



## SPMUD BOARD OF DIRECTORS

**SPECIAL MEETING: 5:00 PM**

**April 19, 2018**

SPMUD Board Room

5807 Springview Drive, Rocklin, CA 95677

The District's regular Board meeting is held on the first Thursday of every month. This notice and agenda is posted on the District's web site ([www.spmud.ca.gov](http://www.spmud.ca.gov)) and posted in the District's outdoor bulletin board at the SPMUD Headquarters at the above address. Meeting facilities are accessible to persons with disabilities. Requests for other considerations should be made through the District Headquarters at (916)786-8555.

### AGENDA

#### I. CALL MEETING TO ORDER

#### II. ROLL CALL OF DIRECTORS

President Gerald Mitchell,	Ward 1
Director William Dickinson,	Ward 2
Director John Murdock,	Ward 3
Director Victor Markey,	Ward 4
Director James Williams,	Ward 5

#### III. PLEDGE OF ALLEGIANCE

#### IV. PUBLIC COMMENTS

Items not on the Agenda may be presented to the Board at this time; however, the Board can take no action.

#### V. BOARD BUSINESS

Board action may occur on any identified agenda item. Any member of the public may directly address the Board on any identified agenda item of interest, either before or during the Board's consideration of that item.

#### 1. CONSIDERATION & ADOPTION OF RESOLUTION #18-12 AUTHORIZING THE GENERAL MANAGER TO EXECUTE CHANGE ORDER NO.6 WITH T&S CONSTRUCTION FOR THE LOOMIS DIVERSION TRUNKLINE PROJECT [pg 3 to 53]

During construction of the Loomis Diversion Trunkline Project significant quantities of hard rock were encountered which were not included in the contract documents with the Contractor, T&S Construction. The work requires additional blasting to excavate and install the proposed trunk sewer.

Action Requested: (Roll Call Vote)

Staff Recommends that the Board of Directors:

- 1. Adopt Resolution #18-12 Authorizing the General Manager to execute a Change Order No.6 with T&S Construction for the Loomis Diversion Trunkline Project.**

## **VI. ADJOURNMENT**

If there is no other Board business the President will adjourn the meeting to its next regular meeting on May 3, 2018 at 4:30 p.m.

# SOUTH PLACER MUNICIPAL UTILITY DISTRICT

## STAFF REPORT

**To:** Board of Directors

**From:** Eric Nielsen, District Engineer

**Cc:** Herb Niederberger, General Manager

**Subject:** Authorization to Execute Change Order No. 6 to the Contract for Loomis Diversion Trunkline Project for Blasting from Station 10+00 to Station 34+00 and Using a Hard Rock Drilling Tool

**Meeting Date:** April 19, 2018

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### Overview

The Loomis Diversion Trunkline Project construction contract was awarded to T&S Construction Company, Inc. (T&S) on June 1, 2017 through Resolution 17-18. On August 3, 2017 the Board passed Resolution 17-27, which requires Board approval for change orders that exceed the General Managers authority per the SPMUD Purchasing Policy (Policy 3150).

During construction, T&S encountered significant quantities of hard rock that were not included in the contract documents. This requires additional blasting efforts to excavate and install the proposed trunk sewer. To better quantify the amount and location of hard rock along the pipeline alignment, the District directed T&S to pre-drill the alignment. T&S proceeded to drill and blast the hard rock in Dias Lane, which was identified during pre-drilling. This change order includes an amount of \$1,476,013.00 for the additional expense to excavate the hard rock and is based on the time and materials required to complete the work.

T&S is in the process of planning its efforts to construct the trunk sewer in sections of Brace Road where hard rock was discovered during the pre-drilling efforts. This area has unique characteristics (e.g., high-speed traffic, utilities) that may differ from the blasting previously completed for the project. An additional change order for blasting in these areas will be presented to the Board for approval later.

Hard rock was also discovered in the excavation of the jacking pit for the Interstate-80 (I-80) crossing. The equipment manufacturer and tunneling companies recommended that a hard rock drilling tool be used to complete the I-80 crossing. The presence of hard rock constituted a changed condition from the contract documents. This change order includes an amount of \$261,063.29 for the additional expense to use this hard rock drilling tool.

## Recommendation

Staff recommends that the Board of Directors:

- Adopt Resolution 18-12 to authorize the General Manager to execute Change Order No. 6 to the Loomis Diversion Trunkline construction contract.

## Strategic Plan Goal

This action is consistent with SPMUD Strategic Plan Goals:

Goal 3.1: Plan all projects to ensure adherence to District standards and ordinances.

Goal 3.2: Provide Engineering and Design to optimize the Capital Improvement Program.

## Related District Ordinances, Policies, or Resolutions

This action relates to the following SPMUD Ordinances, Policies, or Resolutions:

Resolution 17-18: Authorization to Award the Contract to T&S Construction Company, Inc. for the Loomis Diversion Trunkline Project

Resolution 17-27: Authorization to Award Defined Change Orders for the Loomis Diversion Trunkline Project Construction Contract

Policy 3150: Purchasing Policy

## Fiscal Impact

All costs associated with the Loomis Diversion Trunkline Project will be paid for out of Fund 300. The table below shows the amounts of the original contract, this change order, and the total of all change orders. The table also shows the percentage of this change order and the total of all change orders against the original contract amount.

Item	Amount	% of Original Contract
Original contact amount	\$ 5,086,485.00	-
Change Order #6	\$ 1,737,076.29	34%
Total Change Orders to Date	\$ 2,687,828.90	53%

Attachments:

1. Resolution 18-12– Authorization to Sign Change Order No. 6 for the Loomis Diversion Trunkline Project Construction Contract for Blasting between Station 10+00 to Station 34+00
2. Change Order No. 6

**SOUTH PLACER MUNICIPAL UTILITY DISTRICT**

**RESOLUTION NO. 18-12**

**AUTHORIZATION TO SIGN CHANGE ORDER NO. 6 FOR THE  
LOOMIS DIVERSION TRUNKLINE PROJECT CONSTRUCTION CONTRACT FOR  
BLASTING BETWEEN STATION 10+00 TO STATION 34+00 AND  
USING A HARD ROCK DRILLING TOOL FOR THE INTERSTATE-80 CROSSING**

WHEREAS, South Placer Municipal Utility District, hereinafter called SPMUD, owns and operates the sewer facilities within the Town of Loomis and the City of Rocklin, and

WHEREAS, SPMUD awarded the contract for the construction of the Loomis Diversion Trunkline Project to T&S Construction with Resolution No. 17-18, and

WHEREAS, significant quantities of hard rock were discovered during construction and necessitate a change to the contract for the additional work to excavate through the rock, and

WHEREAS, the unforeseen conditions of hard rock in Dias Lane resulted in additional project costs of \$1,476,013.00 to drill and blast hard rock located within the trench of the proposed pipeline, and

WHEREAS, the unforeseen conditions of hard rock in the casing envelope of the proposed beneath Interstate-80 resulted in additional project costs of \$261,063.29 to use a hard rock drilling tool, and

WHEREAS, the SPMUD Purchasing Policy (Policy 3150) requires authorization for the General Manager to approve commitments greater than \$50,000.

NOW, THEREFORE BE IT RESOLVED, the South Placer Municipal Utility District Board of Directors authorizes the General Manager to execute Change Order No. 6 to the Loomis Diversion Trunkline Project construction contract. Change Order No. 6 pays for the additional cost of blasting hard rock between Station 10+00 and Station 34+00 and pays for the additional expense of using a hard rock drilling tool to install a casing beneath Interstate-80.

PASSED AND ADOPTED at a Regular Meeting of the South Placer Municipal Utility District Board of Directors at Rocklin, CA this 19<sup>th</sup> day of April 2018.

Signed: \_\_\_\_\_  
Gerald P. Mitchell, President of the Board of Directors

Attest: \_\_\_\_\_  
Joanna Belanger, Board Secretary



# SOUTH PLACER MUNICIPAL UTILITY DISTRICT

## CHANGE ORDER FORM

Change Order No. 6

**Contract Name:** Loomis Diversion Trunkline Project  
**Executed:** 4/12/2018  
**Owner:** South Placer Municipal Utility District (District)  
**Contractor:** T&S Construction (T&S)

The Contract is changed as follows:

In accordance with Section 6.7 of the Bidding Requirements and Contract Documents (page 18), the District agrees to pay T&S \$1,476,013 for all the expenses required (including, but not limited to, materials, labor, and equipment) to drill and blast approximately 742 linear feet / 677 cubic yards of rock located within the sewer alignment in Dias Lane (STA 10+00 to STA 34+00) in order to install the proposed trunk sewer.

A breakdown of the labor, equipment, and materials associated with the costs to perform this work, as provided by T&S on April 8, 2018, is attached to this change order.

In accordance with Section 6.7 of the Bidding Requirements and Contract Documents (page 18), the District agrees to pay T&S \$261,063.29 for all the expenses required (including, but not limited to, materials, labor, and equipment) to provide a hard rock drilling tool to complete the pipe installation across Interstate-80 (STA 79+15 to STA 81+53) via bore and jack.

The quote for the Interstate-80 bore and jack changed conditions, provided by T&S on March 27, 2018, is attached to this change order.

Except as provided herein, all terms and conditions of the Contract referenced above remain unchanged and in full force and effect.

Signature of person authorized to execute this change order on behalf of District.

By: \_\_\_\_\_  
(authorized Signature)

\_\_\_\_\_  
(printed name of person signing above)

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Signature of person authorized to execute this change order on behalf of Contractor.

