



**BOLTON
& MENK**

Real People. Real Solutions.

1960 Premier Drive
Mankato, MN 56001-5900

Ph: (507) 625-4171
Fax: (507) 625-4177
Bolton-Menk.com

MEMORANDUM

Date: September 3, 2019
To: Bob Van Moer, Wastewater Treatment Superintendent
From: Jon D. Peterson, P.E., Project Engineer
Subject: Wastewater Treatment Facility Improvements – Magney Construction Inc.
Pay Request No. 2
City of Marshall, Minnesota
Project No.: T22.115360

INTRODUCTION

Pay Request No.2 for the above-referenced project in the amount of \$512,171.01 is being submitted for approval.

DISCUSSION

This pay application covers work completed on the project through August 31, 2019. The Contractor has nearly completed excavation of the sludge storage structure and has begun placing structural fill material. This pay application also covers on site storage of reinforcing steel, which has been delivered to the site. Placement of the reinforcing steel is expected to begin the first half of September. We recommend approval of the attached Request for Payment No.1.

BUDGET IMPACT

This expenditure is part of the overall wastewater treatment facility improvements project, and will be covered by the PFA loan proceeds.

ACTION REQUESTED

Approve the attached pay request from Magney Construction Inc. in the total amount of \$512,171.01.

Application for Payment No. 2

To: The City of Marshall, MN

From: Magney Construction, Inc., 1401 Park Road, Chanhassen, MN 55317

Contract: _____

Project: Wastewater Treatment Facility Improvements

Owners Contract No. _____ Engineer's Project No. T22.115360
Date of this Invoice: 8/27/2019
Invoice Work Period: Aug 1-31, 2019

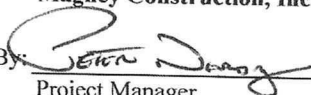
1) Original Contract amount	\$14,074,300.00
2) Change Orders to date	\$0.00
3) Revised Contract amount	\$14,074,300.00
4) Value completed to date	\$938,916.38
5) Materials stored on site	\$30,165.00
6) Total Earned to date	\$969,081.38
7) Amount retained	\$48,454.07
8) Amount previously paid	\$408,456.30
Amount due this Payment	\$512,171.01

Accompanying Documentation:

CONTRACTOR'S Certification:

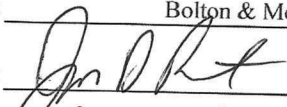
The undersigned CONTRACTOR certifies that (1) all previous progress payments received from OWNER on account of work done under the Contract referred to above have been applied on account to discharge CONTRACTOR'S legitimate obligations incurred in connection with Work covered by prior Applications for Payment numbered 1 through 1 inclusive; (2) title of all work, materials and equipment incorporated in said Work otherwise listed in or covered by this Application for Payment will pass to OWNER at time of payment free and clear of all Liens, security interest or encumbrance (except such as are recovered by a Bond acceptable to OWNER indemnifying OWNER against any such Lien, security interest or encumbrance); and (3) all Work covered by this Application for Payment is in accordance by the Contract Documents and not defective.

Magney Construction, Inc. (Contractor)

By: 
Project Manager

Payment of the above AMOUNT DUE THIS APPLICATION is recommended.

Owner: City of Marshall Engineer: Bolton & Menk

By: _____ By: 

Date: _____ Date: 9-3-19

Contractor: Magney Construction, Inc.
 Owner: City of Marshall, MN
 Project: Wastewater Treatment Facility Improvements
 BMI Project No. T22.115360

Date of Application:
 Work Completed Through:

