Sheet 5 Staging Note 7 references the contractor providing temporary utilities to the staging area. Is there any requirement for utilities at the staging area or any other location other than those at the contractor's option?
	Response: It is the contractor’s option and responsibility to provide and install temporary utility connections to their staging and facility locations.
13	Does the contractor supply or just maintain barricades and lighted X's? If contractor supplied, are they turned over to the airport or do they remain the property of the contractor?
	Response: Contractor is responsible for furnishing and installing barricades and lighted X's.

14	Sheet 13 Note 9: There is a requirement that the Airfield Lighting Contractor shall have 3 years of experience and two past projects of 25% or greater size as this project. Do those two requirements refer to self-performed airfield electrical contracting work?
	Response: This requirement is applicable to the specific contractor performing the airfield electrical installation. If general contractor is proposing to self-perform airfield electrical work then requirement is applicable to general contractor. Contractor performing work on airfield circuits must have prior experience working with 5kV constant current airfield circuits and products.
15	Material Note 68 on Sheet 13 states that the minimum compressive strength of the concrete is 3000 psi. The P-610 states 4000 PSI. Please clarify the compressive strength requirement of the concrete.
	Response: Note 68 on Sheet 13 revised in Addendum #1 read **4000** psi.
16	Will any testing be required on the concrete in advance of the project (i.e. ASR testing)?
	Response: Refer to P-610-4.1 for Quality Assurance Requirements of P-610. Refer to P-153-4.3 for Quality Assurance Requirements for CLSM Flowable Fill.
17	The last detail note on each sheet of sign pad details states that the contractor is supposed to submit a shop drawing stamped by a registered Tennessee engineer to accommodate 200 mph wind loading. Does that mean that the details of the sign pads in the plans are suggestions and as long as the contractor suppplies a sign pad that will accommodate 200 mph wind loading, he/she can use their own design?
	Response: Dimensions and elements shown on details are considered minimum requirements. Shop drawings are subject to approval by Airport and Airport Engineer for non-conformance of minimum requirements shown on details. Contractor substitutions that deviate from detailed minimum requirements must be approved by the Airport and Airport Engineer.
18	If so, what are the other requirements for the sign pad that must be included?
	Response: Minimum sign foundation requirements are identified on sheets 170, 171, 172. Sign foundation shop drawings must be stamped by a registered Tennessee engineer.

19	What is the frost line depth at the airport?
	Response: The frost line depth in Tennessee is 12” below finished grade.
20	Please clarify the type of 2" conduit to be used in all locations within the sign foundations. There are multiple conflicts in the details on sheets 170, 171, and 172. All details show RGS between the base can and the sign. But, the details conflict on the type of conduit used when leaving the sign foundation in the multiple other directions. Some show PVC and some show RGS. As one example, the conduit leaving the base can going to the field on the Front Elevation on Sheet 171 is shown as RGS. But, Detail B on the same sheet shows the same conduit as PVC as does the Front Elevation Detail on Sheet 170 and Detail B on Sheet 170.
	Response: Conduits entering base can within sign foundations may be PVC **or** PVC coated RGS. Details on sheets 170, 171, 172 revised per Addendum #1.
21	There is a detail on sheet 174 for 1 WAY, 2" CONDUIT IN TURF. That detail shows backfill around the conduit with sand. Item 11, L-110-5.2 is for FLOWABLE FILL ENCASED ELECTRICAL CONDUIT, 1-WAY, 2"C, INSTALLED UNDER TURF. There is no line item for DEB conduit or a detail for flowable fill conduit in turf. Please clarify the installation procedure for conduit in turf.
	Response: Refer to Specification L-110 for backfill requirements. Refer to Specification Item P-153 Controlled Low-Strength Material (CLSM) requirements. Pay items updated in addendum #1 to remove the words “flowable fill encased” to reflect that CLSM flowable fill is an option to the contractor to ensure 100% compaction.
22	The Conduit in Paved Shoulder Detail says to refer to Civil Drawings for pavement construction details. On what sheet is that drawing?
	Response: Detail revised in Addendum #1 to reflect CLSM encasement extending to top of adjacent pavement.
23	Will the 2" conduit shown to be routed to the drainage structure in the Junction Base in Turf detail be paid for at the linear foot price? Also, will it be installed with the same requirements as the other conduit? If it is incidental to the line item, how much conduit per junction can should the bidder use for the bid price and what is the detail showing the procedures for joining drainage structures?
	Response: Drainage conduit is considered empty electrical conduit and payable per LF per Items L-110.