By: \_\_\_\_\_  
(authorized Signature)

\_\_\_\_\_  
(printed name of person signing above)

Title: \_\_\_\_\_

Date: \_\_\_\_\_



T&S Construction Company Inc.  
 6108 Hedge Avenue  
 Sacramento, CA 95829  
 916-381-3052

Owner: South Placer Municipal Utility District

Project: Loomis Diversion Trunkline Project

Subject: Unforeseen rock encountered on Dias Lane costs

<u>Blast no.</u>	<u>Station</u>	<u>Date</u>	<u>Street</u>	<u>invoice</u>	<u>Monitoring</u>	
39	10 + 66 to 10 + 94	4/3/2018	Dias	not received	\$	1,100.00
38	10 + 20 to 10 + 48	4/2/2018	Dias	not received	\$	1,100.00
35	34 + 00 area	3/12/2018	Dias	2018-567	\$	1,100.00
34	33 + 70 to 33 + 98	2/28/2018	Dias	2018-559	\$	1,100.00
33	33 + 05 to 33 + 17	2/23/2018	Dias	2018-559	\$	1,100.00
32	32 + 24 to 32 + 39	2/22/2018	Dias	2018-559	\$	1,100.00
31	33 + 51 to 33 + 70	2/20/2018	Dias	2018-559	\$	1,100.00
30	33 + 17 to 33 + 45	2/8/2018	Dias	2018-559	\$	1,100.00
29	32 + 78 to 33 + 05	2/7/2018	Dias	2018-559	\$	1,100.00
28	32 + 39 to 32 + 55	1/31/2018	Dias	2017-554	\$	1,100.00
27	31 +96 to 32 + 23	1/30/2018	Dias	2017-554	\$	1,100.00
26	30 + 22 to 30 + 51	1/25/2018	Dias	2017-554	\$	1,100.00
25	29 + 25 to 29 + 47	1/23/2018	Dias	2017-554	\$	1,100.00
24	29 + 04 to 29 + 20	1/22/2018	Dias	2017-554	\$	1,100.00
23	29 + 94 to 30 +22	1/18/2018	Dias	2017-554	\$	1,100.00
22	28 + 50 to 28 + 72	1/17/2018	Dias	2017-554	\$	1,100.00
21	28 + 79 to 29 + 02	1/4/2018	Dias	2017-554	\$	1,100.00
20	28 + 21 to 28 + 49	1/3/2018	Dias	2017-554	\$	1,100.00
19	27 + 69 to 27 + 86	12/21/2017	Dias	2017-544	\$	1,100.00
18	27 + 84 to 28 + 04	12/14/2017	Dias	2017-544	\$	1,100.00
17	27 + 43 to 27 + 69	12/12/2017	Dias	2017-544	\$	1,100.00
16	27 + 14 to 27 + 43	12/8/2017	Dias	2017-544	\$	1,100.00
	pre-blast survey	1/5/2018	Dias	2017-548	\$	2,000.00
	pre-blast survey	3/1/2018	Dias	2017-562	\$	1,000.00
north end	additional blasts to finish	april / may	Dias	13 X 1,100.00	\$	14,300.00
south end	post survey on houses	may	Dias	6 x 500.00	\$	3,000.00
					\$	44,500.00
					\$	44,500.00

<b>November</b>	invoice			
11/27/2017	3119	\$	3,080.00	drill day
11/28/2017	3119	\$	4,330.00	drill day
11/29/2017	3119	\$	5,647.00	drill day
11/30/2017	3119	\$	6,950.00	drill day
<b>December</b>	3119			
12/1/2017	3119	\$	7,255.00	drill day
12/4/2017	3119	\$	3,791.00	drill day
12/5/2017	3119	\$	4,040.00	drill day
12/6/2017	3119	\$	5,620.00	drill day
12/7/2017	3119	\$	7,445.00	drill day
12/8/2017	3119	\$	14,037.00	blast day
12/11/2017	3128	\$	6,460.00	drill day
12/12/2017	3128	\$	13,030.00	blast day
12/13/2017	3128	\$	6,380.00	drill day
12/14/2017	3128	\$	12,681.00	blast day
12/15/2017	3128	\$	7,210.00	drill day
12/18/2017	3128	\$	4,560.00	drill day
12/19/2017	3128	\$	4,830.00	drill day
12/20/2017	3128	\$	5,760.00	drill day
12/21/2017	3128	\$	12,162.00	blast day
12/22/2017	3128	\$	7,460.00	drill day
<b>January</b>				
1/2/2018	3130	\$	4,095.00	drill day
1/3/2018	3130	\$	12,784.00	blast day
1/4/2018	3130	\$	13,255.00	blast day
1/5/2018	3130	\$	9,155.00	drill day
1/8/2018	3130	\$	3,680.00	drill day
1/9/2018	3130	\$	8,885.00	drill day
1/10/2018	3130	\$	7,060.00	drill day
1/11/2018	3130	\$	5,720.00	drill day
1/12/2018	3130	\$	5,720.00	drill day
1/15/2018	3133	\$	5,720.00	drill day
1/16/2018	3133	\$	7,160.00	drill day
1/17/2018	3133	\$	13,803.00	blast day
1/18/2018	3133	\$	13,618.00	blast day
1/19/2018	3133	\$	9,036.00	drill day
1/22/2018	3133	\$	12,276.00	blast day
1/23/2018	3133	\$	12,475.00	blast day
1/24/2018	3133	\$	3,920.00	drill day
1/25/2018	3133	\$	12,827.00	blast day
1/26/2018	3133	\$	3,580.00	drill day
1/29/2018	3140	\$	5,900.00	drill day
1/30/2018	3140	\$	13,378.00	blast day
1/31/2018	3140	\$	12,483.00	blast day

<b>February</b>				
2/1/2018	3140	\$	6,980.00	drill day
2/2/2018	3140	\$	6,510.00	drill day
2/5/2018	3140	\$	7,360.00	drill day
2/6/2018	3140	\$	7,775.00	drill day
2/7/2018	3140	\$	13,275.00	blast day
2/8/2018	3140	\$	13,413.00	blast day
2/9/2018	3140	\$	5,900.00	drill day
2/12/2018	3144	\$	4,460.00	drill day
2/13/2018	3144	\$	5,720.00	drill day
2/14/2018	3144	\$	5,180.00	drill day
2/15/2018	3144	\$	7,960.00	drill day
2/16/2018	3144	\$	7,960.00	drill day
2/20/2018	3144	\$	14,265.00	blast day
2/21/2018	3144	\$	7,360.00	drill day
2/22/2018	3144	\$	11,275.00	blast day
2/23/2018	3144	\$	10,703.00	blast day
2/26/2018	3157	\$	9,300.00	drill day
2/28/2018	3157	\$	13,865.00	blast day
<b>March</b>				
3/5/2018	3157	\$	8,940.00	drill day
3/6/2018	3157	\$	8,940.00	drill day
3/7/2018	3157	\$	6,840.00	drill day
3/8/2018	3157	\$	6,505.00	drill day
3/9/2018	3157	\$	4,879.00	drill day
3/15/2018	track by T&S	\$	6,547.00	drill day
3/16/2018		\$	6,547.00	drill day
3/19/2018		\$	6,547.00	drill day
3/20/2018		\$	6,547.00	drill day
3/21/2018		\$	6,547.00	drill day
3/22/2018		\$	6,547.00	drill day
3/26/2018		\$	6,547.00	drill day
3/28/2018		\$	6,547.00	drill day
3/29/2018		\$	6,547.00	drill day
3/30/2018		\$	6,547.00	drill day

<b>April</b>			
4/2/2018		\$ 13,644.00	blast day
4/3/2018		\$ 13,644.00	blast day
4/4/2018		\$ 6,547.00	drill day
4/5/2018		\$ 6,547.00	drill day
4/6/2018		\$ 6,547.00	drill day
4/9/2018	projected by WBT	\$ 6,547.00	drill day
4/10/2018		\$ 6,547.00	drill day
4/11/2018		\$ 13,644.00	blast day
4/12/2018		\$ 13,644.00	blast day
4/13/2018		\$ 13,644.00	blast day
4/16/2018		\$ 6,547.00	drill day
4/17/2018		\$ 6,547.00	drill day
4/18/2018		\$ 6,547.00	drill day
4/19/2018		\$ 13,644.00	blast day
4/20/2018		\$ 13,644.00	blast day
4/23/2018		\$ 13,644.00	blast day
4/24/2018		\$ 6,547.00	drill day
4/25/2018		\$ 6,547.00	drill day
4/26/2018		\$ 6,547.00	drill day
4/27/2018		\$ 13,644.00	blast day
4/30/2018		\$ 13,644.00	blast day
<b>May</b>			
5/1/2018		\$ 13,644.00	blast day
5/2/2018		\$ 13,644.00	blast day
5/3/2018		\$ 13,644.00	blast day
5/4/2018		\$ 13,644.00	blast day
5/7/2018		\$ 13,644.00	blast day
5/8/2018		\$ 13,644.00	blast day
5/9/2018		\$ 13,644.00	blast day

note: 6,547.00 = average day of drilling cost  
 note: 13,644 = average cost per blast  
 note: 67 days of drilling  
 note: 35 days of blasting

\$ 904,058.00

equipment \$ 207,119.00  
 material \$ 154,866.00  
 labor \$ 542,073.00

low bed to move air track and mats from tulip to Dias lane  
 8 hours x \$120 per hour = 960.00 \$ 960.00

diesel fuel lube truck / diesel / driver = 3.50 per gallon  
 air tracks fuel 2 each air tracks = 144 gallons x \$3.50 = \$504.00 x 67 days = \$33,768 \$ 33,768.00

water truck to bring water to drills for dust control			
\$95.00 labor + \$45.00 for water truck and fuel = \$140.00 x 67 days = \$9,380			\$ 9,380.00
T&S foreman dealing with the drillers every day			
labor 67 days x 1 hour per day = 67 hours x \$96.00 = \$6,432			\$ 6,432.00
truck 67 days x 1 hour per day = 67 hours x \$20.00 = \$1,340			\$ 1,340.00
PVC pipe for cassing the drill hole from caving in due ground water			
2,074 holes x 10' average = 20,746 l.f. x \$ 1.62 = \$ 33,608.00			\$ 33,608.00
<u>T&amp;S dealing with blast day</u>			
foreman 2hrs x \$96.00 = \$192 x 35 days			\$ 6,720.00
truck 2hrs x \$20.00 = \$40 x 35 days			\$ 1,400.00
operator 8hrs x \$95.00 = \$760 x 35 days			\$ 26,600.00
labor 8hrs x \$65.00 = \$520 x 35 days			\$ 18,200.00
excavator 4hrs x \$55.00 = \$220 x 35 days			\$ 7,700.00
loader 4hrs x \$45.00 = \$180 x 35 days			\$ 6,300.00
power broom 4hrs x \$25.00 = \$100 x 35 days			\$ 3,500.00
gravel 8 ton x \$25.00 = \$200 x 35 days			\$ 7,000.00
stemming gravel material 24 ton x \$23.25 per ton = \$558			\$ 558.00
( covering and uncovering the blasted area )			
survey crew			
16 hours x \$250.00 = \$4,000			\$ 4,000.00
( re-surveying the blasted area )			

714 l.f. 18" gravity sewer

as-bid conditions : vertical walls, less yardage to excavate  
 as-bid production: 4 each 14' joints of 18" pvc pipe = 56' l.f. per day  
 change of conditions: rock excavation, 1 : 1 trench sloping = more yardage to move in a confined street area.  
 714' divided by 56' ft. per day = 13 days x 200% = 26 days.  
 impact: doubles the the pipe installation costs.  
 the impact days are 13 x 9 hour day = 117 hours

	qty.	rate	hours	labor	equipt.	fuel	
foreman	1	\$ 96.00	117	\$ 11,232.00	\$ -	\$ -	\$ 11,232.00
operator	3	\$ 95.00	351	\$ 33,345.00	\$ -	\$ -	\$ 33,345.00
labor	3	\$ 65.00	351	\$ 22,815.00	\$ -	\$ -	\$ 22,815.00
excavator digging	1	\$ 65.00	117	\$ -	\$ 7,605.00	\$ 2,457.00	\$ 10,062.00
excavator compacting	1	\$ 55.00	117	\$ -	\$ 6,435.00	\$ 2,457.00	\$ 8,892.00
loader	1	\$ 45.00	117	\$ -	\$ 5,265.00	\$ 2,457.00	\$ 7,722.00
tool truck	1	\$ 20.00	117	\$ -	\$ 2,340.00	\$ 780.00	\$ 3,120.00
trench shield	1	\$ 15.00	117	\$ -	\$ 1,755.00	\$ -	\$ 1,755.00
dump trucks	2	\$ 95.00	234	\$ -	\$ 22,230.00	\$ -	\$ 22,230.00
hydraulic impact hammer #3500	1s	\$ -	0	\$ -	\$ 6,750.00	\$ -	\$ 6,750.00
generator & pump	1	\$ 15.00	351	\$ -	\$ 5,265.00	\$ 2,457.00	\$ 7,722.00

extra bedding for extra width and depth / due to shot rock

347 ton x 23.25 = 8,067.00 \$ 8,067.00

haul off shot rock 714 yds

89 loads = 2 hour round trip = 178 hours

	rate	hours	labor	equipment	fuel	
dump truck	\$ 95.00	178.00	\$ -	\$ 16,910.00	\$ -	\$ 16,910.00
operator 1/3 time	\$ 95.00	59.00	\$ 5,605.00	\$ -	\$ -	\$ 5,605.00
loader 1/3 time	\$ 45.00	59.00	\$ -	\$ 2,655.00	\$ 1,239.00	\$ 1,239.00

cost \$ 1,283,490.00  
 mark-up & overhead 0.15% \$ 192,523.00

Estimated Costs \$ 1,476,013.00

9811



**GASCH GEOPHYSICAL SERVICES, INC.**  
CONSULTANTS IN GEOPHYSICS  
FOR THE ENGINEERING, GROUNDWATER  
ENVIRONMENTAL AND BLASTING INDUSTRIES.