APPLICATION FOR PAYMENT SCHEDULE

Spec. Section	Pay Application #2 Description of Work	Scheduled Value	Work Previous Application	Completed This Application	Materials Presently Stored	Total Completed & Stored to Date	% Complete	Balance To Finish
0520	Bond & Insurance	\$ 168,892	168,892.00	0.00	0.00	168,892.00	100%	0.00
1000	Mobilization	\$ 696,545	208,963.00	208,963.00	0.00	417,926.00	60%	278,619.00
1010	Supervision & General Conditions	\$ 276,000	6,000.00	13,000.00	0.00	19,000.00	7%	257,000.00
1020	General Construction Allowance	\$ 250,000	0.00	0.00	0.00	0.00	0%	250,000.00
1021	Building Permit Allowance	\$ 10,000	0.00	7,499.38	0.00	7,499.38	75%	2,500.62
2060	Demolition of Existing WWTP Facilities: Trickling Filter Pump Station Top Trickling Filter Pump Station Pumps/Piping Sludge Control Structure Control Building Pumps and Piping Blower Building Blowers and Piping Trickling Filter Roof/Media/Rotary Distributor Aeration Equipment and Piping Intermediate Clarifier Equipment Dewatering Finish Grading	\$ 4,650 \$ 3,480 \$ 13,540 \$ 5,850 \$ 6,420 \$ 62,460 \$ 17,500 \$ 26,417 \$ 19,555 \$ 14,320 \$ 71,200	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 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 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% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	4,650.00 3,480.00 13,540.00 5,850.00 6,420.00 62,460.00 17,500.00 26,417.00 19,555.00 14,320.00 71,200.00
2140	Structure Excavation - Final Clarifier and Splitter Box	\$ 133,600	2,500.00	125,000.00	0.00	127,500.00	95%	6,100.00
2210	Structure Excavation - Sludge Storage Structure	\$ 91,500	0.00	0.00	0.00	0.00	0%	91,500.00
2220	Backfill of Structures - Final Clarifier and Splitter Box	\$ 172,620	0.00	65,000.00	0.00	65,000.00	38%	107,620.00
2221A	Backfill of Structures - Sludge Storage Structure	\$ 12,400	0.00	6,500.00	0.00	6,500.00	52%	5,900.00
2370	Erosion and Sediment Control	\$ 565,333	3,500.00	18,000.00	0.00	21,500.00	4%	543,833.00
2550	Bypass Piping	\$ 49,504	0.00	0.00	0.00	0.00	0%	49,504.00
2600	Roads, Walks and Curbs	\$ 22,540	0.00	0.00	0.00	0.00	0%	22,540.00
2800	Fencing	\$ 12,200	0.00	0.00	0.00	0.00	0%	12,200.00
2920	Seeding	\$ 6,100	0.00	0.00	0.00	0.00	0%	6,100.00
3200	Rebar - Materials	\$ 678,400	0.00	0.00	30,165.00	30,165.00	4%	648,235.00
3201	Rebar - Labor	\$ 457,600	0.00	0.00	0.00	0.00	0%	457,600.00
3300	Concrete Work Clarifier Splitter Structure	\$ 71,760	0.00	0.00	0.00	0.00	0%	71,760.00
	Final Clarifier	\$ 214,650	0.00	0.00	0.00	0.00	0%	214,650.00
	Control Structure	\$ 29,075	0.00	0.00	0.00	0.00	0%	29,075.00
	Sludge Storage Tank	\$ 2,180,839	0.00	0.00	0.00	0.00	0%	2,180,839.00
	Miscellaneous Concrete	\$ 1,860.00	0.00	0.00	0.00	0.00	0%	1,860.00
3410	Precast Double Tees	\$ 448,980	0.00	0.00	0.00	0.00	0%	448,980.00

