



April 15, 2022

Municipality of Skagway
P.O. Box 415
Skagway, Alaska 99840

Sent via Email

Attn: Mr. Tyson Ames
Borough Public Works Director

Re: MOS State Street Sewer/Water Upgrades Phase II
Imported Backfill Change Order Justification

Dear Tyson,

At your request, please consider this our change order justification letter for contract bid item 2203.1 Imported Backfill for the Municipality of Skagway (MOS) State Street Sewer/Water Upgrades Phase II project. The original contract included a quantity of 500 cubic yards of imported backfill at a unit price per cubic yard of \$74.00. The imported backfill quantity provided in the construction bid was an estimated quantity as the PDC design contract scope of work did not include performing a geotechnical investigation to evaluate the subsurface soil conditions. The project which is approximately 77% complete, involves the replacement of existing aged water and sanitary sewer services within State Street. Field observations of the existing soils during trenching operations have revealed loose, wet, silty sand materials below the existing gravel cap in State Street, an unforeseen condition. These materials are unable to be placed directly back into the trench after the new pipes have been installed as they are too saturated, have and are unable to be compacted to construct a stable reconstructed trench. The unsuitable materials are loaded into dump trucks and hauled to the MOS 15 Acre earth disposal site. Imported Backfill (3" minus shot rock) is then trucked to the project site to replace the poor materials that were removed.

Through October 26, 2021 (work through 19.5 alley), a total of 3,191.3 cubic yards of Imported Backfill has been placed which exceeds the contract amount by $3,191.3 - 500 = 2,691.3$ cubic yards \times \$74/cubic yard = \$199,156. We estimate another 550 cubic yards of imported backfill to complete the project. The total estimated overrun of Imported Backfill is predicted to be $2,691.3 + 550 = 3,241.3$ cubic yards. Estimated cost of the Imported Backfill overrun is $3,241.3$ cubic yards \times \$74/cubic yard = \$239,856.20.

It should be noted that there are a couple of contract bid items that will not be fully constructed so the contract amounts for these items (Fill sewer pipes with slurry and water main relocates) will be credited back to MOS and could be applied to the Imported Backfill overrun amount. The estimated amounts for these items are \$60,000. *Therefore the estimated change order amount for Imported Backfill is $\$239,856 - \$60,000 = \$179,856$.*

A couple of things to note:

1. The unusable soils hauled from State Street and stockpiled at the MOS 15 Acre disposal site are the property of MOS and have value to MOS. These soils, once drained, can be used on future projects as general fill material or the material

Mr. Tyson Ames
April 15, 2022
Page 2 of 2

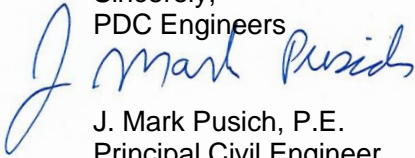
screened and the rock crushed to a specific product.

2. The cost of geotechnical exploration for the project is estimated to cost \$100,000. This money was never spent during the design phase so could be considered as applying toward this unforeseen condition.

In summary the change order is justified as the soil conditions within the utility trenches were unknown to the design engineer of record and the contractor making this an unforeseen condition. A contract amendment in the form of a change order to better fit the field conditions encountered is within the conditions of the contract.

Should you have questions concerning this correspondence please do not hesitate to contact me to discuss.

Sincerely,
PDC Engineers



J. Mark Pusich, P.E.
Principal Civil Engineer

N:\Projects\21071JN-MOS_PHI\7CA\Correspondence\MOS State Street Phase II Imported Backfill Justification Letter 4-15-2022.doc