3174 LUYUNG DRIVE, BUILDING #2  
RANCHO CORDOVA, CALIFORNIA 95742 U.S.A.  
(916) 635-8906 • FAX (916) 635-8907

# Invoice

<b>DATE</b>	<b>INVOICE #</b>
12/28/2017	2017-544

JAN 0 2 2018

CLIENT PURCHASE ORDER #

Vibration Monitoring and Video Taping of  
4 Blasts in December, 2017 at the  
Loomis Trunk Line Project, Loomis, CA

BILL TO:

T&S Construction Co., Inc.  
Attn: Accounts Payable  
3108 Hedge Avenue  
Sacramento, California 95829

<b>TERMS</b>	<b>DUE DATE</b>	<b>GGSI PROJECT #</b>
2% Net 30	1/27/2018	2017-28.02

SERVICES PERFORMED	QUANTITY	RATE	AMOUNT
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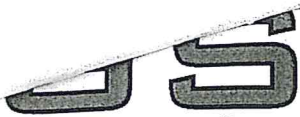
Vibration Monitoring of the 4 blast in December, 2017 at the Loomis Trunk Line Project in Loomis, California	4	1,000.00	4,000.00
Video Taping of the 4 Blasts in December, 2017 at the Loomis Trunk Line Project.	4	100.00	400.00

POSTED  
12/11

Progress Billing. Thank you for the opportunity to be  
of service.

**Total Due This Invoice**

**\$4,400.00**



**GASCH GEOPHYSICAL SERVICES, INC.**  
 CONSULTANTS IN GEOPHYSICS  
 FOR THE ENGINEERING, GROUNDWATER  
 ENVIRONMENTAL AND BLASTING INDUSTRIES.

3174 LUYUNG DRIVE, BUILDING #2  
 RANCHO CORDOVA, CALIFORNIA 95742 U.S.A.  
 (916) 635-8906 • FAX (916) 635-8907

# Invoice

DATE	INVOICE #
1/31/2018	2017-554

FEB 02 2018

CLIENT PURCHASE ORDER #

Vibration and Video Taping of the Blasts at the Loomis Trunk Line Project in Loomis, California.

BILL TO:

T&S Construction Co., Inc.  
 Attn: Accounts Payable  
 3108 Hedge Avenue  
 Sacramento, California 95829

TERMS	DUE DATE	GGSI PROJECT #
2% Net 30	3/2/2018	2017-28.02

SERVICES PERFORMED	QUANTITY	RATE	AMOUNT
Vibration Monitoring of the 9 blasts in January, 2018 at the Loomis Trunk Line Project in Loomis, California.	9	1,000.00	9,000.00
Video Taping of the 9 blasts in January, 2018 at the Loomis Trunk Line Project in Loomis, California.	9	100.00	900.00
	< 198.00		

POSTED  
1/31/18

Pd 2/8/2018  
9702.00/x

Thank you for the opportunity to again be of service.	<b>Total Due This Invoice</b>	<b>\$9,900.00</b>
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# GASCH GEOPHYSICAL SERVICES, INC.

CONSULTANTS IN GEOPHYSICS  
FOR THE ENGINEERING, GROUNDWATER  
ENVIRONMENTAL AND BLASTING INDUSTRIES.

74 LUYUNG DRIVE, BUILDING #2

LANCHO CORDOVA, CALIFORNIA 95742 U.S.A.  
(916) 635-8906 • FAX (916) 635-8907

# Invoice

<b>DATE</b>	<b>INVOICE #</b>
3/1/2018	2018-559

CLIENT PURCHASE ORDER #

Vibration monitoring and video taping of the blasts at the Loomis Trunk Line Project in Loomis California

BILL TO:

T&S Construction Co., Inc.  
Attn: Accounts Payable  
3108 Hedge Avenue  
Sacramento, California 95829

<b>TERMS</b>	<b>DUE DATE</b>	<b>GGSI PROJECT #</b>
2% Net 30	3/31/2018	2017-28.02

SERVICES PREFORMED	QUANTITY	RATE	AMOUNT
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Vibration Monitoring of the 6 blasts in February, 2018 at the Loomis Trunk Line Project in Loomis, California.

Video Taping of the 6 blasts in February, 2018 at the Loomis Trunk Line Project.

**RECEIVED**  
MAR 05 2018  
BY:.....

**POSTED**  
3/6/18

6

6

1706  
380

1,000.00

100.00

2%  
<132.00>

6,000.00

600.00

Thank you for the opportunity to again be of service.	<b>Total Due This Invoice</b>	<b>\$6,600.00</b>
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- Copy -



**GASCH GEOPHYSICAL SERVICES, INC.**  
CONSULTANTS IN GEOPHYSICS  
FOR THE ENGINEERING, GROUNDWATER  
ENVIRONMENTAL AND BLASTING INDUSTRIES.

3174 LUYUNG DRIVE, BUILDING #2  
RANCHO CORDOVA, CALIFORNIA 95742 U.S.A.  
(916) 635-8906 • FAX (916) 635-8907

# Invoice

<b>DATE</b>	<b>INVOICE #</b>
4/3/2018	2018-567

CLIENT PURCHASE ORDER #

Vibration monitoring and video taping of the blasts at the Loomis Trunk Line Project in Loomis California

BILL TO:

T&S Construction Co., Inc.  
Attn: Accounts Payable  
3108 Hedge Avenue  
Sacramento, California 95829

<b>TERMS</b>	<b>DUE DATE</b>	<b>GGSI PROJECT #</b>
2% Net 30	5/3/2018	2017-28.02

SERVICES PERFORMED	QUANTITY	RATE	AMOUNT
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Vibration Monitoring of the 3 blast in March, 2018 at the Loomis Trunk Line Project in Loomis, California	3	1,000.00	3,000.00
Video taping of the 3 blasts in March, 2018 at the Loomis Trunk Line Project	3	100.00	300.00

**RECEIVED**  
APR 06 2018  
BY: .....

charge for  
1 EACH  
+ the other 2  
ARE FOR TULIP /  
WILLIAMS  
RE - BLAST

Thank you for the opportunity to again be of service.	<b>Total Due This Invoice</b>	<b>\$3,300.00</b>
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**GASCH GEOPHYSICAL SERVICES, INC.**  
 CONSULTANTS IN GEOPHYSICS  
 FOR THE ENGINEERING, GROUNDWATER  
 ENVIRONMENTAL AND BLASTING INDUSTRIES.

3174 LUYUNG DRIVE, BUILDING #2  
 RANCHO BORDOVA, CALIFORNIA 95742 U.S.A.  
 (916) 635-8906 • FAX (916) 635-8907

# Invoice

<b>DATE</b>	<b>INVOICE #</b>
3/12/2018	2018-562

**RECEIVED**

MAR 14 2018

CLIENT PURCHASE ORDER #

Pre-Blast Condition Survey  
 Phase 2 - Dias Lane  
 Loomis Trunk Line Project

BILL TO:

T&S Construction Co., Inc.  
 Attn: Accounts Payable  
 3108 Hedge Avenue  
 Sacramento, California 95829

<b>TERMS</b>	<b>DUE DATE</b>	<b>GGSI PROJECT #</b>
2% Net 30	4/11/2018	2017-28.04

SERVICES PERFORMED	QUANTITY	RATE	AMOUNT
Pre-Blast Condition Survey of 2 homes on Dias Lane for the Loomis Trunk Line Project.	2	400.00	800.00
Generation of Report for the pre-blast condition survey on Dias Lane, Phase 2.	2	100.00	200.00

*SOUTH END  
 DIAS*

**Total Due This Invoice**

**\$1,000.00**



**GASCH GEOPHYSICAL SERVICES, INC.**  
 CONSULTANTS IN GEOPHYSICS  
 FOR THE ENGINEERING, GROUNDWATER  
 ENVIRONMENTAL AND BLASTING INDUSTRIES.

3174 LUYUNG DRIVE, BUILDING #2  
 RANCHO CORDOVA, CALIFORNIA 95742 U.S.A.  
 (916) 635-8906 • FAX (916) 635-8907

# Invoice

<b>DATE</b>	<b>INVOICE #</b>
1/5/2018	2017-548

CLIENT PURCHASE ORDER #

Pre-Blast Condition Survey  
 on Dias Lane for the Loomis  
 Trunk Line Project in Loomis, CA

BILL TO:

T&S Construction Co., Inc.  
 Attn: Accounts Payable  
 3108 Hedge Avenue  
 Sacramento, California 95829

<b>TERMS</b>	<b>DUE DATE</b>	<b>GGSI PROJECT #</b>
2% Net 30	2/4/2018	2017-28.03

SERVICES PERFORMED	QUANTITY	RATE	AMOUNT
--------------------	----------	------	--------

Pre-Blast Condition Survey of 4 homes on Dias Lane for the Loomis Trunk Line Project.	4	400.00	1,600.00
Generation of Report of Findings for the 4 home in the Pre-Blast Condition Survey on Dias Lane.	4	100.00	400.00

