

THIS PRINT COVERS CALENDAR ITEM NO.: 11

**SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY**

DIVISION: Central Subway Project

BRIEF DESCRIPTION:

Approving the justification of the sole source and the award of Contract No. 1328 with Renesco Inc. (Renesco), to mitigate the water intrusion in the Chinatown Rose Pak Station, for a contract amount not to exceed \$6,482,379.59, for a term of 273 days to Substantial Completion.

SUMMARY

- During the construction of the Central Subway Chinatown Rose Pak Station, dewatering wells were drilled and the ground water was pumped to maintain the water table below the construction level so that excavation via sequential mining and construction could be performed. The dewatering wells were shut down after the cavern’s concrete liner was constructed. Grout was injected to fill in the gap in the crown to create compartments in the crossover cavern to confine any water that penetrates the membrane to an individual compartment where the leak occurs.
- After the ground water returned to its original level, the SFMTA observed significant water intrusion from the crown arch of the cavern.
- Attempts to mitigate the water proved unsuccessful and led the SFMTA to issue a Request for Information (RFI) and Request for Qualification (RFQ) to seek interested contractors with expertise in performing leak mitigation work.
- Renesco was the only contractor to respond to the RFQ. Renesco developed a proprietary hybrid water mitigation process, recommended by the SFMTA’s designers, that uses a mixture of cementitious grout and chemical grout to fill voids exterior to an underground structure.
- The Director of Transportation authorized a sole source procurement with Renesco to mitigate the water intrusion under San Francisco Administrative Code sections 6.73(c)(1) [only one source after a solicitation or advertisement] and (c)(2) [proprietary process].

ENCLOSURES:

1. SFMTA Board Resolution
2. Contract Agreement

APPROVALS:


DIRECTOR



DATE

November 26, 2024

SECRETARY



November 26, 2024

ASSIGNED SFMTAB CALENDAR DATE: December 3, 2024

PURPOSE

Approving the justification of the sole source and the award of Contract No. 1328 with Renesco Inc. (Renesco), to mitigate the water intrusion in the Chinatown Rose Pak Station, for a contract amount not to exceed \$6,482,379.59, for a term of 273 days to Substantial Completion.

STRATEGIC GOALS AND TRANSIT FIRST POLICY PRINCIPLES

This item will support the following SFMTA Strategic Plan Goals:

- Goal 5. Deliver reliable and equitable transportation services.
- Goal 6. Eliminate pollution and greenhouse gas emissions by increasing use of transit, walking, and bicycling.

This item will support the following Transit First Policy Principles:

- 1. Improves the safe and efficient movement of people and goods.
- 2. Improves public transit as an attractive alternative to travel by private automobile.
- 8. Allocates transit investments to meet the demand for public transit generated by new public and private commercial and residential developments.
- 9. Promotes the use of regional mass transit and the continued development of an integrated, reliable, regional public transportation system.

DESCRIPTION

Background

The 1.75-mile Central Subway Project opened for revenue service on January 7, 2023. Central Subway Chinatown Rose Pak Station (CTS) and the adjacent crossover to the south of the station were built in a large cavern excavated using the Sequential Excavation Method (SEM). The construction consisted of an initial liner of lattice girder and shotcrete installed immediately upon excavation of each round in each heading, followed by the installation of a Polyvinyl Chloride (PVC) waterproofing membrane, and a final cast in place reinforced concrete lining.

PVC water barriers were installed on the PVC membrane and have been embedded in the final cast in place concrete liner to provide compartmentalization. The compartments were designed to confine any water that penetrates the membrane to an individual compartment where the leak occurs. These compartments are roughly in a 30' x 30' grid. Grout hoses and grout pipes are embedded in the station and cavern concrete walls and ceilings to allow for remedial grouting if water migrates outside of the compartment(s).

During the construction of the CTS, dewatering wells were drilled and the ground water was pumped to maintain the water table below the construction level so that excavation via sequential mining and construction could be performed. The dewatering wells were shut down after the cavern's concrete liner was constructed. Grout was injected to fill in the gap in the crown to create compartments in the crossover cavern to confine any water that penetrates the membrane to an individual compartment where the leak occurs.

After the ground water returned to its original level, the SFMTA observed significant water intrusion from the crown arch of the cavern. The attempts to reduce the water intrusion resulted in water migrating to other areas, which resulted in additional leaks in the crown of the cavern.

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Contractors working on the Central Subway Project attempted to mitigate and seal these new leaks at the CTS using separate cementitious grouting followed by application of chemical grout, but that approach has not been effective. Prior efforts sealed some leaks, but the grout pushed displaced water into other areas where it further created new leaks.