APPLICATION FOR PAYMENT SCHEDULE

Spec. Section	Description of Work	Pay Application #2	Scheduled Value	Work Previous Application	Completed This Application	Materials Presently Stored	Total Completed & Stored to Date	% Complete	Balance To Finish
3411	Precast Hollow Core Planks		W/Double Tees						
3460	Precast Non-Architectural Wall Panels		W/Double Tees						
5100	Structural Metals, Misc Metals and Handrail		\$ 456,850	0.00	0.00	0.00	0.00	0%	456,850.00
5500	Access Hatches		\$ 7,820	0.00	0.00	0.00	0.00	0%	7,820.00
7535	Fully Adhered Membrane Roofing & Sheet Metal		\$ 279,400	0.00	0.00	0.00	0.00	0%	279,400.00
7900	Joint Sealant		\$ 1,600	0.00	0.00	0.00	0.00	0%	1,600.00
8110	Hollow Metal Doors, Frames and Hardware		\$ 22,540	0.00	0.00	0.00	0.00	0%	22,540.00
9960	Painting		\$ 299,000	0.00	0.00	0.00	0.00	0%	299,000.00
10400	Identifying Devices		\$ 3,690	0.00	0.00	0.00	0.00	0%	3,690.00
11213	Vertical Non-Clog Solids Handling Pumps		\$ 212,600	0.00	0.00	0.00	0.00	0%	212,600.00
11214	Vertical Turbine Pumps		\$ 143,100	0.00	0.00	0.00	0.00	0%	143,100.00
11311	Submersible Centrifugal Pumps		\$ 17,400	0.00	0.00	0.00	0.00	0%	17,400.00
11312	Replace Vaughan Chopper Pump		\$ 36,400	0.00	0.00	0.00	0.00	0%	36,400.00
11316	Progressive Cavity Pumps		\$ 54,750	0.00	0.00	0.00	0.00	0%	54,750.00
11321	Grit Separation Equipment		\$ 96,560	0.00	0.00	0.00	0.00	0%	96,560.00
11351	Clarifier Equipment - Suction Type Clarifier		\$ 428,500	0.00	0.00	0.00	0.00	0%	428,500.00
11365	Gravity Actuated Rotary Distributor		\$ 135,840	0.00	0.00	0.00	0.00	0%	135,840.00
11366	Trickling Filter Media		\$ 345,600	0.00	0.00	0.00	0.00	0%	345,600.00
11372	Blower Allowance		\$ 650,000	0.00	0.00	0.00	0.00	0%	650,000.00
11372	Blower System (Positive Displacement w/ Enclosure)		\$ 4,630	0.00	0.00	0.00	0.00	0%	4,630.00
11374	Fine Pore Membrane Aeration Equipment		\$ 82,900	0.00	0.00	0.00	0.00	0%	82,900.00
11376	Hybrid Blower System		\$ 6,800	0.00	0.00	0.00	0.00	0%	6,800.00
13126	Circular Tank Covers		\$ 185,300	0.00	0.00	0.00	0.00	0%	185,300.00
13262	Long Term Storage Mixing System		\$ 266,500	0.00	0.00	0.00	0.00	0%	266,500.00
13263	ATAD Equipment Replacement		\$ 140,000	0.00	0.00	0.00	0.00	0%	140,000.00
13263	ATAD Equipment Installation		\$ 29,850	0.00	0.00	0.00	0.00	0%	29,850.00
13320	Blower Master Control Panel		\$ 900	0.00	0.00	0.00	0.00	0%	900.00
13890	Slide Gates		\$ 10,500	0.00	0.00	0.00	0.00	0%	10,500.00
13900	Fiberglass Baffles and Weir Plates		\$ 31,200	0.00	0.00	0.00	0.00	0%	31,200.00
14620	Portable Hoist		\$ 9,200	0.00	0.00	0.00	0.00	0%	9,200.00
15060	Process Piping - Materials		\$ 307,200	40,099.00	0.00	0.00	40,099.00	13%	267,101.00
15060	Process Piping - Labor		\$ 172,800	0.00	10,000.00	0.00	10,000.00	6%	162,800.00
15100	Valves - Materials		\$ 744,040	0.00	0.00	0.00	0.00	0%	744,040.00
15130	Gauges		\$ 1,600	0.00	0.00	0.00	0.00	0%	1,600.00
15140	Pipe Supports and Anchors		\$ 11,600	0.00	0.00	0.00	0.00	0%	11,600.00
15150	Stainless Steel Manways w/ Blind Flanges		\$ 34,500	0.00	0.00	0.00	0.00	0%	34,500.00

Contractor: Magney Construction, Inc.
 Owner: City of Marshall, MN
 Project: Wastewater Treatment Facility Improvements
 BMI Project No. T22.115360

Date of Application:
 Work Completed Through:

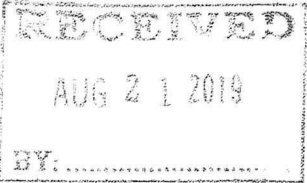
APPLICATION FOR PAYMENT SCHEDULE

Spec. Section	Pay Application #2 Description of Work	Scheduled Value	Work Previous Application	Completed This Application	Materials Presently Stored	Total Completed & Stored to Date	% Complete	Balance To Finish
15250	Plumbing	\$ 14,800	0.00	0.00	0.00	0.00	0%	14,800.00
15500	HVAC	\$ 97,800	0.00	0.00	0.00	0.00	0%	97,800.00
16010	Electrical - Mobilization, Permits and Job Overhead	\$ 100,000	0.00	50,000.00	0.00	50,000.00	50%	50,000.00
16100	Basic Materials and Methods	\$ 260,575	0.00	0.00	0.00	0.00	0%	260,575.00
16150	Motors	\$ 20,000	0.00	0.00	0.00	0.00	0%	20,000.00
16400	Electrical Distribution	\$ 83,000	0.00	0.00	0.00	0.00	0%	83,000.00
16900	Starters and Motor Control Centers	\$ 463,000	0.00	0.00	0.00	0.00	0%	463,000.00
16950	Instrumentation and Controls	\$ 958,165	0.00	0.00	0.00	0.00	0%	958,165.00
16990	Computer Allowance	\$ 50,000	0.00	0.00	0.00	0.00	0%	50,000.00
	Totals	14,074,300.00	429,954.00	508,962.38	30,165.00	969,081.38	7%	13,105,218.62
	Original Contract amount	0.00	14,074,300.00					
	Change Orders to date		0.00					
	Revised Contract amount		14,074,300.00					
	Value completed to date		938,916.38					
	Materials stored on site		30,165.00					
	Total Earned to date		969,081.38					
	Amount retained		48,454.07					
	Amount previously paid		408,456.30					
	Amount due this Payment		512,171.01					



Invoice

Plant: 720 First Street Southwest Phone: (651) 633-3337
 Mailing: P.O. Box 120267 Fax: (651) 633-2332
 New Brighton, MN 55112-0015



Invoice No / Date: 0003028089 8/15/2019
 Bill of Lading No / Date: 9082861 8/15/2019
 Sales Order No: 9084259
 Customer: MAGCON
 Job: 19179
 Salesperson:
 Contact: PAM Ext. 303
 Phone: (952) 474-1674

Sold To: _____ **Ship To:** _____

MAGNEY CONSTRUCTION, INC.
 1401 PARK ROAD
 CHANHASSEN, MN 55317-9592 USA

MARSHALL WWTF
 - IMPROVEMENTS -
 600 EAST ERIE ROAD
 *** 48 HR. DELIV. NOTICE REQ'D. ***
 @ Site: Martv Silvernail 612.518.7561
 MARSHALL, MN 56258-2704 USA

Customer P.O.	Ship Via	F.O.B.	Terms
550-3200	DAKOTA VALLEY TRUCKING	Jobsite/PREPAID	NET 30 DAYS

Item	Description	Qty Shipped	Price	Amount
Reinforcing Steel Per Release CC 6XE, Release 1, Drawing R1, SLUDGE LOWER SLAB/WALL REINF. RB	Black Rebar	50,829 lbs		27,963.00
*** MILL TEST REPORTS REQUIRED! ***				
Job #	Pd Date	Check #		
<u>550</u>	_____	_____		

Total Weight: 50,829 Lbs

Subtotal	27,963.00
Freight	0.00
LY-5% 139.82, MAR-5% 139.82, MN-6.875% 1922.46 Tax	2,202.10
Payment/Credit Amount	0.00
Balance	30,165.10



AUG 15 2019 Bill of Lading

Plant: 720 First Street Southwest
 Mailing: P.O. Box 120267
 New Brighton, MN 55112-0015

Phone: (651) 633-3337
 Fax: (651) 633-2332

Bill of Lading No: 9082861
 Ship Date: 8/15/2019

S MAGNEY CONSTRUCTION, INC.
 H MARSHALL WWTF
 I - IMPROVEMENTS -
 P 600 EAST ERIE ROAD
 *** 48 HR. DELIV. NOTICE REQ'D. ***
 T @ Site: Marty Silvermail 612.518.7561
 O MARSHALL, MN 56258-2704 USA

*Delivery to site
 8/15/19*

Customer: MAGCON
 Job Number: 19179
 Ship Via: Our Truck
 F.O.B.: Jobsite/PREPAID
 Customer P.O.: 550-3200

Contact:
 Phone:

Quantity Ordered	Quantity This Ship	UM	Description	Weight Lbs
SO #9084259			Reinforcing Steel Per Release CC 6XE, Release 1, Drawing R1, SLUDGE LOWER SLAB/WALL REINF.	
50.829	50.829	lbs	Black Rebar	50,829
			B#70408 MARTY:612-518-7561	
*** MILL TEST REPORTS REQUIRED! ***				
Prints req'd.: Y or N Detailer: _____				
Total Weight:				50,829

*Marty Silvermail
 8/15/19*

*Order placed
 8/15/19*

RECEIVED

Special Instructions:
 Requested Delivery Date: 8/15/2019

RECEIVED, subject to the classifications and tariffs in effect on the date of issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and conditions of contents of package unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment. Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by

Note: To obtain allowance for shortage or damage, customer must advise shipper within 5 days of receipt of material. Customer has absolutely no permission to refabricate material which will result in a back-charge to shipper without written consent of shipper.

Rebarfab, Inc.
 720 First Street Southwest
 PO Box 120267
 NEW BRIGHTON, MN 55112
 Phone: (651) 633-3337 FAX: (651) 633-2332

JOB NUMBER 19179	RELEASE NUMBER 1	REQ. DELIVERY DATE	PAGE 1 of 2
JOB NAME MARSHALL WWTF			CC 6XE
CUSTOMER MAGNEY CONSTRUCTION, INC.			BY AJS

MATERIAL TYPE Rebar, Grade 60, Black				REFERENCE CONTRACT				DRAWING ID R1				DESCRIPTION SLUDGE LOWER SLAB/WALL REINF.											
Item	Qty	Size	Length	Mark	Shape	Lbs	A	B	C	D	E	F/R	G	H	J	K	O	BC					

*** MILL TEST REPORTS REQUIRED! ***

1	32	7	30-00			1962													0
2	8	7	20-00			327													0
40.						2289.													
3	58	6	7-07	6A2	8	660	2-00	4-07					1-00						H08
4	14	6	6-00	6A18	17	126		3-00	3-00										H04
5	58	6	5-07	6A3	2	486	1-00	4-07											H04
6	576	6	5-06	6A8	2	4758	1-00	4-06											H04
7	28	6	5-02	6A22	2	217	1-00	4-02											H04
8	39	6	42-02			2470													0
9	8	6	39-05			474													0
10	14	6	38-06			810													0
11	175	6	30-00			7886													0
12	8	6	25-08			308													0
13	242	6	22-08			8240													0
14	29	6	19-08			827													0
15	8	6	13-08			164													0
16	60	6	6-08			601													0
17	8	6	4-08			56													0
1324.						28083.													
18	8	5	17-00	5A6	17	142		5-08	5-08	5-08									H06
19	8	5	13-00	5A7	17	108		4-04	4-04	4-04									H06
20	125	5	6-00	5A9	3	782		3-00	3-00				2-012			2-012			H01
21	56	5	5-06	5A13	17	321		1-00	4-06										H03
22	52	5	5-03	5A5	17	285		1-00	4-03										H03
23	42	5	4-08	5A14	17	205		2-04	2-04										H03
24	56	5	4-02	5A15	2	244	0-10	3-04											H03
25	50	5	4-00	5A16	17	209		2-00	2-00										H03
26	39	5	40-08			1654													0
27	8	5	38-05			321													0
28	133	5	30-00			4162													0
29	8	5	25-08			214													0
30	242	5	22-08			5722													0
31	8	5	13-08			114													0
32	14	5	8-04			122													0
33	576	5	6-04			3803													0
34	56	5	5-08			331													0
35	22	5	4-08			107													0
36	42	5	3-08			161													0
1545.						19007.													
37	186	4	6-05	4A4	25	798		1-06	1-023	1-00	1-023	1-06		1-021			0-071		C09
38	52	4	4-00	4A24	17	139		2-00	2-00										H02
39	32	4	3-10	4A23	17	82		1-11	1-11										H02
40	5	4	8-04			28													0

