FLORIDA	IDA DESIGN DRILLING COF 7733 Hooper Road	RP.			
	West Palm Beach, FL 33411			NO. :	COST PROPOSAL 005
PROJECT NAME: City of Hallan	dale Beach WTP Transfer Pump Rep	lacement			
LOCATION:	Hallandale Beach, FL			DATE:	August 11, 2021
OWNER:	City of Hallandale Beach Hazen and Sawyer			DRAWING NO .: SPEC_SECTION	
				OF EQ: GEOMON:	
REFERENCE: TIME & MATERIA DESCRIPTION: Install conduit, wiring, concrete p attached RFP #2. EV Charaing. included in this proposal.	L: REQUEST FO wad, bollards, asphalt repairs, sidewalk station to be provided by others and ir	R PROPOSA <u>crepairs, and</u> <u>installed by FD</u>	L: all other ite D. Items r	2 ems needed to com marked as "Future"	plete the scope of work per the on RFP #2 drawings are not
	PRICING INFORMATION				
	SKILL/TRADE	MAN-HO	OURS	RATE	COST
	Welder		MH	\$ 100.00 \$ 42.00	\$ - \$
I.A. GENERAL LABOR.	Skilled	80	MH	\$ 56.00	\$ 4,480.00
	Operator	80	MH	\$ 60.00	\$ 4,800.00
1.B FIELD ENGINEERING:	Foreman	80	MH	\$ 65.00	\$ 5,200.00
	Superintendent	8	MH	\$ 95.00	\$ 760.00
	Project Engineer	8	MH	\$ 90.00 \$ 120.00	• - \$ 960.00
	Vice President		MH	\$ 150.00	\$ -
1.C DAILY GENERAL CONDITIONS	Time Increase		DAYS		\$
			SI	JBTOTAL (1)	\$ 16,200.00
	SMALL TOOLS & CONSUMABLE	is		0%	\$ -
	OVERHEAD & PROFIT			10%	\$ 1,620.00
				TOTAL (1)	\$ 17,820.00
2. MATERIALS AND EQUIPMENT	DESCRIPTION	WEE	KS	UNIT PRICE	COST
2.A EQUIPMENT:			DY		\$
	Backhoe FDD Owned	2.00	WK	\$625.00	\$ 1,250.00
			DY		\$ - •
			DY		\$ -
			DY		\$ -
			DY		\$ -
			WK		\$ -
			DY		
			DY		\$ -
			- 50	10%	\$ 1,250.00
2.B MATERIAL	MATERIAL		OTED	12 70	\$ 150.00
	Form matl., rebar, etc.	1	LS	\$1,500.00	\$ 1,500.00
	Concrete incl. short load fee	1	LS	\$1,150.00	\$ 1,150.00
	Bollards	3	EA	\$250.00	\$ 750.00
	Sod Pallet	2	EA	\$225.00	\$ 450.00
					\$ -
					\$ -
					<u>-</u>
1					ہ -
1					\$ -
					\$
1					\$ -
1					5 - e
1					• - \$ -
1					\$
I			SU	BTOTAL (2.B)	\$ 3,850.00
	SALES TAX (ON 2.B ONLY)		-	7%	\$ 269.50
2.C DIRECT COSTS:			S	10%	\$ 5,519.50
	OVERHEAD & PROFII			TOTAL (2)	 φ 551.95 \$ 6.071.45
				- ()	
	DESCRI		-/		
Cyber Electric All County Paving	See att	ached propos	al h renair		> 51,686.45 \$ 16,500,00
All County I aving	Asphan, side	erial Testina	o repair		\$ 450.00
			S	JBTOTAL (3)	\$ 68,636.45
OVERHEAD & PROFIT			7.5%	\$ 5,147.73	
			то	101AL(3)	> 73,784.18 \$ 97,675,63
Bonds & Insurance				2.0%	\$ 1,953.51
Permits BY OTHERS				0.0%	\$
			GI	RAND TOTAL	\$ 99,629.15
By:	Ву:		By:		
Engineer (Authorized Signature)	Owner (Authorized	d Signature)	F .	Florid	la Design Drilling Corp.
Date:	Date:		Date:		

Quote

Cyber Electric of Central Fl. Inc.

3384 NW 18 th st. Okeechobee, Florida 34972 United States Tel: 863-467-2127 Fax: 863-467-8367 E-mail: cyberelectric99@gmail.com

Billing address:

Florida Design Drilling

Attn: Jeff Holst 7733 Hooper Road WPB, Florida 33411 United States Tel: 1-561-844-2966 Fax: 1-561-844-2967

Work Description

Supplied and Installed by Cyber

- 1] 1 24"x24"x8" 4XSS J-box
- 2] 2 Hand holes need size and type
- 3] 1 Duct Bank W/ 1 2" PVC and 7- 1" PVC
- 4] 1 Core Drilling as required
- 5] 1 Terminate existing 100A brkr in SWBD-HSPS-A to EV station
- 6] 1 100A brkr / 70AT in SWBD-HSPS-A
- 7} 1 SS Rack Stand

Supplied and Installed by Others connection only by Cyber

1] 1 - EV Charging station

2] 1 - 12x12x4 Equipment Pad

Proposal excludes the following :

1] Patching or repair of any Concrete / Pavement / Landscaping / or any other existing structures.