*NORTH END  
 DIAS*

JAN 10 2018

1706  
 380

**POSTED**  
 1/12/18

Progress billing, Thank you for your business.	<b>Total Due This Invoice</b>	<b>\$2,000.00</b>
--	-------------------------------	-------------------

dba Western Blasting Technologies  
 2689 Hwy 20  
 Marysville, CA 95901

Date	Invoice #
12/12/2017	3119

Bill To
T & S Construction 6108 Hedge Avenue Sacramento, CA 95829

Art posted

DEC 21 2017

POSTED  
 12/21/17

Description	Amount
Drill and blast as directed at Loomis Diversion Trunkline Project	
November 22, 2017 <i>PETHY BOULDER</i>	
4 hours @ \$180.00/hr - Blasters Helper	720.00
4 hours @ \$180.00/hr - Blasters Helper	720.00
4 hours @ \$205.00/hr - Licensed Blaster/Foreman	820.00
4.5 hours @ \$205.00/hr - Explosives Transportation	922.50
.5 hours @ \$31.00/hr - Overtime	15.50
Explosives	750.86
Seismograph 3 units @ \$125.00/day each	375.00
Video Taping of Shots @ \$125/day	125.00
15 Blast Mats @ \$35.00/day each	525.00
November 27, 2017 <i>DIAZ</i>	
3 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	840.00
8 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	2,240.00
November 28, 2017 <i>DIAZ</i>	
8 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	2,240.00
2 hours @ \$205.00/hr - Foreman/Licensed Blaster	410.00
6 hours @ \$280.00/hr - Operated Self Contained Track Drill - D28	1,680.00
November 29, 2017 <i>DIAZ</i>	
3 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	840.00
8 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	2,240.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
5.5 hours @ \$205.00/hr - Foreman/Licensed Blaster	1,127.50
November 30, 2017 <i>DIAZ</i>	
6.5 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	1,820.00
.5 hours @ \$180.00/hr - Fuel and water	90.00
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,960.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
5 hours @ \$205.00/hr - Foreman/Licensed Blaster	1,025.00
3 hours @ \$205.00/hr - Explosives Transportation	615.00
December 1, 2017 <i>DIAZ</i>	
.5 hours @ \$180.00/hr - Fuel and water	90.00
7.5 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	2,100.00

✓ 3,080

✓ 4,330

✓ 5,647.50

✓ 6,950

Thank you for your business!

**Total**

dba Western Blasting Technologies  
 2689 Hwy 20  
 Marysville, CA 95901

Date	Invoice #
12/12/2017	3119

Bill To
T & S Construction 6108 Hedge Avenue Sacramento, CA 95829

Description	Amount
8 hours @ \$180.00/hr - Chucktender	1,440.00
.5 hours @ \$180.00/hr - Fuel and water	90.00
7.5 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	2,100.00
5 hours @ \$205.00/hr - Licensed Blaster/Foreman	1,025.00
2 hours @ \$205.00/hr - Licensed Blaster/Shot Design	410.00
December 4, 2017 DIAZ	
2 hours @ \$180.00/hr - Casing and shot prep	360.00
7 hours @ \$180.00/hr - Chucktender	1,260.00
1 hours @ \$31.00/hr - Overtime	31.00
1 hours @ \$180.00/hr - Fuel and water	180.00
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,960.00
December 5, 2017 DIAZ	
1 hours @ \$180.00/hr - Shot prep	180.00
4 hours @ \$180.00/hr - Casing holes and blow pipe	720.00
2 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	560.00
1 hours @ \$180.00/hr - Road clean-up	180.00
1 hours @ \$180.00/hr - water and drill layout	180.00
6 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,680.00
1 hours @ \$180.00/hr - Road clean-up	180.00
7 hours @ \$180.00/hr - Blow pipe and helper	180.00
1 hours @ \$180.00/hr - Road clean-up	180.00
December 6, 2017 DIAZ	
.5 hours @ \$180.00/hr - water and layout	90.00
7.5 hours @ \$180.00/hr - Chucktender	1,350.00
.5 hours @ \$180.00/hr - layout	90.00
6.5 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,820.00
1 hours @ \$180.00/hr - Road clean-up	180.00
.5 hours @ \$180.00/hr - oil and water	90.00
6.5 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	1,820.00
1 hours @ \$180.00/hr - Road clean-up	180.00
December 7, 2017 DIAZ	
.5 hours @ \$180.00/hr - Road closure	90.00
4.5 hours @ \$180.00/hr - laying casing	810.00
3 hours @ \$180.00/hr - Chucktender	540.00
Thank you for your business!	<b>Total</b>

dba Western Blasting Technologies  
 2689 Hwy 20  
 Marysville, CA 95901

Date	Invoice #
12/12/2017	3119

Bill To
T & S Construction 6108 Hedge Avenue Sacramento, CA 95829

Description	Amount
.5 hours @ \$180.00/hr - layout	90.00
6.5 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,820.00
5 hours @ \$180.00/hr - Chucktender	900.00
2 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	560.00
1 hours @ \$180.00/hr - Road clean-up	180.00
1 hours @ \$180.00/hr - Road clean-up	180.00
5 hours @ \$205.00/hr - Foreman/Licensed Blaster	1,025.00
3 hours @ \$205.00/hr - Explosives Transportation — DEDUCT	<del>615.00</del>
5 hours @ \$205.00/hr - Shot Design/Meeting Randy Messer	1,250.00
December 8, 2017 DIAZ	
8.5 hours @ \$180.00/hr - Blasters Helper	1,530.00
.5 hours @ \$31.00/hr - Overtime	15.50
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
9 hours @ \$205.00/hr - Licensed Blaster/Foreman	1,845.00
1 hours @ \$31.00/hr - Overtime	31.00
4.5 hours @ \$205.00/hr - Explosives Transportation	922.50
4.5 hours @ \$31.00/hr - Overtime	139.50
Explosives	4,202.41
180 3" stem plugs @ \$.73/each	131.40
15 Blast Mats @ \$35.00/day each	525.00
2 Seismograph @ \$125.00/day	250.00
Video Taping of Shots @ \$125/day	125.00
Total due and payable within 30 days of date of invoice. Customer agrees to pay finance charges of 1.5% per month on all past due balances. Customer further agrees to pay reasonable attorney's fees and cost if collection is required. Venue for purposes of this obligation shall be Yuba County, CA.	
Thank you for your business!	<b>Total</b> \$67,784.67

P & R Resources, Inc.

# Invoice

dba Western Blasting Technologies  
 2689 Hwy 20  
 Marysville, CA 95901

Date	Invoice #
1/2/2018	3128

Bill To
T & S Construction 6108 Hedge Avenue Sacramento, CA 95829

POSTED  
 AVE

JAN 1 1 2018

Description	Amount
Drill and blast as directed at Loomis Diversion Trunkline Project	
December 11, 2017 <i>D I A S</i>	
2 hours @ \$180.00/hr - Chucktender	360.00
5 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	1,400.00
7 hours @ \$180.00/hr - Blasters Helper	1,260.00
7 hours @ \$180.00/hr - Blasters Helper	1,260.00
1 hours @ \$180.00/hr - Road Clean-up	180.00
1 hours @ \$180.00/hr - Road Clean-up	180.00
1 hours @ \$180.00/hr - Road Clean-up	180.00
5 hours @ \$205.00/hr - Foreman/Licensed Blaster	1,025.00
3 hours @ \$205.00/hr - Explosives Transportation	615.00
December 12, 2017 <i>D I A S</i>	
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$205.00/hr - Licensed Blaster/Foreman	1,640.00
4.5 hours @ \$205.00/hr - Explosives Transportation	922.50
4.5 hours @ \$31.00/hr - Overtime	139.50
Explosives	3,544.45
Seismograph 3 units @ \$125.00/day	375.00
Video Taping of Shots @ \$125/day	125.00
15 Blast Mats @ \$35.00/day each	525.00
December 13, 2017 <i>13 E H 7</i>	
.5 hours @ \$180.00/hr - Road closure	90.00
4 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	1,120.00
.5 hours @ \$180.00/hr - Layout	90.00
6.5 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,820.00
1 hours @ \$180.00/hr - Road Clean-up	180.00
7 hours @ \$180.00/hr - Chucktender	1,260.00
1 hours @ \$180.00/hr - Road Clean-up	180.00
4 hours @ \$205.00/hr - Foreman/Licensed Blaster	820.00
4 hours @ \$205.00/hr - Explosives Transportation	820.00
Thank you for your business!	
<b>Total</b>	

*1706*  
*109.5*

POSTED  
 1/16/18

✓  
*6,460*

✓  
*13,030*

✓  
*6,380*



P & R Resources, Inc.

dba Western Blasting Technologies  
 2689 Hwy 20  
 Marysville, CA 95901

# Invoice

Date	Invoice #
1/2/2018	3128

<b>Bill To</b>
T & S Construction 6108 Hedge Avenue Sacramento, CA 95829

Description	Amount
December 14, 2017 <i>BETH</i>	
.5 hours @ \$180.00/hr - Road closure	90.00
8.5 hours @ \$180.00/hr - Blasters Helper	1,530.00
1 hours @ \$31.00/hr - Overtime	31.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
5.5 hours @ \$180.00/hr - Blasters Helper	990.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8.5 hours @ \$205.00/hr - Licensed Blaster/Foreman	1,742.50
.5 hours @ \$31.00/hr - Overtime	15.50
4.5 hours @ \$205.00/hr - Explosives Transportation	922.50
4.5 hours @ \$31.00/hr - Overtime	139.50
15 Blast Mats @ \$35.00/day each	525.00
Explosives	3,317.43
Seismograph 3 units @ \$125.00/day	375.00
Video Taping of Shots @ \$125/day	125.00
December 15, 2017 <i>BETH</i>	
.5 hours @ \$180.00/hr - Road Closure	90.00
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	1,960.00
1 hours @ \$180.00/hr - Road Clean-up	180.00
.5 hours @ \$31.00/hr - Overtime	15.50
.5 hours @ \$180.00/hr - Layout	90.00
6.5 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,820.00
1 hours @ \$180.00/hr - Road Clean-up	180.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
7 hours @ \$205.00/hr - Foreman/Licensed Blaster	1,435.00
December 18, 2017 <i>BETH</i>	
1.5 hours @ \$180.00/hr - Road Closure and water to drill	270.00
6 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	1,680.00
.5 hours @ \$180.00/hr - Road Clean-up	90.00
4.5 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,260.00
1 hours @ \$180.00/hr - Road Clean-up	180.00
6 hours @ \$180.00/hr - Chucktender	1,080.00
December 19, 2017 <i>BETH</i>	
4 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,120.00
Thank you for your business!	
<b>Total</b>	

dba Western Blasting Technologies  
 2689 Hwy 20  
 Marysville, CA 95901

Date	Invoice #
1/2/2018	3128

<b>Bill To</b>
T & S Construction 6108 Hedge Avenue Sacramento, CA 95829

Description	Amount
1 hours @ \$180.00/hr - Road Clean-up and Closure	180.00
.5 hours @ \$180.00/hr - Layout	90.00
6.5 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	1,820.00
1 hours @ \$180.00/hr - Road Clean-up	180.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
December 20, 2017 <i>BETH</i>	
1.5 hours @ \$180.00/hr - Road Closure and Layout	270.00
6.5 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	1,820.00
.5 hours @ \$180.00/hr - Road Clean-up	90.00
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,960.00
1 hours @ \$180.00/hr - Road Clean-up	180.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
December 21, 2017 <i>BETH</i>	
6 hours @ \$180.00/hr - Blasters Helper	1,080.00
2 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	560.00
6 hours @ \$180.00/hr - Blasters Helper	1,080.00
2 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	560.00
6 hours @ \$180.00/hr - Blasters Helper	1,080.00
2 hours @ \$180.00/hr - Chucktender	360.00
6 hours @ \$180.00/hr - Blasters Helper	1,080.00
2 hours @ \$180.00/hr - Chucktender	360.00
7.5 hours @ \$205.00/hr - Licensed Blaster/Foreman	1,537.50
4.5 hours @ \$205.00/hr - Explosives Transportation	922.50
4 hours @ \$31.00/hr - Overtime	124.00
15 Blast Mats @ \$35.00/day each	525.00
Explosives	2,519.04
Seismograph 2 units @ \$125.00/day	250.00
Video Taping of Shots @ \$125/day	125.00
December 22, 2017 <i>BETH</i>	
.5 hours @ \$180.00/hr - Layout	90.00
7.5 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	2,100.00
.5 hours @ \$180.00/hr - Layout	90.00
7.5 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	2,100.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
Thank you for your business!	<b>Total</b>

