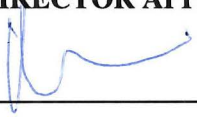


**CITY OF MARYSVILLE AGENDA BILL**

**EXECUTIVE SUMMARY FOR ACTION**

**CITY COUNCIL MEETING DATE: December 10th, 2018**

<b>AGENDA ITEM:</b>	
Highway 9 Exploratory Well – Change Order #1: Additional Depth Drilling	
<b>PREPARED BY:</b>	<b>DIRECTOR APPROVAL:</b>
Kyle Hays, Project Engineer	
<b>DEPARTMENT:</b>	
Public Works / Engineering	
<b>ATTACHMENTS:</b>	
Change Order #1	
<b>BUDGET CODE:</b>	<b>AMOUNT: \$213,579.62</b>
40220594.563000, W1802	
<b>SUMMARY:</b>	

The Highway 9 Exploratory Well project consists of drilling, construction and testing of a large-diameter exploratory well up to 1,000 feet in depth. If successful, this well will become a municipal production well yielding up to 1,000 gallons per minute.

Holt Services (the contractor drilling the well) was able to advance 12” drilling to approximately 963 ft before being unable to continue. RH2 (the City’s design consultant) has collected material samples from drilling activity, and their analysis of the material indicates that the best possible section for well completion would not provide close to our target of 1,000 gpm. However, it will be impossible to tell for sure until the well is completed and pump tests performed.

Based on other drilling logs in the vicinity, bedrock was expected to be at about 1,000 feet depth below the surface. RH2 has evaluated the drilling logs from our project, and estimates bedrock to be at a depth of 1,200-1,300 feet below surface.

The proposed change order will add approximately 350 feet of 10 inch well drilling, to allow the well to reach the estimated bedrock depth. This will allow the City to fully explore the potential for drinking water production at this site, at a cost far below trying to find a different site to develop a well.

Original Contract (Includes Sales Tax):	<b>\$ 857,135.06</b>
Original Management Reserve:	<b>\$ 104,544.45</b>
<u>Original Total Allocation:</u>	<u><b>\$ 961,679.51</b></u>
Change Order #1:	<b>\$ 213,579.62</b>
<u>New Total Allocation:</u>	<u><b>\$ 1,175,259.13</b></u>

**RECOMMENDED ACTION:**

Staff recommends that Council authorize the Mayor to sign and execute the Change Order #1 with Holt Services, Inc. in the amount of \$213,579.62 including Washington State Sales Tax.

**CITY OF MARYSVILLE  
PUBLIC WORKS DEPARTMENT**

**CONTRACT CHANGE ORDER**

No. 1

Date: 12/03/2018 Project: Highway 9 Exploratory Well  
Job No.: W1802 Job Location: Highway 9 Well Site  
Owner: City of Marysville  
To: (Contractor) Holt Services, Inc.  
cc: (Surety) Great American Insurance Company

**YOU ARE HEREBY INSTRUCTED TO:**

Make changes in plans and specifications as noted below

Perform extra work as noted below

- Execute work as noted below
- Delete work as noted below
- Restore areas as noted below

DESCRIPTION AND/OR SKETCH	QTY	UNIT	UNIT PRICE	TOTAL
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*You are ordered to perform the following described work upon receipt of an approved copy of the change order:*

The original well design called for an approximately 1,000ft deep well, expecting to find a good aquifer layer somewhere between 300 to 1000 ft. deep. The driller was able to drill to 963 ft. before being unable to continue with our current design. No good aquifer layers were encountered in the course of drilling.

This change order authorizes drilling and advancing 10 in. casing to an approximate depth of 1300 ft. This work will include:

1. 11 working days of standby time required to wait for this change order approval
2. Mobilization of required casing, additional drill tooling, etc.
3. Furnish temporary 10 in. casing and install up to 852 ft.
4. Drill 10 in. hole up to 337 ft.
5. Install 10 in. casing up to 498 ft.
6. Additional boring sealing of 10/12 in. casing, up to 117 ft.
7. Removal of 16" and 20" sealing from the scope of the contract, which will not be required due to conditions encountered to date.
8. Removal of 5 ft. of 16 in. Drilling and 48 ft. of 12 in. Drilling from the scope of the contract that was not required due to field conditions encountered to date.

See attached modifications to the Project Special Provisions which are related to this work. Also see attached summary of bid item changes and additions.

The total cost of this work is estimated to be \$195,765.00 not including Washington State Sales Tax. The total for this work including sales tax is \$213,579.62.

**Approved by Council:** N/A  
(Date)

**Presented to Council:** 12/10/2018  
(Date)

***All work, materials, and measurement to be in accordance with the provisions of the Standard Specifications and Special Provisions for the type of construction involved.***

**CITY OF MARYSVILLE  
PUBLIC WORKS DEPARTMENT**

ORIGINAL CONTRACT AMOUNT  \$857,135.06
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CONTRACT TOTAL AFTER CHANGE  \$1,070,486.66
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PERCENT CHANGE THIS ORDER  %24.89
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TOTAL PERCENT CHANGE  %24.89
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CONTRACT COMPLETION TIME:

Same  (increase) working days: 45 days

RECOMMENDED FOR APPROVAL BY: [Signature] DATE: 12/3/18  
(Engineer)

APPROVAL BY: [Signature] DATE: 12/3/18  
(Public Works Director)

APPROVAL BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
(Finance Director)

ENDORSED BY: [Signature] DATE: 12/3/2018  
(Contractor's Signature)

# Change Order #1: Special Provisions Modifications

To the Contract Documents for

City of Marysville  
Highway 9 Exploratory Well  
40220594.563000.W1802

## SP 7-10 WELL CONSTRUCTION

Add the following on page 88 after “12-inch Casing” section:

### “10-inch Casing

All 10-inch casings shall have a minimum wall thickness of .365 inches and a weight not less than 40.48 pounds per foot. The casing shall be sufficient to support the loads occurring during drilling and completion depth.”