- 2] Any overtime or work to be performed outside of our regular 4 day 10 hour work week. 7 a.m. to 5. p.m.
- 3] Installation of Concrete/ Rebar or Pumping of concrete.
- 4] Clean up or Removal of any hazardous waste.
- 5] Underground obstructions and the work it takes to get around or thru them.
- 6] Existing unforseen on site conditions.
- 7] Any impact fees/state fees/Utility fees (I.E. FPL or Glades elect.) not shown in the above quote.
- 8] Bonding Cost if required.
- 9] Any engineering of plans provided by the owner/engineer and used for quoting with out the proper compensation for such work.
- 10] We take no responsibility for fiber optic cables that are supplied by others and installed by Cyber. Unless the cable is tested to show no damage before we install it.
- 11] Supply of aggregate or fill dirt or base rock for manholes
- 12] Clearing or dewatering of any sort

Reference File # Job type: Job date: Client code: Customer Ref. #: Page number:

5257 Quote - Pending Jul. 29, 2021 Florida Design Drilling C/O EV CHARGE STATION 1

Site address:

Hallandale Beach WTP Transfer pump Station Florida United States Cyber Electric of Central Fl. Inc.

3384 NW 18 th st. Okeechobee, Florida 34972 United States

Reference	
File #	5257
Page number:	2

Item	Description	Qty	Trade U	Net	Mat \$	Tot. Hrs
2"	COUPLING - RMC - GALV	2	1,316.73 C	1,316.73	26.33	0.00
1"	LOCKNUT - STEEL	14	47.38 C	47.38	6.63	0.43
2"	LOCKNUT - STEEL	12	132.45 C	132.45	15.89	0.82
1"	BUSHING - PLASTIC	14	46.36 C	46.36	6.49	0.36
2"	BUSHING - PLASTIC	4	170.56 C	170 56	6.82	0.23
1"	BUSHING GRDG INSUL - STEEL	2	744 49 C	744 49	14 89	0.07
1"	MEASURE CUT & THREAD LABOR - RMC - GALV	24	0.00 C	0.00	0.00	5 40
2"	MEASURE CUT & THREAD LABOR - RMC - GALV	6	0.00 C	0.00	0.00	2 18
1"		500	280.00 C	280.00	1 400 00	25.00
1		200	635.00 C	635.00	508.00	6.24
2		20	2 563 25 0	2 562 25	007 71	6 16
0"	ELBOW 90 DEG - RMC - ALUM	20	3,503.25 C	3,003.20	1 100 20	0.10
2		10	1,092.00 C	1,092.00	796 10	4.50
1.	CONN THRD HUB INSUL W/ GRD LUG - RMC - ALUM	28	1,022.10 C	1,022.10	200.19	3.92
2	CONN THRD HUB INSUL W/ GRD LUG - RMC - ALUM	4	1,3/1./5 0	1,3/1.75	04.07	1.00
1"	TYPE LB STD CONDULT BODY W/ CVR & GSKT - RMC - ALUM	1	20.75 E	20.75	145.25	4.20
2"	TYPE LB STD CONDUIT BODY W/ CVR & GSKI - RMC - ALUM	2	58.78 E	58.78	117.56	2.70
1"	2-PC STRUT CLAMP - RMC - ALUM	62	280.00 C	280.00	1/3.60	3.47
2"	2-PC STRUT CLAMP - RMC - ALUM	12	350.00 C	350.00	42.00	1.03
1"	FLEX - LIQUIDTIGHT METALLIC - GRAY	1	286.00 C	286.00	2.86	0.06
1"	CONN STRAIGHT - LIQUIDTIGHT DIECAST	1	798.77 C	798.77	7.99	0.17
1"	CONN 90 DEG - LIQUIDTIGHT DIECAST	1	1,832.41 C	1,832.41	18.32	0.17
1"	CONDUIT - PVC40	630	250.00 C	250.00	1,575.00	27.72
2"	CONDUIT - PVC40	85	550.00 C	550.00	467.50	6.46
1"	ELBOW 90 DEG - PVC40	30	450.00 C	450.00	135.00	6.60
2"	ELBOW 90 DEG - PVC40	4	750.00 C	750.00	30.00	1.60
1"	COUPLING - PVC	32	60.36 C	60.36	19.32	0.00
2"	COUPLING - PVC	8	146.21 C	146.21	11.70	0.00
1"	ADAPTER MALE - PVC	14	94.33 C	94.33	13.21	1.68
2"	ADAPTER MALE - PVC	4	210.29 C	210.29	8.41	0.72
3 >	3" BASE SPACER	60	277.94 C	277.94	166.76	1.80
3 >	3" INTERMEDIATE SPACER	60	277.94 C	277.94	166.76	1.20
#3)	KHHW BLACK	667	2,700.00 M	2,700.00	1,800.90	7.94
CON	IDUIT MEASURING TAPE	600	580.00 M	580.00	348.00	1.80
1/4"	POLYROPE (M)	595	580.00 M	580.00	345.10	1.78
24x 2	24x 8" BOX CONT HNG - NEMA 4X	1	2,818.00 E	2,818.00	2,818.00	2.20
1 5/8	8x 1 5/8x 14G STRUT GALV	5	753.30 C	753.30	37.66	0.50
6x 6	3 1/2" POST BASE - ANGLE MNT 1-1 5/8x 1 5/8" STRUT	1	3,393.45 C	3,393.45	33.93	0.14
1 5/8	8x 1 5/8x xxG CHANNEL - S/S	71	1,800.00 C	1,800.00	1,278.00	9.94
1/2-1	3x 2 3/4 WEDGE ANCHOR - 2 1/4" MIN DEPTH	4	0.00 C	0.00	0.00	0.64
1/2-1	3x 1 1/2 HEX HEAD BOLT - PLTD STL	2	23.16 C	23.16	0.46	0.11
1/2"	LOCK WASHER - PLTD STL	2	4.26 C	4.26	0.09	0.02
100A	3P BREAKER MOLDED CASE - OPEN	1	1,500.00 E	1,500.00	1,500.00	0.75
STA	NDARD UTILITY PULLBOX	2	1,250.00 E	1,250.00	2,500,00	12.00
EXC	AVATION (CUBIC YARD)	45	0.00 F	0.00	0.00	31.50
CON	CRETE 3500 LB (CU YARD)	12	210.00 F	210.00	2,520,00	8.40
1" DI	AM CORE 6" THICK WALL	14	0.00 F	0.00	0.00	9.80
2" DI	AM CORE 6" THICK WALL	1	0.00 E	0.00	0.00	0.80