Rebarfab, Inc. 720 First Street Southwest PO Box 120267 NEW BRIDGHTON, MN 55112- Phone: (651) 633-3337 FAX: (651) 633-2332				JOB NUMBER 19179	RELEASE NUMBER 1	REQ. DELIVERY DATE	PAGE 2 of 2												
				JOB NAME MARSHALL WWTF	CC 6XE														
				CUSTOMER MAGNEY CONSTRUCTION, INC.	BY AJS														
MATERIAL TYPE Rebar, Grade 60, Black		REFERENCE CONTRACT		DRAWING ID R1		DESCRIPTION SLUDGE LOWER SLAB/WALL REINF.													
Item	Qty	Size	Length	Mark	Shape	Lbs	A	B	C	D	E	F/R	G	H	J	K	O	BC	
1	10	4	7-08			51												0	
2	10	4	5-08			38												0	
3	16	4	5-02			55												0	
4	21	4	4-08			66												0	
5	15	4	4-02			45												0	
6	36	4	3-10			92												0	
7	36	4	2-00			48												S	
						420.													1442.
8	4	3	5-04	3A1	25	8		1-06	0-081	1-00	0-081	1-06		0-08		0-04		C07	
						4.													8.

WEIGHT SUMMARY

TOTAL				STRAIGHT			LIGHT BENDING			HEAVY BENDING		
SIZE	ITEMS	PIECES	LBS	ITEMS	PIECES	LBS	ITEMS	PIECES	LBS	ITEMS	PIECES	LBS
Rebar, Grade 60, Black												
3	1	4	8	0	0	0	1	4	8	0	0	0
4	11	420	1,442	8	150	423	1	186	798	2	84	221
5	19	1545	19,007	11	1148	16,711	0	0	0	8	397	2,296
6	15	1324	28,083	10	590	21,836	0	0	0	5	734	6,247
7	2	40	2,289	2	40	2,289	0	0	0	0	0	0
	<u>48</u>	<u>3333</u>	<u>50,829</u>	<u>31</u>	<u>1928</u>	<u>41,259</u>	<u>2</u>	<u>190</u>	<u>806</u>	<u>15</u>	<u>1215</u>	<u>8,764</u>

Total Weight: 50.829 Lbs

Longest Length: 42-02



CMC STEEL TENNESSEE
1919 Tennessee Avenue
Knoxville TN 37921-2686

CERTIFIED MILL TEST REPORT
For additional copies call
865-202-5972/888-870-0766

We hereby certify that the test results presented here
are accurate and conform to the reported grade specification

Jim Hall
Jim Hall
Quality Assurance Manager

HEAT NO.: 7000166 SECTION: REBAR 22MM (#7) 60"0" 420/60 GRADE: ASTM A615-18s1 Gr 420/60 ROLL DATE: 05/19/2019 MELT DATE: 02/11/2019 Cert. No.: 82704704 / 000166L625	S O L D T O	Rebarfab Inc 720 First St SW New Brighton MN US 55112-7786 6516333337 65163332332	S H I P T O	Rebarfab Inc 1 MN Commercial Rail Siding New Brighton MN US 55112-0015 6516333337	Delivery#: 82704704 BOL#: 1778406 CUST PO#: 11176 CUST P/N: DLVRY LBS / HEAT: 38264.000 LB DLVRY PCS / HEAT: 312 EA
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Characteristic	Value	Characteristic	Value
C	0.35%	Rebar Deformation Avg. Spaci	0.532IN
Mn	0.52%	Rebar Deformation Avg. Heigh	0.052IN
P	0.009%	Rebar Deformation Max. Gap	0.136IN
S	0.058%		
Si	0.19%		
Cu	0.38%		
Cr	0.15%		
Ni	0.13%		
Mo	0.029%		
V	0.003%		
Sn	0.008%		
Yield Strength test 1	83.6ksi		
Yield Strength test 1 (metric)	576MPa		
Tensile Strength test 1	102.9ksi		
Tensile Strength 1 (metric)	709MPa		
Elongation test 1	13%		
Elongation Gage Lgth test 1	8IN		
Elongation Gage Lgth 1(metric)	200mm		
Bend Test 1	Passed		
<p>The Following is true of the material represented by this MTR:</p> <ul style="list-style-type: none"> *Material is fully killed *100% melted and rolled in the USA *EN10204:2004 3.1 compliant *Contains no weld repair *Contains no Mercury contamination *Manufactured in accordance with the latest version of the plant quality manual *Meets the "Buy America" requirements of 23 CFR635.410. 49 CFR 661 *Warning: This product can expose you to chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov 			