The SFMTA issued a Request for Information (RFI) and Request for Qualifications (RFQ) to seek interested contractors with expertise to perform leak mitigation work at the CTS. In addition to Renesco, there were two contractors that responded to the SFMTA's RFI, namely Foundation Soil Stabilization Inc (FSS) and JB3 Epoxy Injection & Synthetic Coatings Specialist, Inc. (JB3). Both FSS and JB3 found that they did not meet the minimum requirements and did not respond to the RFQ. FSS did not meet the bonding capacity requirements, and JB3 did not meet the licensing requirements. Thus, Renesco was the only contractor to respond to the water leak mitigation RFQ.

Solution

Resenco developed a proprietary hybrid process that uses a mixture of cementitious grout and chemical grout to fill voids exterior to an underground structure. This process allows them to control and vary the ratios of the two types of grouts and the pressure by which the grout mixture is pumped into the cavities of the structure. At the CTS station, Renesco will use this process to inject the grout mixture to displace the water inside the cavities between the waterproofing layer and the final concrete lining to completely fill the cavities in one operation, thereby sealing the structure against water intrusion, and stopping the migration of the water from a "wet" to a "dry" section. Renesco will determine the precise mixture of cementitious and chemical grout and application pressures at the site by monitoring the volume needed to fill the cavities. This methodology is a specialized process that has been successful in other similar situations, and is recommended by the SFMTA's design consultants. Awarding the work to a Contractor lacking experience with this methodology could lead to new leaks.

The scope of work includes preparatory work of protecting existing finishes, removing, and storing Glass Fiber Reinforced Concrete (GFRC) ceiling and wall panels, exposing, and testing continuity of grout hoses, which will be performed prior to starting grouting. The leaking area will be segmented into zones/panels and mitigation will be performed in the identified leaking compartments in a pre-determined manner to prevent water migration into other areas. After the completion of all grouting activities, the station will be restored to its current finished condition.

Service Impacts

The proposed contract calls for the work to be performed outside of revenue service and during a 17-day service shutdown period. During the 17-day shutdown period, there will be no T-line service from Fourth and Brannan station to Chinatown Station. Patrons traveling from Fourth and Brannan to Chinatown will be directed to the 30 and 45 services as these bus lines serve the same stations affected by the service shutdown.

Sole Source

On June 12, 2024, the Director of Transportation authorized a sole source procurement with Renesco to mitigate the water intrusion in the Chinatown Rose Pak Station under Administrative Code sections 6.73(c)(1) and (c)(2).

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Administrative Code section 6.73(c)(1) authorizes a sole source public works contract where work or services are available from only one source as justified by the results of a solicitation or advertisement designed to attract as many potential sources qualified to compete on the procurement as appropriate, whether through a RFI, RFQ or other form of advertisement or solicitation. As explained above, Renesco was the only contractor that responded to the RFQ for the water mitigation work.

In addition, section 6.73(c)(2) authorizes a City department to award a sole source public works contract where a process or system of work is proprietary to a contractor and the work or services are available only from that one source. Renesco successfully applied its proprietary hybrid grouting method to mitigate and resolve similar water infiltration and leaks at the Uma Oya Multipurpose Development Project in Sri Lanka, and Ritom Pumped Storage Plant in Switzerland. The SFMTA's designers recommend this hybrid grouting method, believing this method to be the most effective in sealing the tunnels without causing new leaks. The SFMTA and its engineering consultants have extensively studied the causes and issues concerning water leaks into the CTS. Based on market research, the SFMTA is not aware of another contractor that uses a similar hybrid grouting technique.

Negotiation of the Sole Source Contract

SFMTA staff issued the Request for Proposal (RFP) to Renesco on August 1, 2024.

The SFMTA prepared an initial independent estimate on September 25, 2023 in the amount of \$2.33 million, but the original estimate only accounted for the scope related to the grout installation without the construction support work, and work schedule limitations. Staff had prepared the estimate based on how the original Central Subway contractor performed their work - with equipment on site and full access to the work area as the CTS was not open for revenue service. For the RFP, the team prepared all the elements of work that needed to be included for the scope of work, including the time allowed for the work in consideration of transit operations associated costs relating to mobilization and demobilization, work to prepare for the grouting, and electrical grounding work. On October 4, 2024, the SFMTA updated its independent estimate based on the revised scope in the amount of \$6,421,000.