Totals

Summary Total (\$) Subtotal Material 20,716.42 Journeyman (204.23 Hrs @ \$85.00) 17,359.55 Misc. Materials & Hardware (1.00 @ \$3,000.00) 3,000.00 Equipment Rental (1.00 @ \$3,650.00) 3,650.00 (@ 7.500 %) (@ 7.500 %) Overhead 3,354.45 Markup 3,606.03

Total

\$51,686.45

\$20,716.42 204.23

Terms

٢

Our price is valid for 10 days and subject to changes any time thereafter. ANY changes from the plans that were used for estimating the cost of said project will only be performed upon a signed and received change order to our office. (467 - 8367 Fax] The work will be performed @ T&M rates of \$ 85.00/ per man hour and 20 % on materials.

Due to the rising cost of our materials we reserve the right to adjust our quoted materials to meet the current cost at the time of purchase. Which will then be added to the total quoted cost for the project as a change order.

Rep. Name: Date: Signature: Thereby propose the above described work.	Client Name: Date: Signature: I hereby acknowledge the satisfactory completion of the above described work.
---	---



RFP No. 2

Project: Transfer Pump Replacement

Date of Request: July 27, 2021

Owner: City of Hallandale Beach

Design Engineer: Hazen and Sawyer

To: Nick Martin, Project Manager Contractor From: Beth Waters, PE Hazen and Sawyer

Return Proposal By: 8/10/2021

In accordance with Article 17 of the Construction Contract, you are hereby requested to submit a proposal to perform the following scope of work:

Refer to attached sketches. Contractor shall install an owner furnished DC Fast Charger for charging of electrical vehicles, along with associated electrical, civil, and structural work.

In your proposal, provide adequate breakdown of materials, labor, and equipment required, with backup invoices as appropriate.

It shall be understood that this Request for Proposal is a request for information only, and is not an instruction to execute the changes. If, after review of your proposal, the Owner elects to proceed with this change, a Change Order will be prepared.



- 1. UNDERGROUND UTILITIES SHOWN ARE TAKEN FROM EXISTING RECORDS AND ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR ONLY.
- 2. THE CONTRACTOR SHALL ACCURATELY LOCATE AND UNCOVER ALL EXISTING UTILITIES BEFORE BEGINNING CONSTRUCTION. ANY DAMAGE RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- 3. FUTURE RACEWAY 01 INSTALLED UNDER THIS PROJECT FOR UPCOMING PROJECT.



1. ALL REQUIREMENTS OF THE TRANSFER PUMP STATION CONTRACT DOCUMENTS SHALL APPLY TO THE WORK INCLUDED HEREIN UNLESS OTHERWISE INDICATED IN THIS RFP.

2. CONTRACTOR SHALL PROVIDE A SINGLE SHOP DRAWING FOR CITY AND ENGINEER REVIEW AND APPROVAL FOR ALL COMPONENTS OF THE RFP.