EMARKS :



CMC STEEL TENNESSEE
1919 Tennessee Avenue
Knoxville TN 37921-2686

CERTIFIED MILL TEST REPORT
For additional copies call
865-202-5972/888-870-0766

We hereby certify that the test results presented here
are accurate and conform to the reported grade specification

Jim Hall
Jim Hall
Quality Assurance Manager

HEAT NO.: 7000881	S	Rebarfab Inc	S	Rebarfab Inc	Delivery#: 82651492
SECTION: REBAR 16MM (#5) 60"0" 420/60	O	720 First St SW	H	1 MN Commercial Rail Siding	BOL#: 1747875
GRADE: ASTM A615-18e1 Gr 420/60	L	New Brighton MN	I	US 55112-0015	CUST PO#: 11155
ROLL DATE: 03/24/2019	D	US 55112-7786	P	6516333337	CUST P/N:
MELT DATE: 03/25/2019	T	6516333337	T		DLVRY LBS / HEAT: 56322.000 LB
Cert. No.: 82651492 / 000881L002	O	6516333332	O		DLVRY PCS / HEAT: 900 EA

Characteristic	Value	Characteristic	Value	Characteristic	Value
C	0.35%	Rebar Deformation Avg. Height	0.043IN	The Following is true of the material represented by this MTR: *Material is fully killed *100% melted and rolled in the USA *EN10204:2004 3.1 compliant *Contains no weld repair *Contains no Mercury contamination *Manufactured in accordance with the latest version of the plant quality manual *Meets the "Buy America" requirements of 23 C.F.R.635.410 *Warning: This product can expose you to chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov	
Mn	0.57%	Rebar Deformation Max. Gap	0.112IN		
P	0.012%				
S	0.052%				
Si	0.18%				
Cu	0.43%				
Cr	0.19%				
Ni	0.13%				
Mo	0.022%				
V	0.005%				
Sn	0.010%				
Yield Strength test 1	84.6ksi				
Yield Strength test 1 (metric)	583MPa				
Tensile Strength test 1	104.3ksi				
Tensile Strength 1 (metric)	719MPa				
Elongation test 1	11%				
Elongation Gage Lgth test 1	8IN				
Elongation Gage Lgth 1(metri	200mm				
Bend Test 1	Passed				
Rebar Deformation Avg. Spaci	0.373IN				

REMARKS:



ROCKY MOUNTAIN STEEL
A DIVISION OF EVRAZ INC. NA

2100 S. Broadway
Pueblo, CO 81008 USA

MATERIAL TEST REPORT

Date Printed: 24-OCT-16

Date Shipped: 24-OCT-16	Product: DEF #4 (1/2")	Specification: ASTM A706/A615 GR 60
FWDP: 52815348	Customer: REBARFAB INC	Cust. PO: 10729
	PO BOX 120267	
	NEW BRIGHTON, MN 55112-0015	

CHEMICAL ANALYSIS (In Weight %, uncertainty of measurement 0.005 %)

Heat Number	C	Min	P	S	Si	Cu	Ni	Cr	Mo	Al	V	B	Cb	Sn	N	Ti
588253	0.28	1.23	0.009	0.016	0.24	0.25	0.08	0.09	0.016	0.003	0.040	0.0006	0.000	0.011	0.0092	0.001

(Heat cast 08/22/16)

Carbon Equivalent = 0.500

M E C H A N I C A L P R O P E R T I E S

Heat Number	Sample No.	Yield (Psi)	Ultimate (Psi)	Elongation (%)	Reduction (%)	Bend	Wtft
588253	01	67383 (MPa)	96350	15.0		OK	0.660
588253	02	69147 (MPa)	97700	14.6		OK	0.661

(Tensiles test date 08/23/16)

All melting and manufacturing processes of the material subject to this test certificate occurred in the United States of America.

ERMIS also certifies this material to be free from Mercury contamination.

This material has been produced, tested and conforms to the requirements of the applicable specifications. We hereby certify that the above test results represent those contained in the records of the Company.

Methods used: ASTM A370, A510, A615, A706.

Material test report shall not be reproduced except in full, without approval of the company.

Valoree V. Varick

Valoree Varick
General Supervisor of Quality