24	The junction can in paved shoulder is drawn as a two piece base can that would typically be installed during paving operations. Will there be any paving during another project that will impact this project's schedule? Or will all of this project be in existing pavement? Also, can a one piece base can be used instead of the two piece can since they would both be placed at the same time?
	Response: This project is a stand-alone project, however the contractor may require coordination with other concurrent construction projects. Two-piece base cans are required in paved areas to allow for future mill and overlay projects.
25	Should the contractor expect to hit any rock or other obstruction when trenching or during the bore?
	Response: Rock obstructions are not anticipated.
26	Airfield Grounding and Lightning Protection Note 137 on Sheet 14 states that the contractor is to drive an additional ground rod 10 feet away from the first if the original ground rod's impedence exceeds 25 ohms. In accordance with the NEC, that is a single additional ground rod. In Spec section L-111-3.2, the contractor is instructed to continue driving ground rods until the 25 ohm threshold is met. Should the contractor be prepared to drive an additional single ground rod? Or, should he/she be prepared to drive multiple ground rods to meet the 25 ohm threshold?
	Response: For bidding purposes, assume the contractor shall not be required to install more than (1) additional ground rod or (1) additional 10ft ground rod extension.
27	Has there been a history of ground rods in other projects not meeting the 25 ohm threshold?
	Response: For bidding purposes, assume the contractor shall not be required to install more than (1) additional ground rod or (1) additional 10ft ground rod extension.
28	Should the contractor expect to hit rock when driving ground rods?
	Response: Natural rock obstructions are not anticipated.

29	From the discussion during the pre-bid meeting, it seemed that the staging area is existing with all fencing in place. There are requirements in the plans for setting up plastic fencing, mowing the staging area, placing and removing stone base in stockpile areas, etc. Will there be any requirements of the contractor to create and/or demolish the staging area other than to leave the area in the same or better condition that it is in already? (With the understanding that the area should be maintained in a neat and orderly fashion during the project.)
	Response: For bidding purposes, assume the contractor must install fencing around the entire existing staging area. Contractor shall leave the staging area in the same or better condition as existing.
30	Haul Road Note 4 states that the contractor is responsible for constructing a haul road for the project. What are the specific requirements of that road to include detail cross section and length? Or, is the haul route/road already in place?
	Response: Existing paved routes are accessible to the staging area, AOA, and to / from project sites.
31	Regarding the Clearance Procedures shown in the specs in section 00802-J-1-g, it states that Clear persons to be escorted (if required) to destination. Does that mean that all contractor vehicles will be under escort by airport personnel the entire time? (No where in the list does it say badged individuals that are not on the Stop List and whose badges are not expired will have them returned to them by the gate guard.) Will the contractor have free access between the staging area work locations via the haul route during construction activities?
	Response: This project requires all contractors (prime and subs) to be airport badged, which will keep escorting to a bare minimum. Certain contractor's will be granted escorting privileges and will be allowed to escort another person or vehicle onto the AOA under certain circumstances and as approved by Airport. It is the responsibility of the person escorting to stay with the person(s) at all times while on the AOA. Requirements for exiting restricted areas can be found in section 00802, M: 1. Construction workers must exit the same gate they entered. 2. Upon exiting the restricted area, vehicles may be required to stop and all persons in the vehicle may be required to present an Airport photo identification badge to the gate guard.
32	Instruction to Bidders – Please confirm that the DBE signed letter of intent is to be submitted within 24 hours of bid opening.
	Response: The unsigned DBE Assurance Statement/Letter of Intent must be submitted at time of bid submission, but the signed copies are required withing 24 hours of bid opening.