3. EV FAST CHARGER WILL BE SUPPLIED BY THE CITY TO THE CONTRACTOR FOR INSTALLATION.



REPRESENTATIVE INSTALLATION DETAIL INSTALL PER MANUFACTURER'S INSTRUCTIONS ON CONCRETE PAD WITH ANCHOR BOLTS

I ON R EAG Y CC RE US	THIS DRAWING CH CHARGER DNDUITS SHALL SE.	LEGEND: RED = TO BE INSTALLED NOW GREEN = FUTURE	LEGEND: YCX :	YARD CON FOR 6 MGI	IDUIT FROM REG D MEMBRANE SO	CORD DRAWIN	GS 2.
					DATE: J	ULY 2021	
		SKETCH SK-1			HAZEN NO.:	40621-0)00
					CONTRACT NO).:	1
h T		ELECTRICAL SITE	PLAN		DRAWING NUMBER:	SK-1	



- 1. PERMANENT CONDUITS SHALL BE ROUTED EXPOSED ON WALLS AND CEILING TO THE GREATEST EXTENT POSSIBLE.
- 2. SEE DRAWING E-11 FOR AREA DESIGNATIONS.
- 3. EACH DUCTBANK GROUND CONDUCTOR CROSSING THE GROUND LOOP SHALL BE EXOTHERMICALLY WELDED TO THE GROUND LOOP CONDUCTOR.
- 4. GROUND LOOP CONDUCTOR SHALL BE A #4/0 BARE COPPER WIRE 30 INCHES MINIMUM BELOW FINISHED GRADE. ALL GROUND CONDUCTORS TO EQUIPMENT OR STRUCTURAL STEEL SHALL BE BARE COPPER WIRE.
- 5. IF VERTICALLY DRIVEN GROUND RODS ENCOUNTER ROCK BEFORE BEING DRIVEN TO 10'-0" DEPTH, CONTRACTOR SHALL BE PERMITTED TO DRIVE ROD AT AN ANGLE, OR LAY IN ACCORDANCE WITH 2014 N.E.C ARTICLE 250.53(G).
- FILTER 6. CONTRACTOR SHALL FURNISH AND INSTALL LIGHTNING PROTECTION SYSTEM FOR THIS HIGH SERVICE PUMP STRUCTURE IN ACCORDANCE WITH SPECIFICATION SECTION 16670.
 - 7. CONTRACTOR SHALL INSTALL GROUNDING SYSTEM AROUND HIGH SERVICE PUMP STRUCTURE AS SHOWN. CONFIRM DESIGN WITH ENGINEER PRIOR TO INSTALLATION. BOND LIGHTNING PROTECTION SYSTEM TO NEW GROUNDING SYSTEM.
 - 8. THE GROUNDING ELECTRODE CONDUCTOR SHALL PENETRATE THE SOUTH HSPS WALL ABOVE GRADE THROUGH A 1" SCH40 PVC CONDUIT SLEEVE. WALKWAY AREA SHALL REMAIN OBSTRUCTION AND TRIPPING HAZARD FREE. VOID AREA BETWEEN CONDUCTOR AND CONDUIT WALL SHALL BE TIGHTLY CAULKED. GROUNDING ELECTRODE SHALL BE CONNECTED TO SWITCHBOARD IN ACCORDANCE WITH SPECIFICATION SECTION
 - 9. THE AREAS SHOWN HERE FOR THE GROUNDING ELECTRODES ARE APPROXIMATIONS BASED ON AS-BUILT DRAWINGS. ALTHOUGH THESE AREAS HAVE BEEN CHOSEN CAREFULLY TO AVOID CONFLICTS WITH EXISTING UNDERGROUND OBJECTS, THE CONTRACTOR SHALL CAREFULLY PLAN AND STUDY THE EXACT LOCATION OF EACH ELECTRODE TO AVOID CONFLICTS WITH PIPING, CONDUITS, DUCTBANKS, ETC.
 - 10. CONNECT TO EXISTING GROUNDING GRID.
 - 11. ROUTE EXPOSED CONDUITS FROM THE PLC-10 ENCLOSURE TO THE LOCATION SHOWN ALONG THE CEILING. AT THE LOCATION SHOWN, THE CONDUITS SHALL TURN DOWN AND CONNECT TO THE INSTRUMENTS AS SHOWN ON THE RISER DIAGRAM ON DRAWING E-13. ROUTE CONDUITS TO ENSURE NO CONFLICT WITH THE A-FRAME GANTRY SUPPLIED BY THE CONTRACTOR.

ONLY WORK SHOWN IN RED, BLUE, AND GREEN TEXT APPLIES TO THIS RFP

SCOPE OF WORK AT HSPS BUILDING:

- 1. REMOVE MCC-1.
- 2. REMOVE UTILITY TRANSFORMER AND
- GENERATOR, WHICH ARE NO LONGER IN USE.
- 3. INSTALL NEW SWITCHBOARD SWBD-HSPS, SUPPLYING FOUR NEW VFD STARTERS FOR HIGH SERVICE PUMPS.
- 4. INSTALL NEW AIR CONDITIONING SYSTEM IN VFD ROOM.
- 5. INSTALL NEW PLC-10 TO CONTROL NEW HIGH SERVICE PUMPS.

	DATE: JULY 2021
SK-2	HAZEN NO.: 40621-000
	CONTRACT NO.: 1
POWER PLAN	DRAWING NUMBER: SK-2



Description	FLA	Short Circuit Contribution (A)			
2500kVA Transformer (5.51% Z)	3,007.03	54,574.10			
SWBD-HSPS-A Motor Loads	722.00	2,888.00 *			
SWBD-HSPS-B Motor Loads	853.60	3,414.40 *			
Total Short Circuit Current		60,876.50			
* For the motor short circuit contribution, ANSI Standard C37.010 uses 400% FLA.					





