



INVITATION FOR BID (IFB) No. 26-050

ELECTRIC VEHICLES CHARGING STATIONS

Exhibit A - Drawings

EV CHARGING STATIONS

DRAWING STATUS: CD50

PARCEL NUMBER:

AERIAL MAP



SITE INFORMATION

SITE ADDRESS: 5201 Nelson Rd, Morrisville, NC 27560

COUNTY:

PROPERTY OWNER:

PROJECT TEAM

ENGINEERING:

EMAIL:

CLIENT MANAGER:
FIRST NAME LAST NAME

PROJECT MANAGER:
FIRST NAME LAST NAME

LEA ENGINEERING MANAGER:
FIRST NAME LAST NAME

LEAD ELECTRICAL ENGINEER:
FIRST NAME

LEAD STRU

FIRST NAME LAST NAME

DRAWING INDEX

SHEET NUMBER	SHEET NAME	REVISION DATE	REVISION NUMBER	REVISION DESCRIPTION	REVISION RESPONSIBILITY
EAO01	TITLE SHEET & SHEET INDEX				
EAO02	NOT USED				
EAO03	NOT USED				
ED101	NOT USED				
EC101	OVERALL SITE POWER PLAN				
EC102	ENLARGED VIEWS - SITE POWER PLAN				
EE101	ONE - LINE DIAGRAM				
EP201	NOT USED				
EE801	EV CHARGING EQUIPMENT SPECIFICATION				
EE802	EV CHARGING EQUIPMENT SPECIFICATION				

PLANS PREPARED BY



240 EAST HACIENDA AVE.
CAMPBELL, CA. 95008 USA

PLANS PREPARED FOR

CLIENT NAME

Go Triangle Transit

PROJECT ADDRESS
5201 Nelson Rd,
Morrisville, NC 27560

PROJECT DESCRIPTION
EV CHARGING STATIONS

SHEET NAME

COVER SHEET



KEY PLAN

JURISDICTION COMPLIANCE

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

- INTERNATIONAL BUILDING CODE
- ANSI/TIA-222 STRUCTURAL STANDARD
- NFPA 780 - LIGHTNING PROTECTION CODE
- NATIONAL ELECTRICAL CODE



Know what's below.
Call before you dig.
www.call811.com

THE UTILITIES AS SHOWN ON THIS SET OF DRAWINGS WERE DEVELOPED FROM THE INFORMATION AVAILABLE. THE INFORMATION PROVIDED IS NOT IMPLIED NOR INTENDED TO BE THE COMPLETE INVENTORY OF UTILITIES IN THIS AREA. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES (WHETHER SHOWN OR NOT) AND PROTECT SAID UTILITIES FROM ANY DAMAGE CAUSED BY CONTRACTOR'S ACTIVITIES.

PROJECT DESCRIPTION

EQUIPMENT SUMMARY

- (2) EXPP POWER BLOCKS
- (4) EXPP SINGLE PORT POWER LINK - PL1000
- (4) CPE 250's on Separate Pads.
- (2) 350A/3p Breakers for EXISTING MDP.
- (4) 100AF 3ph 480v Disconnects on Strut Racks.

SCOPE OF WORK

Existing Proterra Charging Stations Removed by others.
Modify Existing EV MSB to Serve New BEB Charging.
Use Existing conduits from MSB to Charging area.
Install (2) EXPP 200KW POWER BLOCKS (250A rated) and
(4) EXPP SINGLE PORT POWER LINK - PL1000's.
Install (4) CPE 250's on Separate Pads.
Furnish and Install All Required Equipment Barriers.

DATE:	NO:	REVISIONS:	RESP

PROJECT NUMBER

XXXXXX

DRAWN BY:

APPROVED BY:

DATE:

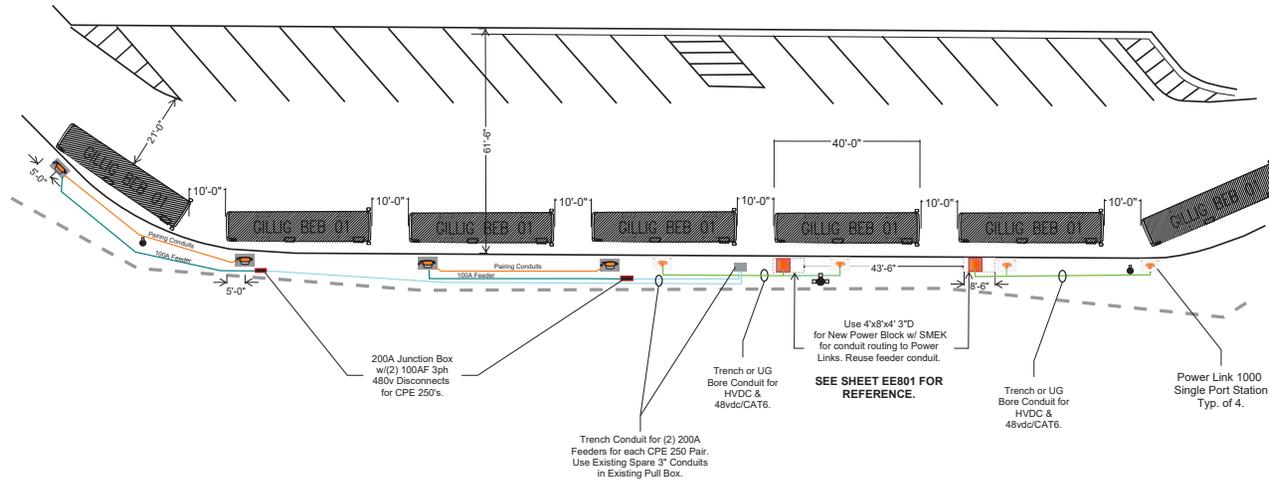
SCALE:

SHEET NUMBER

EAO01

General Notes

1. Comply with ALL Adopted Building Codes.
2. Coordinate Customer Responsibilities and Installation requirements with Local Electrical Utility.
3. See attached Supplemental Information for CP Equipment Precast Concrete Available via Distribution Resource or Oldcastle Industries.
4. Avoid Tree removal, if possible.



-  POWER BLOCK 1000
-  POWER LINK 1000 - Horizontal Cable Reach Approx. 20'.
-  CPE 250 - Horizontal Cable Reach Approx. 12' 4".
-  200A Junction Box w/(2) 100AF 3ph 480V Disconnects on Strut Rack.

ENLARGED SITE PLAN

PLANS PREPARED BY



240 EAST HACIENDA AVE.
CAMPBELL, CA. 95008 USA

PLANS PREPARED FOR

CLIENT NAME
Go Triangle Transit

PROJECT ADDRESS
5201 Nelson Rd,
Morrisville, NC 27560

PROJECT DESCRIPTION
EV CHARGING STATIONS

SHEET NAME
ENLARGED SITE PLAN

DATE:	NO:	REVISIONS:	RESP:
MM/DD/YY	A	ISSUED FOR REVIEW	XXX

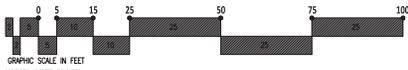
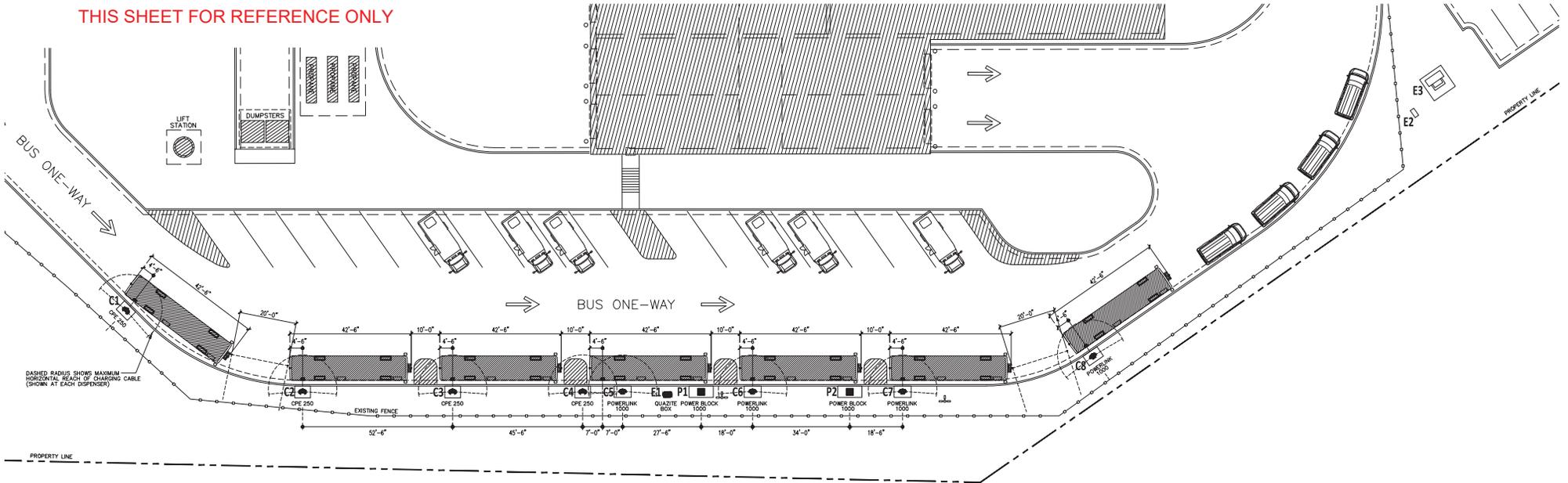
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DRAWN BY: _____
DESIGNED BY: _____
APPROVED BY: _____
DATE: _____
SCALE: _____