P & R Resources, Inc.

dba Western Blasting Technologies  
2689 Hwy 20  
Marysville, CA 95901

# Invoice

Date	Invoice #
1/2/2018	3128

Bill To
T & S Construction 6108 Hedge Avenue Sacramento, CA 95829

Description	Amount
8 hours @ \$205.00/hr - Foreman/Licensed Blaster Total due and payable within 30 days of date of invoice. Customer agrees to pay finance charges of 1.5% per month on all past due balances. Customer further agrees to pay reasonable attorney's fees and cost if collection is required. Venue for purposes of this obligation shall be Yuba County, CA.	1,640.00
Thank you for your business!	<b>Total</b> \$80,538.42

P & R Resources, Inc.

dba Western Blasting Technologies  
 2689 Hwy 20  
 Marysville, CA 95901

# Invoice

Date	Invoice #
1/19/2018	3130

<b>Bill To</b>
T & S Construction 6108 Hedge Avenue Sacramento, CA 95829

*POSTED  
 AX*

Description	Amount
Drill and blast as directed at Loomis Diversion Trunkline Project	
✓ January 2, 2018 <i>DIAZ</i>	
2 hours @ \$180.00/hr - Shot prep	360.00
6 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,680.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
3 hours @ \$205.00/hr - Explosives Transportation	615.00
✓ January 3, 2018 <i>DIAZ</i>	
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$205.00/hr - Licensed Blaster/Foreman	1,640.00
4.5 hours @ \$205.00/hr - Explosives Transportation	922.50
4.5 hours @ \$31.00/hr - Overtime	139.50
Explosives	3,360.33
15 Blast Mats @ \$35.00/day each	525.00
Video Taping of Shots @ \$125/day	125.00
2 units @ Seismograph @ \$125.00/day	250.00
60 units of 2.5" Stem Plugs @ \$1.06	63.60
✓ January 4, 2018 <i>DIAZ</i>	
8.5 hours @ \$180.00/hr - Blasters Helper	1,530.00
.5 hours @ \$31.00/hr - Overtime	15.50
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$205.00/hr - Licensed Blaster/Foreman	1,640.00
4.5 hours @ \$205.00/hr - Explosives Transportation	922.50
4.5 hours @ \$31.00/hr - Overtime	139.50
Explosives	3,726.93
15 Blast Mats @ \$35.00/day each	525.00
Video Taping of Shots @ \$125/day	125.00
2 Seismograph @ \$125.00/day	250.00
60 units of 2.5" Stem Plugs @ \$1.06	63.60
Thank you for your business!	<b>Total</b>

*4,095*

*17,784*

*13,255*

P & R Resources, Inc.

dba Western Blasting Technologies  
 2689 Hwy 20  
 Marysville, CA 95901

# Invoice

Date	Invoice #
1/19/2018	3130

Bill To
T & S Construction 6108 Hedge Avenue Sacramento, CA 95829

Description	Amount
✓ January 5, 2018 DIAZ	
8.5 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	2,380.00
.5 hours @ \$31.00/hr - Overtime	15.50
8 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	2,240.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
3 hours @ \$205.00/hr - Licensed Blaster/Foreman - Shot Design	615.00
5 hours @ \$205.00/hr - Deliver Blast Mat to site	1,025.00
✓ January 8, 2018 DIAZ	
4 hours @ \$280.00/hr - Operated Self Contained Track Drill - D28	1,120.00
4 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,120.00
4 hours @ \$180.00/hr - Chucktender	720.00
4 hours @ \$180.00/hr - Chucktender	720.00
✓ January 9, 2018 DIAZ	
6 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	1,680.00
6 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,680.00
6 hours @ \$180.00/hr - Chucktender	1,080.00
6 hours @ \$180.00/hr - Chucktender	1,080.00
1 hours @ \$205.00/hr - Foreman/Licensed Blaster	205.00
4 hours @ \$205.00/hr - Explosives Transportation	820.00
360 linear feet @ \$6.50/lf of trench-line(10 x 10 pattern)	2,340.00
✓ January 10, 2018 DIAZ	
1.5 hours @ \$180.00/hr - Road closure and layout	270.00
6.5 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	1,820.00
1.5 hours @ \$180.00/hr - Road closure and layout	270.00
6.5 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,820.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
✓ January 11, 2018 DIAZ	
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	1,960.00
1 hours @ \$180.00/hr - Road clean-up	180.00
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,960.00
1 hours @ \$180.00/hr - Road clean-up	180.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
Thank you for your business!	<b>Total</b>

P & R Resources, Inc.  
 dba Western Blasting Technologies  
 2689 Hwy 20  
 Marysville, CA 95901

# Invoice

Date	Invoice #
1/19/2018	3130

Bill To
T & S Construction 6108 Hedge Avenue Sacramento, CA 95829

JAN 24 2018

Description	Amount
January 12, 2018 <i>PIAZ</i> 7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29 1 hours @ \$180.00/hr - Lay-out and clean-up 7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27 1 hours @ \$180.00/hr - Fuel, water and layout 8 hours @ \$180.00/hr - Chucktender Total due and payable within 30 days of date of invoice. Customer agrees to pay finance charges of 1.5% per month on all past due balances. Customer further agrees to pay reasonable attorney's fees and cost if collection is required. Venue for purposes of this obligation shall be Yuba County, CA.	<div style="text-align: right;"> <i>✓</i>  <i>5,720</i>            1,960.00            180.00            1,960.00            180.00            1,440.00         </div>
<i>1706</i> <hr/> <i>102.5</i>	<b>POSTED</b> <i>1/25/18</i>
Thank you for your business!	<b>Total</b> \$70,359.46

# Invoice

P & R Resources, Inc.

dba Western Blasting Technologies  
 2689 Hwy 20  
 Marysville, CA 95901

Date	Invoice #
2/5/2018	3133

<b>Bill To</b>
T & S Construction 6108 Hedge Avenue Sacramento, CA 95829

FEB 16 2018

*AVT POSTED*

Description	Amount
Drill and blast as directed at Loomis Diversion Trunkline Project	
January 15, 2018 ✓	
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	1,960.00
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,960.00
1 hours @ \$180.00/hr - Road Clean-up	180.00
1 hours @ \$180.00/hr - Road Clean-up	180.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
January 16, 2018 ✓	
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	1,960.00
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,960.00
1 hours @ \$180.00/hr - Road Clean-up	180.00
1 hours @ \$180.00/hr - Road Clean-up	180.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
January 17, 2018 ✓	
9.5 hours @ \$180.00/hr - Blasters Helper	1,710.00
1.5 hours @ \$31.00/hr - Overtime	46.50
9 hours @ \$180.00/hr - Blasters Helper	1,620.00
1 hours @ \$31.00/hr - Overtime	31.00
9 hours @ \$180.00/hr - Blasters Helper	1,620.00
1 hours @ \$31.00/hr - Overtime	31.00
9 hours @ \$180.00/hr - Blasters Helper	1,620.00
1 hours @ \$31.00/hr - Overtime	31.00
9 hours @ \$205.00/hr - Licensed Blaster/Foreman	1,845.00
1 hours @ \$31.00/hr - Overtime	31.00
5 hours @ \$205.00/hr - Explosives Transportation	1,025.00
5 hours @ \$31.00/hr - Overtime	155.00
16 Blast Mats @ \$35.00/day each	560.00
2 Seismograph @ \$125.00/day	250.00
1 Video Taping of Shots @ \$125/day	125.00
Explosives	3,103.13
January 18, 2018 ✓	
9 hours @ \$180.00/hr - Blasters Helper	1,620.00
<b>Total</b>	

POSTED  
2/5/18

5,720

7,160

13,803

Thank you for your business!

**Total**

# Invoice

P & R Resources, Inc.

dba Western Blasting Technologies  
 2689 Hwy 20  
 Marysville, CA 95901

Date	Invoice #
2/5/2018	3133

<b>Bill To</b>
T & S Construction 6108 Hedge Avenue Sacramento, CA 95829

Description	Amount
1 hours @ \$31.00/hr - Overtime	31.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$205.00/hr - Licensed Blaster/Foreman	1,640.00
5 hours @ \$205.00/hr - Explosives Transportation	1,025.00
5 hours @ \$31.00/hr - Overtime	155.00
16 Blast Mats @ \$35.00/day each	560.00
60 units @ \$1.06/ea	63.60
1 Video Taping of Shots @ \$125/day	125.00
2 Seismograph @ \$125.00/day	250.00
<b>Explosives</b>	<b>3,829.82</b>
<b>January 19, 2018</b>	
8 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	1,960.00
1 hours @ \$180.00/hr - Road clean-up	180.00
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,960.00
1 hours @ \$180.00/hr - Road clean-up	180.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
9 hours @ \$205.00/hr - Foreman/Licensed Blaster	1,845.00
1 hours @ \$31.00/hr - Overtime	31.00
<b>January 22, 2018</b>	
8.5 hours @ \$180.00/hr - Blasters Helper	1,530.00
.5 hours @ \$31.00/hr - Overtime	15.50
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$205.00/hr - Licensed Blaster/Foreman	1,640.00
4 hours @ \$205.00/hr - Explosives Transportation	820.00
4 hours @ \$31.00/hr - Overtime	124.00
4 hours @ \$205.00/hr - Randy Messer - shot design and meeting	820.00
16 Blast Mats @ \$35.00/day each	560.00
36 units @ \$1.06/ea	38.16
1 Video Taping of Shots @ \$125/day	125.00
Thank you for your business!	<b>Total</b>

✓  
13,615

✓  
9,036

✓  
12,276



# Invoice

P & R Resources, Inc.