EV CHARGER INSTALLATION NOTES:

1. ELECTRIC VEHICLE (EV) FAST CHARGER SHALL BE INSTALLED IN ACCORDANCE WITH ALL MANUFACTURER REQUIREMENTS AND INSTRUCTIONS. MANUFACTURER INSTALLATION REQUIREMENTS ARE INCLUDED IN THIS RFP FOR CONTRACTOR REFERENCE.

2. EV FAST CHARGER SHALL BE INSTALLED AT APPROXIMATE LOCATION SHOWN ON SK-1. LOCATION SHALL BE LAID OUT AND APPROVED BY THE CITY PRIOR TO STARTING WORK.

3. INSTALLATION LOCATION SHALL MEET THE STANDARDS FOR ACCESSIBLE DESIGN. REFER TO MANUFACTURER INSTALLATION INSTRUCTIONS (PAGES 9 AND 10 OF 28).

4. INSTALLATION LOCATION SHALL PROVIDE FOR ADEQUATE CLEARENCES AROUND CHARGER AND CONSIDER LOCATION OF CHARGING CORDS FOR PARKED VEHICLES.

5. EV FAST CHARGER SHALL BE INSTALLED ON AN EQUIPMENT PAD AS SHOWN ON SK-4 INCLUDED IN THIS RFP.

6. PROTECTIVE BOLLARDS SHALL BE INSTALLED TO PROTECT THE CHARGER.

SKETCH SK-5

EV CHARGER INSTALLATION

BTC POWER

50 kW Slim (480VAC) DC Fast Charger

INSTALLATION AND USER'S MANUAL



BTCPOWER, INC.

1719 S. GRAND AVE. SANTA ANA, CA 92705

WWW.BTCPOWER.COM

PLEASE NOTE

This document contains useful general information about the product and its installation. BTCPower, Inc. reserves the right to make changes to this product without further notice. No part of this document may be reproduced in any form or by any means, electronic or mechanical, including photocopying, without written permission of BTCPower, Inc.

Changes or modifications to this product by other than an authorized service facility could void the product warranty.

If you have questions about the use of this product, contact your customer service representative.

This product should be operated by trained personnel only.

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BTC POWER

Revision B

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Revision B

SAFETY GUIDELINES

1. Safety Guidelines

SAVE THESE INSTRUCTIONS

This document contains important instructions for the installation, operation, and maintenance of **50kW Slim DC Fast Charger**. These instructions should be retained for future reference.

1.1. IMPORTANT SAFETY INSTRUCTIONS



READ THIS MANUAL BEFORE YOU BEGIN

This **50kW Slim DC Fast Charger** manages electricity and may be hazardous. The equipment should be installed, adjusted, and serviced only by qualified electrical personnel familiar with the construction and operation of this type of equipment and the hazards involved, and in full compliance with all local and national codes and standards. Failure to observe this precaution could result in severe injury or death.

Read this manual completely and become familiar with the equipment prior to performing any procedures specified in the manual and energizing the equipment. Inspection and maintenance of this equipment should be performed in accordance with the procedures detailed in this manual.

In situations where it is not possible to perform an installation following the procedures specified in this document, contact BTCPower, Inc. BTCPower, Inc. will not be responsible for any damages that may occur resulting from custom installations that are not specified in this document.

There are no user serviceable parts inside. For service, please contact customer service or your local distributor. DO NOT ATTEMPT TO REPAIR THE CHARGE STATION YOURSELF. SERVICE TO THE UNIT SHALL ONLY BE PERFORMED BY A QUALIFIED PERSONNEL.

If your charging cable is somehow damaged, do not operate the charge station. Contact your service representative for service immediately. Shut down the power to the charger by switching the breaker on the supply panel to the off position.

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Revision B

1.2. Symbols and Definitions

Please take special attention to all information marked with the following symbols. These symbols may be found throughout the manual and on labels affixed to the equipment unit.

4	DANGER	Indicates High Voltage. It calls attention to items or operations that could be dangerous to person/s operating this equipment. Read and follow the instructions carefully. Failure to do so will result in severe injury or possibly death.
$\underline{\land}$	WARNING	Indicates a hazard or unsafe practice which, if not avoided, may result in severe injury or possibly death.
	CAUTION	Indicates a hazard or unsafe practice which, if not avoided, may result in minor to moderate injury.
	NOTE	Indicates important information to consider, otherwise, improper installation and/or damage to components may occur.

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SYSTEM OVERVIEW

2. System Overview

The **50kW Slim DC Fast Charger** converts a 480VAC 3-phase voltage into DC voltage to directly charge an electric vehicle's lithium ion battery. It is capable to charge all electric vehicles compliant with CHAdeMO charging system and Combined Charging System (CCS) standards.