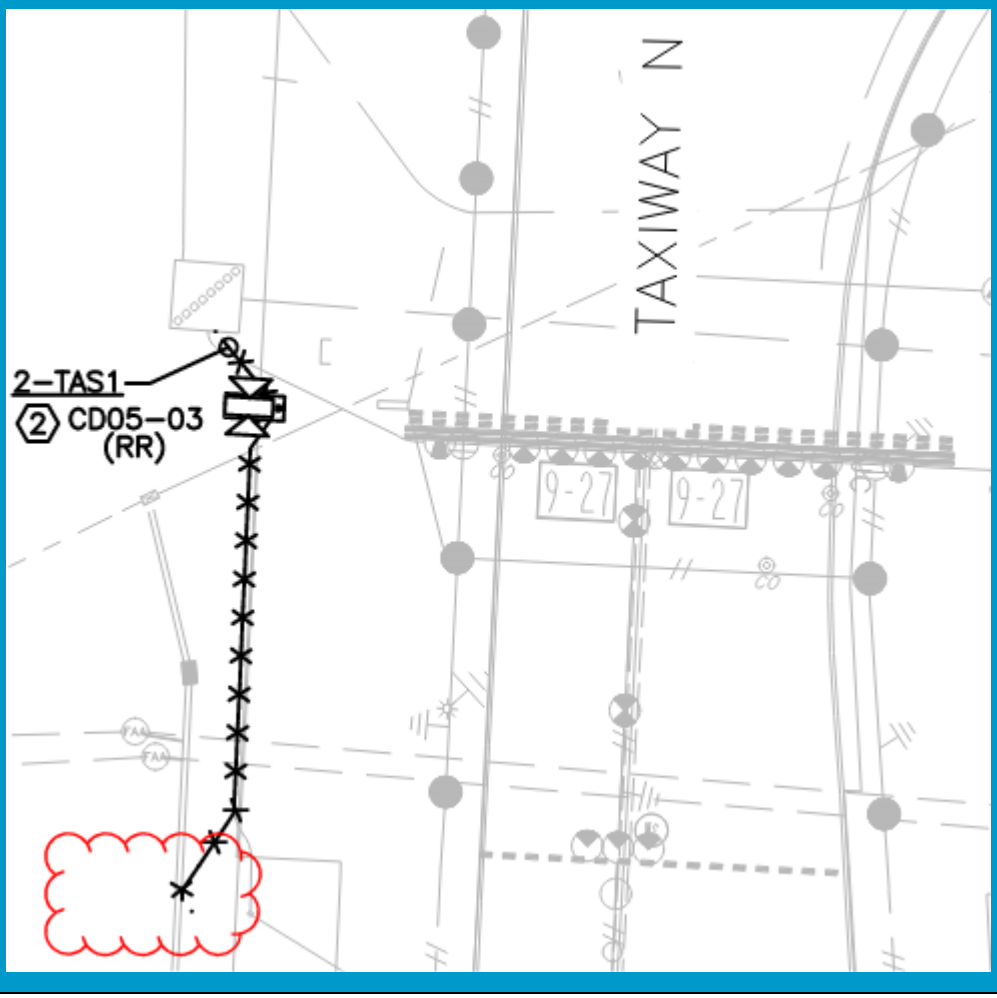
33	Proposal-Please confirm that only one (1) copy of the bid proposal form is required to be submitted.
	Response: Correct.
34	Please clarify if the contractor is expected to find hazardous substances such as asbestos, contaminated soils, etc. within the work areas.
	Response: The only hazardous substances anticipated is Mercury containing lamps within 23 existing signs.
35	Please confirm that the airport is providing and paying for the guard house and the guards at the construction gates.
	Response: The airport shall be responsible for furnishing, installing, and staffing guard house at construction gates.
36	Procurement Time – Please clarify if the current construction schedule allows for procurement time. A of now, material procurement is running between 10-12 weeks due to shortages.
	Response: The anticipated construction schedule is July 2021 through April 2022 (270 calendar days). It is anticipated that the contractor may perform investigations, site preparations, and installation of relocated foundations, while procurement of long lead materials.
37	Due to the current price fluctuations of commodities such as PVC and copper, please clarify if the airport will be including an escalator clause in the contract.
	Response: No escalation clause will be included in the contract.
38	Is the proposed staging area fenced? If not fenced, will it be required to be fenced other than the plastic safety fence?
	Response: For bidding purposes, assume the contractor must install fencing around the entire existing staging area.