dba Western Blasting Technologies  
 2689 Hwy 20  
 Marysville, CA 95901

Date	Invoice #
2/5/2018	3133

<b>Bill To</b> T & S Construction 6108 Hedge Avenue Sacramento, CA 95829
---

Description	Amount
2 Seismograph @ \$125.00/day	250.00
Explosives	2,034.96
January 23, 2018 ✓	
8.5 hours @ \$180.00/hr - Blasters Helper	1,530.00
.5 hours @ \$31.00/hr - Overtime	15.50
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$205.00/hr - Licensed Blaster/Foreman	1,640.00
5 hours @ \$205.00/hr - Explosives Transportation	1,025.00
5 hours @ \$31.00/hr - Overtime	155.00
16 Blast Mats @ \$35.00/day each	560.00
44 units @ \$1.06/ea	46.64
1 Video Taping of Shots @ \$125/day	125.00
2 Seismograph @ \$125.00/day	250.00
Explosives	2,809.32
January 24, 2018 ✓	
3 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	840.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$205.00/hr - Licensed Blaster/Foreman	1,640.00
January 25, 2018 ✓	
8.5 hours @ \$180.00/hr - Blasters Helper	1,530.00
.5 hours @ \$31.00/hr - Overtime	15.50
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$205.00/hr - Licensed Blaster/Foreman	1,640.00
5 hours @ \$205.00/hr - Explosives Transportation	1,025.00
16 Blast Mats @ \$35.00/day each	560.00
60 units @ \$1.06/ea	63.60
2 Seismograph @ \$125.00/day	250.00
Explosives	3,424.41
January 26, 2018 ✓	
5 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27 - Test Drilling	1,400.00
Thank you for your business!	<b>Total</b>

Handwritten notes and totals:

- 12,475 (Total for Jan 23-24)
- 3,920 (Total for Jan 24-25)
- 12,527 (Total for Jan 25-26)
- 3,580 (Total for Jan 26)

# Invoice

P & R Resources, Inc.  
dba Western Blasting Technologies  
2689 Hwy 20  
Marysville, CA 95901

Date	Invoice #
2/5/2018	3133

Bill To
T & S Construction 6108 Hedge Avenue Sacramento, CA 95829

Description	Amount
2 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	560.00
1 hours @ \$180.00/hr - Road clean-up	180.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
Thank you for your business!	<b>Total</b> \$94,421.64

P & R Resources, Inc.

dba Western Blasting Technologies  
 2689 Hwy 20  
 Marysville, CA 95901

# Invoice

Date	Invoice #
2/19/2018	3140

Bill To
T & S Construction 6108 Hedge Avenue Sacramento, CA 95829

FEB 26 2018

*Art Posted*

Description	Amount
Drill and blast as directed at Loomis Diversion Trunkline Project	
January 29, 2018	
1 hours @ \$180.00/hr - Layout	180.00
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,960.00
1 hours @ \$180.00/hr - Road Clean-up	180.00
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	1,960.00
1 hours @ \$180.00/hr - Road Clean-up	180.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
January 30, 2018	
9 hours @ \$180.00/hr - Blasters Helper	1,620.00
1 hours @ \$31.00/hr - Overtime	31.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
9 hours @ \$205.00/hr - Licensed Blaster/Foreman	1,845.00
1 hours @ \$31.00/hr - Overtime	31.00
5 hours @ \$205.00/hr - Explosives Transportation	1,025.00
5 hours @ \$31.00/hr - Overtime	155.00
16 Blast Mats @ \$35.00/day each	560.00
57 units @ \$1.06/ea	60.42
1 Video Taping of Shots @ \$125/day	125.00
2 Seismograph @ \$125.00/day	250.00
Explosives	3,356.47
January 31, 2018	
9 hours @ \$180.00/hr - Blasters Helper	1,620.00
1 hours @ \$31.00/hr - Overtime	31.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
6 hours @ \$180.00/hr - Blasters Helper	1,080.00
2 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	560.00
8 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	2,240.00
8 hours @ \$205.00/hr - Licensed Blaster/Foreman	1,640.00
4.5 hours @ \$205.00/hr - Explosives Transportation	922.50
4.5 hours @ \$31.00/hr - Overtime	139.50
Thank you for your business!	<b>Total</b>

*5,900*

*13,375*

*12,483*

**POSTED**  
3/1/18

*1706*  
*109.5*

P & R Resources, Inc.

dba Western Blasting Technologies  
 2689 Hwy 20  
 Marysville, CA 95901

# Invoice

Date	Invoice #
2/19/2018	3140

Bill To
T & S Construction 6108 Hedge Avenue Sacramento, CA 95829

Description	Amount
16 Blast Mats @ \$35.00/day each	560.00
32 units @ \$1.06/ea	33.92
1 Video Taping of Shots @ \$125/day	125.00
2 Seismograph @ \$125.00/day	250.00
Explosives	1,843.50
February 1, 2018	
1 hours @ \$180.00/hr - Layout	180.00
6 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,680.00
8 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	2,240.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
February 2, 2018	
8 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	2,240.00
1 hours @ \$180.00/hr - Layout	180.00
8 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	2,240.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
2 hours @ \$205.00/hr - Licensed Blaster/Foreman - Blast Design	410.00
February 5, 2018	
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,960.00
1 hours @ \$180.00/hr - Road Clean-up	180.00
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	1,960.00
1 hours @ \$180.00/hr - Road Clean-up	180.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
4 hours @ \$205.00/hr - Foreman/Licensed Blaster	820.00
4 hours @ \$205.00/hr - Licensed Blaster/Foreman - Meeting Randy Messer	820.00
February 6, 2018	
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	1,960.00
1 hours @ \$180.00/hr - Road Clean-up	180.00
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,960.00
1 hours @ \$180.00/hr - Road Clean-up	180.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
3 hours @ \$205.00/hr - Explosives Transportation	615.00
February 7, 2018	
Thank you for your business!	
<b>Total</b>	

✓ 6,195.00  
 ✓ 6,151.00  
 ✓ 7,360.00  
 ✓ 7,775.00

P & R Resources, Inc.

dba Western Blasting Technologies  
 2689 Hwy 20  
 Marysville, CA 95901

# Invoice

Date	Invoice #
2/19/2018	3140

Bill To
T & S Construction 6108 Hedge Avenue Sacramento, CA 95829

Description	Amount
8.5 hours @ \$180.00/hr - Blasters Helper	1,530.00
.5 hours @ \$31.00/hr - Overtime	15.50
6 hours @ \$180.00/hr - Blasters Helper	1,080.00
2 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	560.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$205.00/hr - Licensed Blaster/Foreman	1,640.00
4.5 hours @ \$205.00/hr - Explosives Transportation	922.50
4.5 hours @ \$31.00/hr - Overtime	139.50
16 Blast Mats @ \$35.00/day each	560.00
56 units @ \$1.06/ea	59.36
1 Video Taping of Shots @ \$125/day	125.00
3 Seismograph @ \$125.00/day	375.00
Explosives	3,390.89
February 8, 2018	
8.5 hours @ \$180.00/hr - Blasters Helper	1,530.00
.5 hours @ \$31.00/hr - Overtime	15.50
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$205.00/hr - Licensed Blaster/Foreman	1,640.00
5 hours @ \$205.00/hr - Explosives Transportation	1,025.00
5 hours @ \$31.00/hr - Overtime	155.00
16 Blast Mats @ \$35.00/day each	560.00
56 units @ \$1.06/ea	59.36
1 Video Taping of Shots @ \$125/day	125.00
3 Seismograph @ \$125.00/day	375.00
Explosives	3,339.11
375 Air Compressor for blowing water out of blast holes before loading.	270.00
February 9, 2018	
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	1,960.00
1 hours @ \$180.00/hr - Road Clean-up	180.00
1 hours @ \$180.00/hr - Chucktender	180.00
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,960.00
Thank you for your business!	
<b>Total</b>	

✓  
13,275

✓  
13,413

✓  
5,900

P & R Resources, Inc.

dba Western Blasting Technologies  
2689 Hwy 20  
Marysville, CA 95901

# Invoice

Date	Invoice #
2/19/2018	3140

Bill To
T & S Construction 6108 Hedge Avenue Sacramento, CA 95829

Description	Amount
1 hours @ \$180.00/hr - Road Clean-up	180.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
Total due and payable within 30 days of date of invoice. Customer agrees to pay finance charges of 1.5% per month on all past due balances. Customer further agrees to pay reasonable attorney's fees and cost if collection is required. Venue for purposes of this obligation shall be Yuba County, CA.	
Thank you for your business!	<b>Total</b> \$92,981.03

P & R Resources, Inc.

964

# Invoice

dba Western Blasting Technologies  
2689 Hwy 20  
Marysville, CA 95901

Date	Invoice #
3/1/2018	3144

Bill To
T & S Construction 6108 Hedge Avenue Sacramento, CA 95829

AVX  
POSTED

**RECEIVED**  
MAR 07 2018  
BY: .....

Description	Amount
Drill and blast as directed at Loomis Diversion Trunkline Project	
<b>February 12, 2018</b>	
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,960.00
1 hours @ \$180.00/hr - Road Clean-up	180.00
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	1,960.00
1 hours @ \$180.00/hr - Road-up Clean-up	180.00
1 hours @ \$180.00/hr - Lay-out	180.00
<b>February 13, 2018</b>	
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	1,960.00
1 hours @ \$180.00/hr - Road Clean-up	180.00
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,960.00
1 hours @ \$180.00/hr - Road Clean-up	180.00
4 hours @ \$180.00/hr - Chucktender	720.00
4 hours @ \$180.00/hr - Chucktender	720.00
<b>February 14, 2018</b>	
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,960.00
1 hours @ \$180.00/hr - Road Clean-up	180.00
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D28	1,960.00
1 hours @ \$180.00/hr - Road Clean-up	180.00
4 hours @ \$180.00/hr - Lay-out and road clean-up	720.00
4 hours @ \$180.00/hr - Chucktender	180.00
<b>February 15, 2018</b>	
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,960.00
1 hours @ \$180.00/hr - Road clean-up and mob	180.00
8 hours @ \$280.00/hr - Operated Self Contained Track Drill - D28	2,240.00
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	1,960.00
1 hours @ \$180.00/hr - Road clean-up and mob	180.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
<b>February 16, 2018</b>	
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,960.00
1 hours @ \$180.00/hr - Road clean-up	180.00
8 hours @ \$280.00/hr - Operated Self Contained Track Drill - D28	2,240.00
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	1,960.00
<b>Total</b>	<b>17,060</b>

1706  
109.5

3181.8

P & R Resources, Inc.