## SP DIVISION 10 – MEASUREMENT AND PAYMENT

Revise the paragraph under the following subheading to read as follows:

### Bid Item No. 20 – Sealing of 12-inch Diameter Boring:

“The linear per foot price shall cover the complete cost of labor, equipment, and materials to backfill/seal the *10-inch diameter and 12-inch diameter* and cased portion of the well to the desired depth of well screen placement with neat cement grout. The grout shall be placed starting from the bottom and continuing to the desired depth. Any backfill materials placed shall meet the sealing requirements of WAC 173-160. Payment shall be per linear foot upon completion of the successful sealing to the specified depth.”

Add the following on the bottom of page 106:

### “ Change Order #1:

#### **CO#1 Item No. 1 – Mobilization**

The lump sum price shall cover the complete cost to mobilize and deliver to the project site all equipment and materials necessary to complete the change order work. Payment shall be made in full on the first payment including any other item from this change order

#### **CO#1 Item No. 2 – Furnish Temporary 10 inch Casing**

The linear foot price shall cover the complete cost of all materials, labor, and equipment necessary to provide the temporary 10 inch diameter casing required to install permanent 10 inch casing. Measurement shall be per linear foot of temporary casing utilized.

**CO#2 Item No. 3 – 10 inch Diameter Drilling**

The linear foot price shown shall cover the complete cost of labor and equipment necessary for drilling a 10-inch diameter boring with simultaneous advance of a 10-inch diameter casing, and collection of representative samples. This bid item includes drilling but does not include the cost of the casing. Payment for sample collection over this depth interval shall be paid in this item. Measurement shall begin at the bottom of the 12-inch diameter boring, from approximately 960 feet to a depth of approximately 1,300 feet (340 feet of drilling) and shall be per linear foot of drilling.

**CO#1 Item No. 4 – Furnish and Install 10 inch Diameter Well Casing**

The linear foot price shown shall cover the complete cost of all materials, labor, and equipment necessary for the installation of all required permanent 10-inch diameter casing strings, including a new 10 inch diameter casing shoe for protection of the casing during advance and drilling, complete and in place. This bid item includes cleaning, trimming, welding, centralizing, stringing, and cutting and removing excess casing, but does not include drilling. Payment shall be per linear foot of casing utilized during construction, which is estimated to be approximately 440 feet. Measurement shall be per linear foot of casing utilized during construction.

**CO#1 Item No. 5 – Standby Time**

The per day price shall cover the complete cost for standby time of all equipment during the time waiting for change order #1 to be approved. Payment shall be made based on the actual days that no critical path work could be accomplished as a direct result of waiting for change order #1.

OWNER & PROJECT: City of Marysville Highway 9 Exploratory Well				Change Order #1 Summary of changes to contract quantities			CONTRACTOR: Holt Services Inc.				
PROJECT #		W1802			ORIGINAL CONTRACT QUANTITIES			CHANGE TO CONTRACT QUANTITIES		TOTAL CONTRACT QUANTITIES	
SCHEDULE A BID ITEM #	ITEM	QTY	UNIT	UNIT COST	TOTAL PRICE	QTY	AMOUNT	QTY	AMOUNT		
7	16-inch Diameter Well Drilling	300	LF	\$ 165.00	\$ 49,500.00	-5.0	\$ (825.00)	295.0	\$ 48,675.00		
9	12-inch Diameter Well Drilling	400	LF	\$ 275.00	\$ 110,000.00	-48.0	\$ (13,200.00)	352.0	\$ 96,800.00		
20	Sealing of 12-inch Diameter Boring	400	LF	\$ 125.00	\$ 50,000.00	117.0	\$ 14,625.00	517.0	\$ 64,625.00		
21	Sealing of 16-inch Diameter Boring	300	LF	\$ 150.00	\$ 45,000.00	-300.0	\$ (45,000.00)	0.0	\$ -		
22	Sealing of 20-inch Diameter Boring	300	LF	\$ 200.00	\$ 60,000.00	-300.0	\$ (60,000.00)	0.0	\$ -		
<b>CHANGE ORDER #1 ITEMS</b>											
1	Mobilization	0	LS	\$ 10,597.00	\$ -	1	\$ 10,597.00	1.0	\$ 10,597.00		
2	Furnish Temporary 10-inch Casing	0	LF	\$ 103.00	\$ -	802	\$ 82,606.00	802.0	\$ 82,606.00		
3	10-inch Diameter Well Drilling	0	LF	\$ 238.00	\$ -	337	\$ 80,206.00	337.0	\$ 80,206.00		
4	Furnish and install 10 inch Diameter Well Casing	0	LF	\$ 122.00	\$ -	498	\$ 60,756.00	498.0	\$ 60,756.00		
5	Standby Time	0	Days	\$ 6,000.00	\$ -	11	\$ 66,000.00	11.0	\$ 66,000.00		
							<b>SUM (PRE-TAX)</b>		<b>\$ 195,765.00</b>		
							<b>9.1% Sales Tax</b>		<b>\$ 17,814.62</b>		
							<b>SUM (AFTER TAX)</b>		<b>\$ 213,579.62</b>		