2.1. Equipment Description



DESCRIPTION

- 1. Charge Cord Retractor
- 2. 15" Outdoor-Rated Touch Screen Display
- 3. Encrypted Insert Card Reader
- 4. RFID Card Reader
- 5. High Security Lock
- 6. Charging Coupler (for dual port)
 - CHAdeMO, SAE Combo

- 7. LED Light
- 8. Stop Button
- 9. Start Button
- 10. Charging Coupler
 - CHAdeMO, SAE Combo

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Revision B

EQUIPMENT SPECIFICATION

2.2. Equipment Specification

PARAMETER	MODEL: EVSLIM50480
	SKUs: L3S-50-480-01-003, L3S-50-480-05-003, L3S-50-480-06-003
AC Input	
Input voltage kange	480VAC, 3 Phase, +10%/-15%
Input Frequency Range	60 Hz
Full Load Amperage	/2 A
Breaker Size (Recommended)	
Power Factor	> U.9U tuli load
Iotal Harmonic Distortion	< 5%
Efficiency Rafing	> 90%
SCCR/AIC	15 KA
	50 - 500 VDC
Maximum Oulput Current	125 A
Maximum Output Power	50 kW
Minimum Output Current	5 A
Output Ripple Current	< 15 Ap–p (Bandwidth 1 kHz)
Interface and Connectivity	
Connectors	CHAdeMO, SAE J1772 Combo CCS1
Network Compatibility	OCPP 1.5/1.6, BTCP Network
Access Control –	PEID Cradit Card 4C Cat 5 Ethornat
Communication	KID, Cleali Cala – 40, Cal-3 Lillemen
Protection	
Plug-Out Detection	Power Terminated per SAEJ1772 or GB/T Specifications
Surge Protection	6000 VAC
Standards	
Safety Compliance	ETL Listed for USA and Canada: Complies with UL 2202, UL 2231,
	UL 50E, NEC Article 625, CSA Std C22.2 No. 107.1, FCC Part 15 Class A
Environment Conditions	
Operating Temperature Range	-30°C to +50°C
Operating Altitude	6,000 ft.
Humidity	95% Non-Condensing
Mechanical Characteristics	
Dimensions	34" W x 86" H x 22" D
Weight	850 lbs
Enclosure IK Rating	IK 08
Enclosure IP Rating	IP 54 (NEMA 3R)

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BTC POWER

PRE-INSTALLATION

3. Pre-Installation

Prior performing any installation activities, it is important to go through each of the items outlined in this section which are essential for the installation process.

3.1. Location Selection

Thing to consider when choosing a location to install the unit:

- Standards for Accessible Design (refer to Section 3.2)
- Conformance to all governing standards for location and placement of the charger
- Communications Connectivity
 - o Refer to BTCPower guidelines in "Determining Suitability of Site for Cellular Connectivity"
 - Ensure that installation location meets the Cellular Signal Strength Criteria below

Parameter	Min Value	Device	Notes
RSSI	-69 dBm	SureCall	If RSSI < - 69dBm, measure RSRP,
			RSRQ, and SNIR
RSRP	-100 dBm	Squid or BTC-Cellular Meter	Please consult BTCPower
			Application Engineering
RSRQ	-11 dBm	Squid or BTC-Cellular Meter	Please consult BTCPower
			Application Engineering
SNIR	> 6 dB	Squid or BTC-Cellular Meter	For Reference

- Local Conditions
 - Area is not expose to high temperatures, dust, corrosive fumes, combustible materials, or explosive gases
 - Area is dry and well-ventilated
 - o Clearances at front, back, and sides for accessibility during service (refer to Section 4.1)
 - Wiring and conduit needed to connect the charger to the circuit panel
 - o Location of vehicle's charging inlets while parked
 - \circ Use of protective bollards and wheel stops to protect the charger

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PRE-INSTALLATION

3.2. ADA Consideration

STANDARDS FOR ACCESSIBLE DESIGN for Americans with Disabilities is applicable when choosing the location and placement of all Electric Vehicle Supply Equipment. The following is a direct excerpt from the 2010 ADA Standards for Accessible Design:

http://www.ada.gov/2010ADAstandards_index.htm

"The Department of Justice published revised regulations for Titles II and III of the Americans with Disabilities Act of 1990 "ADA" in the Federal Register on September 15, 2010. These regulations adopted revised, enforceable accessibility standards called the 2010 ADA Standards for Accessible Design "2010 Standards" or "Standards". The 2010 Standards set minimum requirements – both scoping and technical – for newly designed and constructed or altered State and local government facilities, public accommodations, and commercial facilities to be readily accessible to and usable by individuals with disabilities.

Adoption of the 2010 Standards also establishes a revised reference point for Title II entities that choose to make structural changes to existing facilities to meet their program accessibility requirements; and it establishes a similar reference for Title III entities undertaking readily achievable barrier removal.

The Department has assembled this online version of the official 2010 Standards to increase its ease of use. This version includes:

- 2010 Standards for State and Local Government Facilities Title II
- 2010 Standards for Public Accommodations and Commercial Facilities Title III

The Department has assembled into a separate publication the revised regulation guidance that applies to the Standards. The Department included guidance in its revised ADA regulations published on September 15, 2010. This guidance provides detailed information about the Department's adoption of the 2010 Standards including changes to the Standards, the reasoning behind those changes, and responses to public comments received on these topics. The document, Guidance on the 2010 ADA Standards for Accessible Design, can be downloaded from:

http://www.ada.gov

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For information about the ADA, including the revised 2010 ADA regulations, please visit the Department's website www.ADA.gov; or, for answers to specific questions, call the toll-free ADA Information Line at 800- 514-0301 (Voice) or 800-514-0383 (TTY)."