# Invoice

dba Western Blasting Technologies  
 2689 Hwy 20  
 Marysville, CA 95901

Date	Invoice #
3/1/2018	3144

Bill To
T & S Construction 6108 Hedge Avenue Sacramento, CA 95829

**RECEIVED**  
 MAR 07 2018  
 BY:.....

*AUT  
 POSTED*

Description	Amount
5.5 hours @ \$31.00/hr - Overtime	170.50
1 Video Taping of Shots @ \$125/day	125.00
2 Seismograph @ \$125.00/day	250.00
375 Air Compressor for blowing water out of blast holes before loading	270.00
16 Blast Mats @ \$35.00/day each	560.00
Explosives	1,325.99
February 23, 2018	
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
7 hours @ \$180.00/hr - Blasters Helper	1,260.00
7 hours @ \$180.00/hr - Blasters Helper	1,260.00
8 hours @ \$205.00/hr - Licensed Blaster/Foreman	1,640.00
4 hours @ \$205.00/hr - Explosives Transportation	820.00
4 hours @ \$31.00/hr - Overtime	124.00
375 Air Compressor for blowing water out of blast holes before loading.	270.00
16 Blast Mats @ \$35.00/day each	560.00
28 units @ \$1.06/ea	29.68
1 Video Taping of Shots @ \$125/day	125.00
3 Seismograph @ \$125.00/day	375.00
Explosives	1,360.05
Total due and payable within 30 days of date of invoice. Customer agrees to pay finance charges of 1.5% per month on all past due balances. Customer further agrees to pay reasonable attorney's fees and cost if collection is required. Venue for purposes of this obligation shall be Yuba County, CA.	
Thank you for your business!	<b>Total</b> \$74,888.85

*U  
 10,703*



P & R Resources, Inc.

# Invoice

dba Western Blasting Technologies  
 2689 Hwy 20  
 Marysville, CA 95901

Date	Invoice #
3/1/2018	3144

<b>Bill To</b>
T & S Construction 6108 Hedge Avenue Sacramento, CA 95829

**RECEIVED**  
 MAR 07 2018  
 BY: .....

*Aux  
 posted*

Description	Amount
1 hours @ \$180.00/hr - Road clean-up	180.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
February 20, 2018	
9.5 hours @ \$180.00/hr - Blasters Helper	1,710.00
1.5 hours @ \$31.00/hr - Overtime	46.50
9 hours @ \$180.00/hr - Blasters Helper	1,620.00
1 hours @ \$31.00/hr - Overtime	31.00
8.5 hours @ \$180.00/hr - Blasters Helper	1,530.00
.5 hours @ \$31.00/hr - Overtime	15.50
8.5 hours @ \$180.00/hr - Blasters Helper	1,530.00
.5 hours @ \$31.00/hr - Overtime	15.50
8 hours @ \$205.00/hr - Licensed Blaster/Foreman	1,640.00
6 hours @ \$205.00/hr - Explosives Transportation	1,230.00
6 hours @ \$31.00/hr - Overtime	186.00
375 Air Compressor for blowing water out of blast holes before loading.	270.00
16 Blast Mats @ \$35.00/day each	560.00
1 Video Taping of Shots @ \$125/day	125.00
3 Seismograph @ \$125.00/day	375.00
Explosives	3,382.88
February 21, 2018	
6 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,680.00
2 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27 - tram	560.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
8 hours @ \$280.00/hr - Operated Self Contained Track Drill - D28	2,240.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
February 22, 2018	
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
1.5 hours @ \$180.00/hr - Road clean-up	2.25
1.5 hours @ \$31.00/hr - Overtime	46.50
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
8 hours @ \$205.00/hr - Licensed Blaster/Foreman	1,640.00
5.5 hours @ \$205.00/hr - Explosives Transportation	1,127.50
Thank you for your business!	
<b>Total</b>	

*✓  
 14,265*

*✓  
 7,360*

*✓  
 11,275*

P & R Resources, Inc.

dba Western Blasting Technologies  
 2689 Hwy 20  
 Marysville, CA 95901

*Arts  
 Copy*

# Invoice

Date	Invoice #
3/12/2018	3157

Bill To
T & S Construction 6108 Hedge Avenue Sacramento, CA 95829

**RECEIVED**  
 MAR 15 2018  
 BY: .....

*POSTED  
 ART*

Description	Amount
Drill and blast as directed at Loomis Diversion Trunkline Project	
February 26, 2018	
4 men(2 hours each) = 8 hours @ \$180.00/hr - Show-up	1,440.00
February 27, 2018	
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,960.00
1 hours @ \$180.00/hr - Road-Cleanup	180.00
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	1,960.00
1 hours @ \$180.00/hr - Road Cleanup	180.00
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D28	1,960.00
1 hours @ \$180.00/hr - Road Cleanup	180.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
February 28, 2018	
8 hours @ \$180.00/hr - Blasters Helper	1,440.00
9 hours @ \$180.00/hr - Blasters Helper	1,620.00
1 hours @ \$31.00/hr - Overtime	31.00
9 hours @ \$180.00/hr - Blasters Helper	1,620.00
1 hours @ \$31.00/hr - Overtime	31.00
9 hours @ \$180.00/hr - Blasters Helper	1,620.00
1 hours @ \$31.00/hr - Overtime	31.00
8 hours @ \$205.00/hr - Licensed Blaster/Foreman	1,640.00
6 hours @ \$205.00/hr - Explosives Transportation	1,230.00
6 hours @ \$31.00/hr - Overtime	186.00
375 Air Compressor for blowing water out of holes before loading	270.00
16 Blast Mats @ \$35.00/day each	560.00
56 units @ \$1.06/ea	59.36
1 Video Taping of Shots @ \$125/day	125.00
3 Seismograph @ \$125.00/day	375.00
Explosives	3,027.50
March 5, 2018	
5 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,400.00
1 hours @ \$180.00/hr - Road Cleanup	180.00
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D28	1,960.00
Thank you for your business!	
<b>Total</b>	

*9,300*

*13,865*

*8,940*

P & R Resources, Inc.

dba Western Blasting Technologies  
 2689 Hwy 20  
 Marysville, CA 95901

# Invoice

Date	Invoice #
3/12/2018	3157

Bill To
T & S Construction 6108 Hedge Avenue Sacramento, CA 95829

**RECEIVED**  
 MAR 15 2018  
 BY: .....

*POSTED  
 AVT*

Description	Amount
1 hours @ \$180.00/hr - Road Cleanup	180.00
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	1,960.00
1 hours @ \$180.00/hr - Road Cleanup	180.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
8 hours @ \$205.00/hr - Foreman/Licensed Blaster	1,640.00
March 6, 2018	
5 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,400.00
1 hours @ \$180.00/hr - Road Cleanup	180.00
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D28	1,960.00
1 hours @ \$180.00/hr - Road Cleanup	180.00
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	1,960.00
1 hours @ \$180.00/hr - Road Cleanup	180.00
8 hours @ \$205.00/hr - Foreman/Licensed Blaster	1,640.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
March 7, 2018	
4 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,120.00
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D28	1,960.00
1 hours @ \$180.00/hr - Road Cleanup	180.00
7 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	1,960.00
1 hours @ \$180.00/hr - Road Cleanup	180.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
March 8, 2018	
4 hours @ \$280.00/hr - Operated Self Contained Track Drill - D27	1,120.00
4 hours @ \$180.00/hr - Chucktender	720.00
5 hours @ \$280.00/hr - Operated Self Contained Track Drill - D29	1,400.00
8 hours @ \$280.00/hr - Operated Self Contained Track Drill - D28	2,240.00
5 hours @ \$205.00/hr - Foreman/Licensed Blaster	1,025.00
March 9, 2018	
10.5 hours @ \$280.00/hr - Operated Self Contained Track Drill - D28	2,940.00
2.5 hours @ \$31.00/hr - Overtime	77.50
10 hours @ \$180.00/hr - Chucktender	1,800.00
2 hours @ \$31.00/hr - Overtime	62.00
March 10, 2018	
Thank you for your business!	<b>Total</b>

*RALEX'S*

*✓ 5940*

*✓ 61840*

*✓ 6505*

*✓ 4899*

P & R Resources, Inc.

# Invoice

dba Western Blasting Technologies  
2689 Hwy 20  
Marysville, CA 95901

Date	Invoice #
3/12/2018	3157

<b>Bill To</b>
T & S Construction 6108 Hedge Avenue Sacramento, CA 95829

*POSTED  
AUT*

**RECEIVED**  
MAR 15 2018  
BY: .....

Description	Amount
8 hours @ \$280.00/hr - Operated Self Contained Track Drill - D28	2,240.00
8 hours @ \$31.00/hr - Overtime	248.00
8 hours @ \$180.00/hr - Chucktender	1,440.00
8 hours @ \$31.00/hr - Overtime	248.00
<p>Total due and payable within 30 days of date of invoice. Customer agrees to pay finance charges of 1.5% per month on all past due balances. Customer further agrees to pay reasonable attorney's fees and cost if collection is required. Venue for purposes of this obligation shall be Yuba County, CA.</p>	
<p><i>Not in this CCO</i></p>	
<p><i>4,176</i></p>	
Thank you for your business!	<b>Total</b> \$63,446.36



1035

P.O. Box 6407  
Rohnert Park, CA 94927-6407  
Branch Contact: 916-386-8347 Fax 916-386-8674  
Accounting & Credit: 855-306-5689

DATE SHIPPED	INVOICE DATE	INVOICE NUMBER	PAGE
03/14/18	03/19/18	064317000.5	1

# INVOICE

SOLD TO

CUST# (28714-31)  
T & S CONST / LOOMIS DIVERSION  
\*\* JOB #1706 \*\*  
6108 HEDGE AVENUE  
SACRAMENTO, CA 95829

SHIP TO

T & S CONST / LOOMIS DIVERSION  
DIAS LANE, BRASE ROAD, BETTY LANE  
LOOMIS, CA 95650

CUSTOMER PURCHASE ORDER	JOB NAME	SHIPPED VIA	TERMS	TAXABLE ITEMS			
1706		OUR TRUCK	2%10TH NET 25TH				
PART/DESCRIPTION	ORDER	SHIP	LIST	MULT	EXTENSION		
PVPSCH40212 2 1/2 X 20 BE PVC SCH40 PIPE	1200	1200	151.33	NET	1815.96		
INSTRUCTIONS: ** MASTER RELEASE OF ORDER# (064317000) **							
<div data-bbox="365 871 673 1060" data-label="Text"> <p><b>RECEIVED</b> MAR 22 2018 BY: .....</p> </div> <div data-bbox="544 1386 690 1501" data-label="Text"> <p>1706 310</p> </div> <div data-bbox="885 1459 1193 1564" data-label="Text"> <p><b>POSTED</b> 3/22/18</p> </div> <div data-bbox="1356 1281 1599 1627" data-label="Text"> <p>1,947.62 - 1,200.00 = 747.62</p> </div>							
THIS INVOICE IS SUBJECT TO ALL TERMS AND CONDITIONS ON THE FACE AND REVERSE		GROSS	TAX%	SALES TAX	SHIPPING & HANDLING	OTHER CHARGES	INVOICE TOTAL
		1815.96	7.250	131.66	0.00	0.00	1947.62

Material Signed for by: Mike S 03/19/18

**PCO-Changed Conditions I-80 Bore & Jack**

**Contract:** SPMUD-Loomis Diversion Trunkline

**Date of Work:** TBD  
**Submitted:** 3/27/2018

**Contractor:** T&S Construction Co, Inc.

**Description:** PCO #6- I-80 Bore & Jack changed conditions

Number	Equipment	Hours	Rate	Extended
				\$0.00
				\$0.00
				\$0.00
				\$0.00
				\$0.00
				\$0.00
				\$0.00
				\$0.00
				\$0.00
				\$0.00
				\$0.00
				\$0.00
				\$0.00
				\$0.00
				\$0.00
Sub-Total:				\$0.00

