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PROJECT: Main to Junction 420 (Downtown Area)
CIP ID: 5267.046
IFB#: 6100 CLMC550

SUBJECT: Answers to Bidders Questions as of the date of this letter, per 00100-IFB Article 1.(3)(C).

The following are answers to bidders questions received on the above project. These answers do not modify the contract. Any modifications to the Contract will be through Addenda.

Q-1. **Riverside Drive Exit Point – Far too close to riverside drive:** In order to properly and successfully complete this rather difficult drill, a 42" diameter (minimum diameter) hole will need to drilled under Lake Austin. This is a rather large hole and will require a great deal of water and drilling slurry pressure for the final reaming (hole openers) passes and also on the final pullback of the 30" HDPE pipe. If this HDD were to be performed as currently designed, there is a very high probability (~ 100%) that there will be a major frak-out and more than likely a large bubble underneath and around Riverside Drive. The current design only has ~ 10' of clearance as you start to drill under Riverside Drive – way too shallow for this diameter hole.

A-1. Prospective bidders need to consider these issues, and how he will handle them, in the preparation of this bid. Conferred with engineers; design stands.

Q-2. **The Entire HDD Should Be Performed from San Antonio Street:** Given the law of physics and gravity, HDDs should always be drilled downhill and never 'uphill'. From the drawings, it looks there is an ~35' elevation change from the Riverside Drive HDD point to the San Antonio HDD point. Given the fact that the majority of the HDD drill will be through very hard gray shale, fat clay and some gravel areas – the drilling returns and broken up solids (shale and gravel) need to always be flowing downstream/downhill to prevent blockages, etc.

a. Drilling uphill, especially in rock / shale conditions greatly increases the risk of breaking off HDD tooling in the bore hole and greatly increases the amount of push and tension on our drill string trying to drill uphill.

b. Re-mobilizing from Riverside to San Antonio Street is a considerable undertaking (2-3 days), would lead to a large clean-up exercise, would be duplicative in nature and only increases the costs of the project for little to no value. The HDD contractor would need to mobilize the following equipment:

1. HDD Maxi rig (55' in length)

2. Mud Recycler / Cleaning System (55' in length)
3. Large excavator
4. Rubber tired backhoe
5. 3-5 130 bbl vacuum trailers
6. 1 3000 ga water truck
7. 2 trailer loads of 30' drill string
8. 1-2 frak tanks full of drilling slurry
9. 1 large trash dumpster

A-2. Prospective bidders need to consider these issues, and he will handle them, in the preparation of this bid. Conferred with engineers; design stands.

Q-3. **HDD Workspace on San Antonio Street needs to be widened by at least 10-15':** Given the current building construction on the West side of San Antonio street, there is not enough room for an HDD contractor to set-up his HDD spread with in/out access for Water and Drilling slurry trucks to also have (2) single north-south lanes for traffic on San Antonio street. The current proposed workspace appears to be ~ 20' wide by 100' in length.

A-3. Conferred with engineers; design stands.

Q-4. **Remove as much of the east-to-west side bend in the HDD as possible:** From the drawings, there appears to be a fairly large East->West side bend (we have not been able to determine the % of the side bend from the drawings) to execute this HDD. Given the proposed diameter and length and given the geo (hard rock) conditions of this HDD, the drill path for this HDD should be as **straight** from Entry to Exit as possible to this drill. Given the proposed depth of this drill, there is no reason that we can think of that would require this drill to not be much straighter.

A-4. Easement Constraints.

Q-5. A large amount of water will be required to complete this city project. Question: Is the City going to provide its own 'Water Meter' on the project site for its contractors to access water freely for this project.

A-5. See Project Manual, Volume I of V, Section 01500, Paragraph 3.1.

Q-6. A considerable amount of drilling mud/slurry will need to be hauled off the job site during the length of the project. Can the contractors use a City owned landfill/landfarm for the disposal of the environmentally safe drilling mud?

A-6. See Project Manual, Volume I of V, Section 01550, Page 3 of 4, Paragraph 3.3, Spoil Disposal.

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