PRE-INSTALLATION

Compliance to ADA Standards

Access to all the controls and commands including the buttons and the card reader, must comply with local codes and ADA requirements. That includes being under 48" of distance to the ground.



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PRE-INSTALLATION

3.3. Moving and Hoisting Instructions



Improper handling may result to severe injury and/or damage to the unit due to dropping or falling. Make sure to follow specified procedures for hoisting operations. Take necessary measures to prevent falling when moving or hoisting the unit.

Using Lifting Bracket

The charger comes with a lifting bracket for moving and hoisting purposes. The bracket is installed on the unit using four (4) M12 screws as shown below.



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Post Installation

Once the charger is fixed on its location, remove the lifting bracket. Then insert the same M12 screws (4 pcs) and seal washers to the holes as shown below.



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4. Installation

SAFETY INSTRUCTIONS

The **50kW Slim DC Fast Charger** should be installed in accordance with local codes and all applicable ordinances.

Read all installations instructions carefully prior to performing the installation.



The equipment utilizes high voltages, only qualified electrical personnel familiar with the operation and construction should install, adjust, modify, and service this equipment. Failure to observe this precaution could result to severe injury or death.



- The equipment may be installed outdoors but only use under environment conditions as stated in this document.
- Do not perform any live wire operations.
- Do not touch the inside of the equipment while it is running.
- This equipment includes capacitive components such as electrolytic capacitors. Some parts may still remain charged inside of the unit even after the input power is disconnected.
- This charger should not be modified in any way. This will void the warranty, compromise protection and could result in a possible shock or fire hazard.
- Personal Protective Equipment should be used at all times when working with the equipment.



During installation of the unit, ensure that the charge station's supply cable is in such a way that it will not be tripped over, stepped on, pulled on, or somehow subjected to damage or stress.

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4.1. Mounting Procedures

4.1.1. Clearance Around the Unit

Clearance surrounding the charger must be considered for proper ventilation and service accessibility. Refer to the installation drawings as illustrated below.

Charger Installation Drawing







DOOR OPEN



DOOR CLOSE



ISOMETRIC VIEW

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Charger Installation Drawing (continuation)





4.1.2. Charger Mounting

The Charger must be fixed on a concrete pad using **six (6)** ¹/₂" **x 3** ³/₄" (McMaster-Carr P/N **91578A116 or equivalent)** concrete expansion studs or as determined appropriate by the structural engineer in-charge.

Make sure to check local codes for compliance.

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Charger Footer Drawing

The illustration below shows the drilling layout for the **Charger**. Only six (6) points are needed to fix the unit on the concrete pad. The conduit entry to the unit is also shown.





INSTALLATION FOOTER VIEW

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4.2. Electrical and Communication Service Connection

4.2.1. Electrical Service Entrance

50kW Slim DC Fast Charger is provisioned to receive an electrical power connection from the bottom. Refer to all applicable codes.



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4.2.2. Electrical Connection



This is a 3-Phase 480VAC EVSE Charger.

The **50kW Slim DC Fast Charger** includes over-current protection as required by the National Electric Code and has an integrated UL listed 100 Amp breaker. Please refer to NEC Article 625 for installation requirements and check in the installed jurisdiction for any other electrical requirements.

GFCI on panel maybe required if not included in the charge station.

Conduit is to be routed per NEC standards.



The unit is designed for indoor or outdoor installation. If this unit is mounted outdoors, the hardware for connecting the conduits to the unit must be rated for outdoor installation and be installed properly to maintain the proper outdoor / rain tight rating of the enclosure.

*Line 1, Line 2, Line 3, and Ground wires are required, neutral is not required.



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For 480VAC unit, the phases used must each measure 277VAC to Neutral. Earth Ground must be connected to Neutral at only one point, usually at the Service Entry of the Breaker Panel.

Service Wiring

Connect 480VAC 3-Phase to the Schaffner Line Filter FN3270H-100-35 in the lower compartment of the 50kW Slim DC Fast Charger. Requirements are 3AWG line for each phase and 3AWG GROUND wire.

480VAC Charger



GROUNDING INSTRUCTIONS

This unit is to be connected to a grounded, metal, permanent wiring system; or an equipmentgrounding conductor is to be run with circuit conductors and connected to equipmentgrounding lug or lead on battery charger. Connections to the charger shall comply with all local codes and ordinances.

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OPERATION

5. Operation

5.1. Charging Session and Operation Procedure



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5.2. Stop Procedure

50kW Slim DC Fast Charger offers three (3) ways to stop the charging session.

Option 1 – Press STOP on the touchscreen



Option 2 – Press STOP button on the charger



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5.3. Time Outs

If for any reason the charge session does not begin within 60 seconds after payment has been processed, CHARGING FAILED screen will display and the credit card transaction gets automatically voided.

In situations like this, user will need to unplug the connector and re-plug before retrying.

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MAINTENANCE

6. Maintenance



All servicing must be performed ONLY by qualified personnel. Do not attempt to service the 50kW Slim DC Fast Charger yourself.