LABOR	Hours	Rate	Extended
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
Sub-Total:			\$0.00

Materials	Qty	Unit Price	Extended
			\$0.00
			\$0.00
			\$0.00
			\$0.00
Sub-Total:			\$0.00

Sub Contractors	Qty	Unit Price	Extended
Walter C. Smith	239	\$1,030.00	\$246,170.00
*See attached quotation			\$0.00
Sub-Total:			\$246,170.00

Labor	\$0.00
Equipment	\$0.00
Subcontractors	\$246,170.00
Materials	\$0.00
Markup - Labor (15%)	\$0.00
Markup - Equipment (15%)	\$0.00
Markup - Subcontractors (5%)	\$12,308.50
Markup - Materials (15%)	\$0.00
Bond & Special Insurance (1.0%)	\$2,584.79
<b>Total Cost of This Report:</b>	<b>\$261,063.29</b>
<b>Additional Contract Days:</b>	<b>0 Days</b>

March 22, 2018  
File No. 17-075



Anthony Spinella  
Project Manager  
**T&S CONSTRUCTION CO., INC.**  
6100 Hedge Ave,  
Sacramento, CA 95829

---

HORIZONTAL BORING  
TUNNELING  
PIPE JACKING  
MICROTUNNELING  
DIRECTIONAL DRILLING  
PIPE RAMMING

---

P.O. Box 1047  
Clovis, California 93613  
Phone: (559) 299-9727  
Fax: (559) 299-4723  
[www.waltercsmith.com](http://www.waltercsmith.com)  
CCL 288799

**SUBJECT:** Loomis Diversion Trunk line Project  
**SPMUD**  
Loomis, California

Re: *Changed Conditions @ I-80 bore crossing*

Gentlemen,

With the excavation of the jacking pit for the I-80 crossing, a hard rock material was encountered at the horizon of the pipeline casing. This is contrary to the contract documents, and therefore, is a changed condition.

T&S Construction Company has encountered what appears to be granite in the jacking pit for the pipeline crossing of the I-80 (239-ft of 36-in OD-WSP). A core sample from the jacking pit and pipeline horizon was delivered to Geocon Consultants, Inc. for evaluation; they reported the compressive strength to be 6,396-psi. T&S Construction forwarded this information to Walter C. Smith Co, Inc. (WCS) via email and WCS discussed this data with Akkerman, Inc. and Midwest Mole [An equipment manufacturer and a tunnel construction company, respectively, with extensive experience in rock boring].

The consensus is that a hard rock drilling tool is required for the I-80 crossing and we recommend the Robbins SBU with the drilling equipment on-site. Literature about the Robbins SBU is attached for your ready reference.

The Robbins SBU (Small Boring Unit) mixed ground cutting head operates in rock strengths of (4,000 to 25,000-psi) with specialized muck openings for discharge of material such as grindings, dirt, cobble to pass through and not stop excavation. A Concrete floor and starter block will be poured to stabilize the launch as well as the horizontal bore machine and rail system during casing installation. The SBU will be launched and line and grade will be checked as needed for monitoring the line and grade of advanced casing segments.

Based on the plan outlined above using a Robbins SBU (Small Boring Unit), disc cutter dressing(s), concrete floor and starter block as well as other equipment for the overall installation the additional expense for this change is \$246,170.

---

**WE'RE BORING PEOPLE & PROUD OF IT**

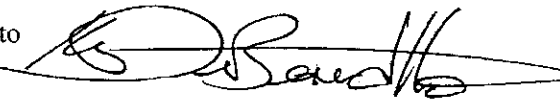
Loomis Diversion Trunk line Project  
**SPMUD**  
Loomis, California

Original unit 'bid' price:	\$1,245-plf	239-lf	\$ 297,555.
This Change 'total' unit price:	\$2,275-plf		\$ 543,725.
Net increase:	\$1,030-plf		\$ 246,170.

Should you have any questions or if you wish to discuss this matter in greater detail, please contact me at your earliest convenience.

Very truly yours,  
**WALTER C. SMITH CO., INC.**

Kyle DeBenedetto  
Project Manager





# SMALL BORING UNITS

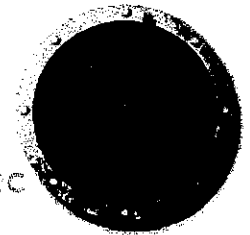
## SMALL BORING MACHINES

SBUS

MOTORIZED SBUS

ROCKHEAD

SBU-RC



## Imagine using the best rock excavating technology on your next project

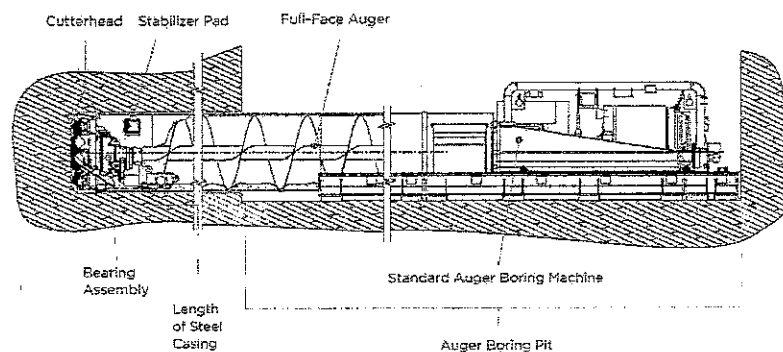
Own or rent the Robbins Small Boring Unit (SBU-A) and experience the most time and cost effective way to bore through hard rock. The Robbins SBU-A has been proven on hundreds of jobsites across the country. Beat your competition on the bid, impress the job owner, and walk away more profitable when you use the Robbins SBU-A on your next job.

No other company exists that knows more about excavating hard rock. And no other company makes a

rock bores.

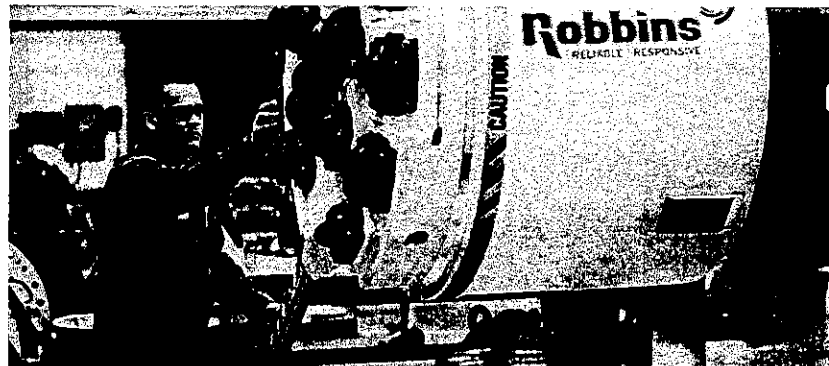
Many contractors around the U.S. have successfully used this equipment. Some contractors own nearly every size SBU-A that Robbins manufactures.

## What is the Robbins SBU-A?



The SBU-A is a small diameter cutterhead and thrust bearing assembly (from 24 in / 600 mm to 72 in / 1.8 m) that can be used with any auger boring machine (ABM) from 36 in (900 mm) to 72 in (1.8 m). The SBU-A is welded to the lead casing. The contractor-supplied auger pilots directly onto a taper hex shaft in the thrust bearing assembly. The SBU-A contains a high-thrust bearing and is equipped with mini disc cutters available in three sizes depending on your project. It can be steered to maintain line and grade.

## THE RIGHT MACHINE FOR YOUR JOB: DIAMETERS, LENGTHS, AND STRENGTHS



ABOUT PRODUCTS PARTS & SERVICE PROJECT SOLUTIONS

Search



NEWS & MEDIA CONTACT

DIAMETERS AVAILABLE RANGING FROM 24"  
(600 MM) TO 72" (1.8 M)

DOWNLOAD THE  
SPEC SHEET

Small Boring  
Unit:  
Download  
the Spec  
Sheet

The SBU-A and all component parts are readily available in any bore diameter with standard English (inch) or metric (mm) casing sizes in stock.

THE SBU-A CAN INSTALL DRIVES OVER 500  
FT (150 M) IN LENGTH

The majority of the crossings are 100 to 300 ft (30 to 90 m) long; however, there have been several contractors that have utilized the SBU on drives over 500 ft (150 m) in length. The length of the drive depends on the ground conditions. Talk to a Robbins rep to discuss what the SBU is capable of on your specific job.

THE SBU-A CAN BORE THROUGH ROCK 4,000  
- 25,000 PSI UCS (25 - 170 MPA)

That means you can excavate rock without the hassle of pneumatic hammers or other less effective tools. You will be able to excavate rock faster on small diameter drives than any other method available. You will be able to excavate rock at a lower price due to the efficiency of the disc cutter.

FIND OUT NOW:

Is an SBU  
Right for  
Your Project?

FEATURED CASE  
STUDY

Long-  
Distance  
SBU-A  
Crossing

more

"This was an awesome piece of equipment. I was very impressed with the construction quality of this

machine, and if I came across another job that required this technology I would use it

boulders, an alternative cutterhead is available. Depending on the conditions, mixed ground cutterheads can feature a combination of single disc cutters or two-row tungsten carbide insert cutters and carbide cutter bits. Specialized larger muck openings allow the cobbles and boulders to pass through without stopping excavation.

## FEATURES AND BENEFITS

### THE SBU-A HAS A RUGGED CUTTERHEAD WITH CUTTER SADDLES

The cutterhead is a smaller version of Robbins' innovative hard rock tunnel boring machines (TBMs). The cutterhead is specifically configured to cut hard rock.

### THE SBU-A HAS PATENTED MINI DISC GAGE CUTTERS THAT WILL LAST THE ENTIRE BORE

### MUCK IS REMOVED EITHER BY AN AUGER, MUCK CAR, OR SMALL CONVEYOR

There are two simple methods to take out the excavated material from the drive. For shorter drives, the auger can be used to remove spoil. Muck cars can be an economic option on shorter drives also. On longer drives, a small conveyor system can be installed. The best decision is highly dependent on your project requirements.

### STEER THE SBU-A WITH INTEGRAL

Construction, on site  
SBU-A

A SOLUTION FOR  
EVERY CONDITION:  
SEARCH OUR  
PROJECT DATABASE

**Project Map**



Sign up for the  
Robbins  
Newsletter

cut in the same method that TBMs excavate rock. They are available in 6.5", 9.5", and 11.5" sizes, depending on your project requirements. There is so much force placed from the tip of the cutter onto the rock that it displaces the force by creating small fractures in the rock. Those fractures break the rock into chips.

control line and grade, it is possible to install gravity sewers. The machine is not steered through the entire bore. Instead the stabilizer shoes are adjusted through the first 20 to 40 feet (6 to 12 m) of the bore to get the machine in the right direction. The stabilizer shoes come standard on SBU-As 30" (762 mm) and larger.

OUR HISTORY

**A Legacy of  
Innovation**