SHEET NUMBER
EC102

THIS SHEET FOR REFERENCE ONLY



EQUIPMENT LEGEND

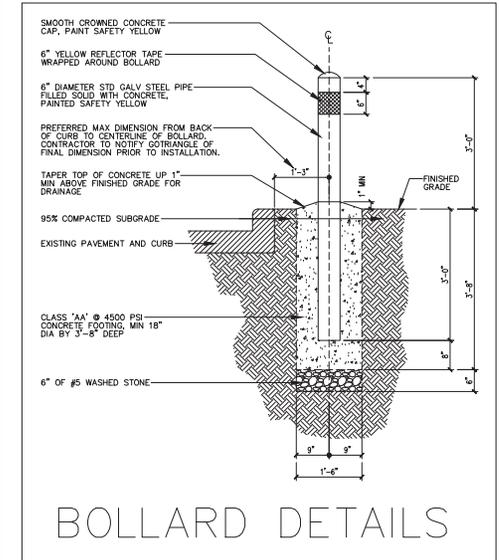
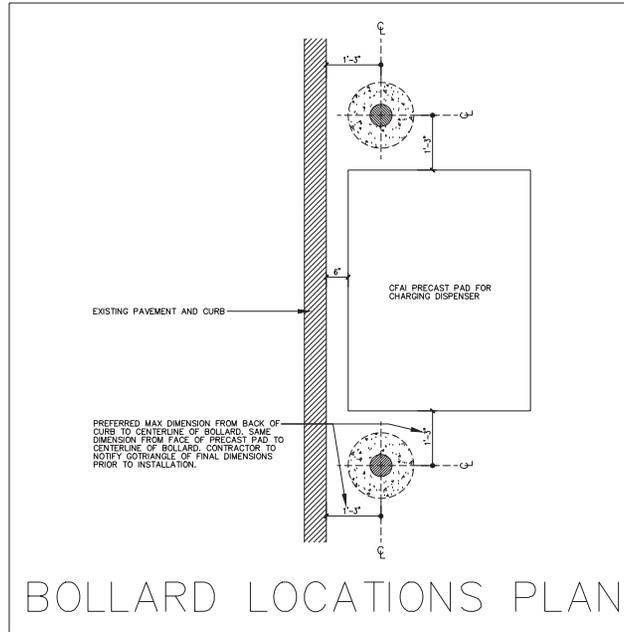
- C1, C2, C3, C4: (4 LOCATIONS) OFCI CPE-250 DISPENSER ON CFAI PRECAST PAD (SEE CHARGEPOINT DOCUMENTATION FOR PAD DETAILS). TWO (2) CFAI BOLLARDS TO BE INSTALLED AT EACH DISPENSER (ONE ON EACH SIDE OF THE DISPENSER BEHIND THE EXISTING CONCRETE CURB - SEE BOLLARD DETAILS AND LOCATIONS PLAN).
- C5, C6, C7, C8: (4 LOCATIONS) OFCI POWER-LINK 1000 DISPENSER ON CFAI PRECAST PAD (SEE CHARGEPOINT DOCUMENTATION FOR PAD DETAILS). TWO (2) CFAI BOLLARDS TO BE INSTALLED AT EACH DISPENSER (ONE ON EACH SIDE OF THE DISPENSER BEHIND THE EXISTING CONCRETE CURB - SEE BOLLARD DETAILS AND LOCATIONS PLAN).
- P1, P2: (2 LOCATIONS) OFCI POWER-BLOCK 1000 ON EXISTING CONCRETE FOOTING. CONTRACTOR TO VERIFY EXISTING FOOTING CAN BE USED AS-IS OR IF MODIFICATIONS TO THE FOOTING OR EXISTING CONDUITS ARE REQUIRED. CONTRACTOR TO DETAIL ANY REQUIRED MODIFICATIONS TO EXISTING CONCRETE FOOTING OR EXISTING CONDUITS IN COST PROPOSAL.
- E1: EXISTING QUAZITE BOX - ADDITIONAL CONDUITS FROM DP-1 TERMINATE IN THIS SURFACE ACCESSIBLE BOX
- E2: EXISTING DISTRIBUTION PANEL, DP-1 WITH EXISTING CONDUITS TERMINATING AT EACH OF THE EXISTING CONCRETE FOOTINGS FOR THE POWER-BLOCKS, AND INCLUDES TWO ADDITIONAL SPARE CONDUITS THAT TERMINATE IN THE QUAZITE BOX E1.
- E3: EXISTING TRANSFORMER