39	As shown during the prebid presentation, the project construction limits extend throughout all the AOA. Please clarify if mowing of the construction area, as described in the specifications, will be required for the duration of this project.
	Response: Airport operations will be responsible for mowing of construction areas during normal operations schedule. Contractor shall coordinate construction activities with Airport Operations and RPR to avoid conflicts.
40	Section 01784 – Please clarify: a. For how long manufacturer's supervision will be required. b. Will it be required for every item on the bid or just for signs, base cans, etc.
	Response: Manufacturer supervision of installation is not anticipated for this project.
41	Notes on the airfield sign details require a structural engineer to design the new bases and the modifications of the existing bases. Please provide geotechnical information for the areas where these two types of foundations are going to be installed.
	Response: Geotechnical reports are not available for all project areas. Existing geotechnical reports that are available will be made available to the contractor upon request.
42	Please provide the Construction Safety and Phasing Plan for this project.
	Response: CSPP posted to MEM Bid / RFP / RFQ procurement website https://flymemphis.com/rfps-rfqs/bid-no-18-1415-01-airfield-signage-replacement-construction/
43	Please confirm that all work for this project will be completed during daytime regular hours.
	Response: Correct. Work hours will fluctuate daily depending on flight operations, but generally, contractor should have access to AOA daily from 8:00am-2:30pm. Mondays are generally more flexible and should allow for longer work hours. Anticipate access to staging area 24/7/365.
44	If there is any night work, please clarify which areas will be required to be worked at night.
	Response: Requirements for night work is not anticipated.

45	Please provide a tentative construction schedule for this project.
	Response: The anticipated construction schedule is July 2021 through April 2022 (270 calendar days).
46	Please provide a tentative phasing schedule for this project.
	Response: The anticipated construction schedule is July 2021 through April 2022 (270 calendar days). Refer to General Note 1 on phasing Sheet No. 007- 010. Phasing of project areas requires coordination with Program Manager, Airport Operations, and other concurrent construction projects.
47	Please clarify if the work areas will be closed to aircraft traffic until the work areas are completed.
	Response: See question 46. Typical intersection diagrams are shown on the phasing plans.
48	Please clarify if there are any moratoriums (Thanksgiving, Christmas, etc.) that restrict the areas and times that work will be allowed.
	Response: Construction moratorium is anticipated from mid-November through January 1 (New Years) due to increase in flight operations.
49	Please confirm that photometric testing of the airfield signs is not required.
	Response: In-field photometric testing is not required. Contractor responsible for providing and FAA listed products meeting FAA Advisory Circular requirements that are manufacturer tested.
50	Given that investigation of the existing conditions will be the responsibility of the contractor, please clarify if the airport will be providing additional time in the schedule to complete this investigation.
	Response: It is anticipated that unknown existing conditions may be investigated early in the project schedule during procurement of signs and other materials.

51	Please clarify which MOT phasing will be required during the investigation of the existing conditions.
	Response: Investigation of existing conditions shall conform to CSPP requirements.
52	When removing conduit from paved areas, please clarify how the trench will be backfilled and restored.
	Response: Detail on sheet 174 revised in Addendum #1 to reflect P-153 CLSM Flowable Fill extending to top of adjacent pavement.
53	Please confirm that there is no paving restoration on this project.
	Response: Conduits trenched through existing shoulder pavement shall be backfilled with P-153 CLSM Flowable Fill extending to top of adjacent pavement. Damage to existing pavements around sign foundations and other structures shall be repaired to match existing conditions to satisfaction of Airport and RPR.
54	There appears to be a discrepancy between the Sign Schedule and Bid Schedule for signs under Bid Item 17, (New Airfield Sign and Foundation). the Sign Schedule count = 254 and the Bid Schedule count = 234.
	Response: Sign Schedule and Bid Schedule revised in Addendum #1.
55	Will the sign reference points be the same on the new signs as the existing signs?
	Response: Location Northing and Eastings are identified on the sign schedules with reference points identified on the symbol legend and details.

56	Please confirm that on the modified sign pads for signs whose legends ARE NOT changing, the only modification to the existing sign pad is to rebuild the pad as shown in the plans to include a new base can, new conduit to the power leg, and new concrete to the second sign leg (first past the power leg).
	Response: The modified pad includes a new base can and new conduit to the power leg. The limits of tie-in to existing foundation and new concrete shall be determined by a licensed civil or structural engineer as determined on Drawing No. 170, detail note 10.
57	On the modified sign pads for signs whose legends ARE changing to the point of requiring additional sign modules, will those sign pads also require an extension on the end of the pad opposite the base can to accommodate the extra length (in addition to the modification shown in the plans and spelled out in the question above)?
	Response: The intent is not to extend the foundation on the side opposite of the base can. An increase in additional sign modules would require full replacement of sign and foundation.

58	Please clarify if there is a manhole or base can at the end of the demolition of this conduit. 
	Response: There is a junction base can at the end of this conduit.

All questions are listed as submitted. Company names are withheld.
This Addendum No. 1 includes questions received through May 25, 2021.