Make sure to turn off the power to the charger before performing any maintenance activity.

Maintenance Precautions

Each of the capacitors in this device have a high voltage for a time after shutting off the input power supply. Must allow five (5) minutes after powering down before servicing internal components.

Maintenance Items

Perform periodic checks.

Visual Check Items

- Check for abnormal sound from running fans and power units. If there is abnormal sound, please contact a BTC Power representative for further assistance.
- Check for abnormal odor, changes of inner materials, corrosion, anomaly in appearance, etc., in this device. If there are any anomalies, please contact a BTC Power representative for further assistance.
- Check for dust and dirt in this device regularly and, if any is found, clean using appropriate procedures.

Replacement of Fixed-Life Components

To prevent the device from failure due to worn out components, it is necessary to replace the components before they reach the end of their lifespan. Use the following replacement intervals as a guideline for the estimate of the total running time. Please contact a BTC Power representative for further assistance when you replace the parts.

- Power feed cable: Approximately three (3) years.
- Intake and exhaust filters (as applicable): Approximately three (3) years.
- Please keep in mind that the replacement interval of each part can vary depending on, for example, the usage environment of the device.

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WARRANTY

7. Warranty

BROADBAND TELECOM POWER, INC.

LIMITED PRODUCT WARRANTY

This Limited Product Warranty applies to customers who have purchased a BTCPower Electric Vehicle Charging Station(s) and/or a related product ("Product(s)") from Broadband Telecom Power, Inc., or one of its authorized distributors.

LIMITED WARRANTY: Subject to the exclusions from warranty coverage set forth below, BTCPower warrants that the Product will be free from any defects in materials and/or workmanship (the "Limited Warranty") for a period of one (1) year after the date of the initial installation of the Product (the "Warranty Period"). If the Product becomes defective in breach of the Limited Warranty, BTCPower will, upon written notice of the defect received during the Warranty Period, either repair or replace, at BTCPower's election, the Product if it proves to be defective; provided, that BTCPower will only be responsible for the cost of any parts associated with the repair or replacement of any defective Product for a period of one (1) year after the date of the initial installation of the Product.

You acknowledge that replacement products provided by BTCPower under the Limited Warranty may be remanufactured or reconditioned Products or, if the exact Product is no longer manufactured by BTCPower, a Product with substantially similar functionality ("Replacement Products") will be supplied. Any Replacement Products so furnished will be warranted for the remainder of the original Warranty Period or ninety (90) days from the date of delivery of such Replacement Product, whichever is greater. Should BTCPower be unable to repair the Product, BTCPower will replace the Product with the latest model/version of a similar product in current production.

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WARRANTY

EXCLUSIONS FROM LIMITED WARRANTY

IMPORTANT: The Limited Warranty and on your Product shall not apply to defects, or service repairs, resulting from any of the following:

- Force Majeure any occurrence or extraordinary event or circumstance beyond the control of BTCPower that is an act of God or whether that occurrence is caused by war, riot, storm, (such as hurricane, flooding, earthquake, volcanic eruption, etc.), or other natural forces, or acts of nature or other causes.
- Vandalism.
- Any Alteration or Modification of the Product in any way not approved in writing by BTCPower.
- Abuse, damage or otherwise being subjected to problems caused by negligence (including but not limited to physical damage from being struck by a vehicle) or misapplication, or misuse of the Products by customers or end users.
- Installation or relocation of the Products unless performed by an authorized BTCPower distributor or by an authorized installer or service provider.
- Improper site preparation or maintenance.
- Damage as a result of accidents, extreme power surge, extreme electromagnetic field.
- Use of the Product with software, interfacing, parts or supplies not supplied by BTCPower.

You are responsible for the proper installation and maintenance of the Product. Any service or repairs beyond the scope of the Limited Warranty above are subject to BTCPower's prevailing current labor rates and other applicable charges.

Third Party Products. This Limited Warranty is exclusive of products manufactured by third parties ("Third Party Products"). If such third-party manufacturer provides a separate warranty with respect to the Third-Party Product, BTCPower will include such warranty in the packaging of the BTCPower Product.

OBTAINING WARRANTY SERVICE

To obtain warranty service you must contact BTCPower within 3 business days of realization of the defect at 1-714-259-7996 and ask for Customer Service, provide a written description of the source of the defect along with any pictures and email this information to the email address provided by the customer service agent. If necessary, you may be required to deliver the Product, in accordance with the instructions provided by BTCPower, along with Product's serial number, to BTCPower's repair facility.

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REVISION HISTORY

REVISION HISTORY

Revision	Date	Description	Originator
0	27-May-19	Initial Release	Dante Sanchez
A	21-Aug-19	 Separated manual for 208VAC and 	Dante Sanchez
		480VAC version	
		Added important parameters under	
		Equipment Specification	
		Added 480VAC Wiring Connection	
		illustration	
		Changed to generic splash screens	
		• Deleted the Error Codes (will be a	
		separate document)	
В	18-Jan-20	Added provision for moving and	Dante Sanchez
		hoisting using the lifting bracket	
		Added SCCR/AIC Rating and model	
		number in the specification section	

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