Staff and Renesco negotiated the conditions of the final contract, including changing from a 9-day shutdown to a 17-day shutdown period to perform the work, and costs for the final scope of work to be \$6,482,379.59. Staff is updating the independent estimate based on the revisions to the working conditions, but believes this amount to be fair and reasonable based on the final contract scope and technical conditions.

STAKEHOLDER ENGAGEMENT

The SFMTA meets with community organizations and elected officials on a regular basis to inform them of construction activities and status of the water mitigation work. The SFMTA will keep the community informed on the timing of the construction activities and the disruption in service to perform the water mitigation activities. Should the Board approve this contract, the public will be informed of when this work will begin and of any changes and impacts to service and shutdown periods of the Central Subway T-Third Line.

ALTERNATIVES CONSIDERED

The SFMTA could decide not to issue Contract 1328 to address the water leaks in the CTS, but doing so could jeopardize the integrity of the tunnel structure and continue to expose the public areas to water leaks. Alternatively, the SFMTA could restart the competitive bid process, but this could lead to increased costs or unqualified contractors, exposing the public areas to more extended periods of water leaks. Awarding the work to a contractor who does not perform hybrid grouting will require a longer contract duration. Delay to mitigating the water leakage may impact Muni services.

FUNDING IMPACT

The budget for this contract will be funded by the Capital Budget Reserve, which is a source of last resort when no other funding sources are available and there is a regulatory or life/safety project element that must be funded. The Central Subway Project has a budget of \$24.9 million from the Capital Budget Reserve to perform various activities.

The Chinatown Station Water Mitigation work was budgeted at \$4.5 million To mitigate for the shortfall between the original budget of \$4.5 million, and the negotiated contract amount of \$6.4 million, the SFMTA intends to reprioritize and/or rescope other activities. Additional future contract modifications may be brought to Board as the Central Subway Project completes close-out activities using a similar source of funding.

ENVIRONMENTAL REVIEW

On November 14, 2024, the SFMTA, under authority delegated by the Planning Department, determined that the Contract No. 1328, Chinatown Rose Pak Station Water Leak Mitigation Project, with Renesco Inc., to mitigate the water intrusion in the Chinatown Rose Pak Station is not defined as a “project” under the California Environmental Quality Act (CEQA) pursuant to Title 14 of the California Code of Regulations Sections 15060(c) and 15378(b). A copy of the CEQA determination is on file with the Secretary to the SFMTA Board of Directors and is incorporated herein by reference.

OTHER APPROVALS RECEIVED OR STILL REQUIRED

The City Attorney’s office reviewed this calendar item.

RECOMMENDATION

Approving the justification of the sole source and the award of Contract No. 1328 with Renesco Inc. (Renesco), to mitigate the water intrusion in the Chinatown Rose Pak Station, for a contract amount not to exceed \$6,482,379.59, for a term of 273 days to Substantial Completion.

SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
BOARD OF DIRECTORS

RESOLUTION No. _____

WHEREAS, The 1.75-mile Central Subway (Central Subway Project) opened for revenue service on January 7, 2023; and,

WHEREAS, After the construction of Central Subway Chinatown Rose Pak Station, the San Francisco Municipal Transportation Agency (SFMTA) observed significant water intrusion from the crown arch of the cavern of the station; and,

WHEREAS, Attempts to mitigate the water proved unsuccessful and led the SFMTA to issue a Request for Information (RFI) and Request for Qualification (RFQ) to seek interested contractors with expertise in performing leak mitigation work; and,

WHEREAS, A total of three contractors responded to the SFMTA's RFI, but two of the contractors did not respond to the RFQ; and,

WHEREAS, Renesco Inc. developed a proprietary method, recommended by the SFMTA's design consultants, that uses a mixture of cementitious and chemical grout to fill the voids exterior to an underground structure; and,

WHEREAS, The SFMTA is not aware of another contractor that uses a similar hybrid grouting technique; and,

WHEREAS, On June 12, 2024, staff received authorization from the Director of Transportation to negotiate a sole source contract with Renesco for the water mitigation work under the provisions of San Francisco Administrative Code sections 6.73(c)(1) [only one source after a solicitation or advertisement] and (c)(2) [proprietary process]; and,

WHEREAS, On November 14, 2024, the SFMTA, under authority delegated by the Planning Department, determined that the Contract No. 1328, Chinatown Rose Pak Station Water Leak Mitigation Project, with Renesco Inc., to mitigate the water intrusion in the Chinatown Rose Pak Station is not defined as a "project" under the California Environmental Quality Act (CEQA) pursuant to Title 14 of the California Code of Regulations Sections 15060(c) and 15378(b); and,

WHEREAS, A copy of the CEQA determination is on file with the Secretary to the SFMTA Board of Directors and is incorporated herein by reference; therefore be it

RESOLVED, That the San Francisco Municipal Transportation Agency approves the justification of the sole source to Renesco Inc. for Contract No. 1328 under the provisions of San Francisco Administrative Code sections 6.73(c)(1) [only one source after a solicitation or advertisement] and (c)(2) [proprietary process]; and be it further

RESOLVED, That the San Francisco Municipal Transportation Agency Board of Directors approves Contract No. 1328 with Renesco Inc. (Renesco), to mitigate the water intrusion in the Chinatown Rose Pak Station, for a contract amount not to exceed \$6,482,379.59, for a term of 273 days to Substantial Completion; and be it further

RESOLVED, That the San Francisco Municipal Transportation Agency Board of Directors authorizes the Director of Transportation to execute Contract No. 1328.

I certify that the foregoing resolution was adopted by the San Francisco Municipal Transportation Agency Board of Directors at its meeting of December 3, 2024.

Secretary to the Board of Directors
San Francisco Municipal Transportation Agency

**CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY**

AGREEMENT

This AGREEMENT, made on this date of _____, by and between

_____ **Renesco, Inc.** _____, whose place of business is at
3935 Avion Park Court, Suite A106, Chantilly, VA 20151 _____, (the Contractor), and
the **CITY AND COUNTY OF SAN FRANCISCO, a MUNICIPAL CORPORATION** by and through its
MUNICIPAL TRANSPORTATION AGENCY (the Agency or SFMTA), acting under and by
virtue of the authority vested in the Agency by the Charter of said City and County and by ordinances
enacted pursuant to said Charter.

WHEREAS, the Agency, by Resolution No. _____, adopted on the _____ day of
_____, 20 **24** (a copy of which is attached hereto and made a part of this Agreement),
awarded to the Contractor the contract for

**CHINATOWN ROSE PAK STATION
WATER LEAK MITIGATION PROJECT
(Contract No. 1328)**

in the amount of (**Six Million Four Hundred Eighty Two Thousand Three Hundred Seventy Nine Dollars and 59/100 (\$6,482,379.59)**) and
for a term of **273** Calendar Days to Substantial Completion from the commencement of the Contract
Time.

NOW, THEREFORE, the Contractor for and in consideration of payment to be made as
hereinafter mentioned, promises and agrees with the Agency to perform said Work in a good and
workmanlike manner, under the direction (to the extent of ascertaining whether said Work is being
performed in accordance with the plans and specifications) and to the satisfaction of the Agency and to
furnish all labor, material and equipment necessary for use in the performance thereof, all in accordance
with the Contract Documents, as described in Section 1.04 of the General Provisions (Contract
Documents), which as provided in said specifications are made a part thereof, all of which documents are
by reference made a part of this Agreement as if all requirements and provisions therein contained were
specifically set forth herein.

Said Work shall be commenced as soon as practicable after execution of this Contract, prosecute
diligently thereafter and completed within the time limits stated in the specifications.

And the Agency promises and agrees that upon performance and fulfillment of the covenants
aforesaid, it will pay to the Contractor for said Work, in the manner provided by law and in said
specifications, the price or prices fixed in the Schedule of Pay Items for said Work, as set forth in

the Contract Documents.

Time is of the essence in this contract.

It is understood and agreed that in no instance is any party signing this Agreement for or on behalf of the City and County of San Francisco or acting as a member of the San Francisco Municipal Transportation Agency liable on this contract, or upon any warranty of authority, or otherwise, and it is further understood and agreed that the liability of said City and County is limited and confined to such liability as authorized or imposed by law.

IN WITNESS WHEREOF the parties to these presents have hereunto set their hands and seals and have executed this contract in triplicate the day and year first above written.

CONTRACTOR:

CITY AND COUNTY OF SAN FRANCISCO
by its Municipal Transportation Agency

By: _____

By: _____

Jeffrey P. Tumlin

Title: _____

Director of Transportation

(Corporate Seal When Required)

ATTEST:

Authorized by the Municipal Transportation
Agency Board of Directors

Resolution No. _____

Adopted: _____

Secretary, SFMTA Board of Directors

Copy of SFMTA Board of Directors' Resolution
follows this document.

APPROVED AS TO FORM:

DAVID CHIU

City Attorney

By: _____

Annie Smiddy