NOTES

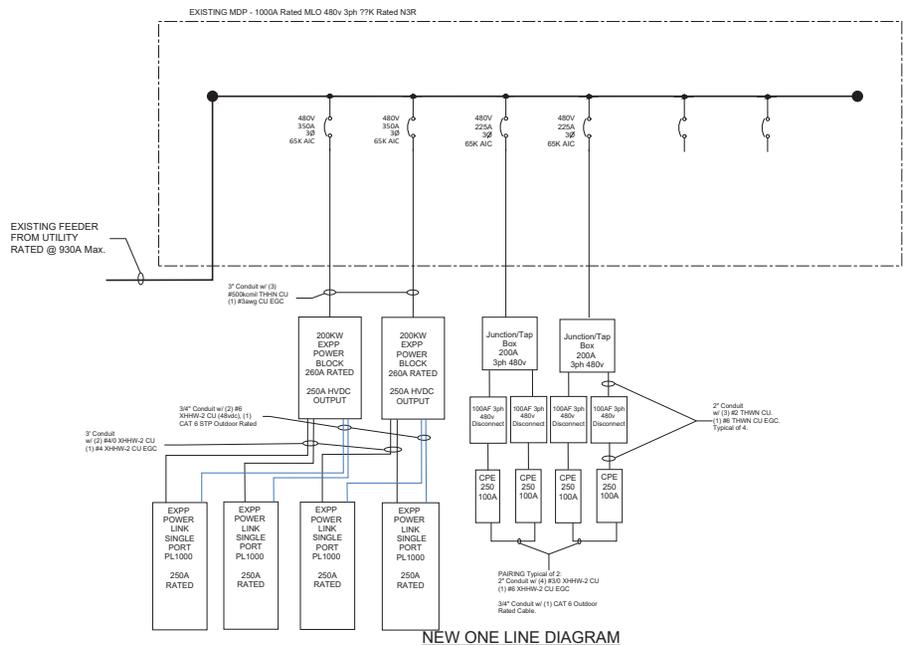
1. DIMENSIONS SHOWN ON THIS PLAN ARE FOR ESTIMATION PURPOSES ONLY.
2. CONTRACTOR WILL VERIFY ALL DIMENSIONS IN FIELD PRIOR TO INSTALLATION.
3. CONTRACTOR WILL CONFIRM FINAL SIZES, LOCATIONS, AND DETAILS OF ALL WORK PRIOR TO BEGINNING.
4. SEE WRITTEN SCOPE OF WORK FOR ADDITIONAL DETAILS ABOUT COORDINATION AND REQUIRED ACTIVITIES.

ABBREVIATIONS

- 1.) OFCI - OWNER FURNISHED, CONTRACTOR INSTALLED
- 2.) CFAI - CONTRACTOR FURNISHED AND INSTALLED
- 3.) CPE - CHARGEPOINT EQUIPMENT



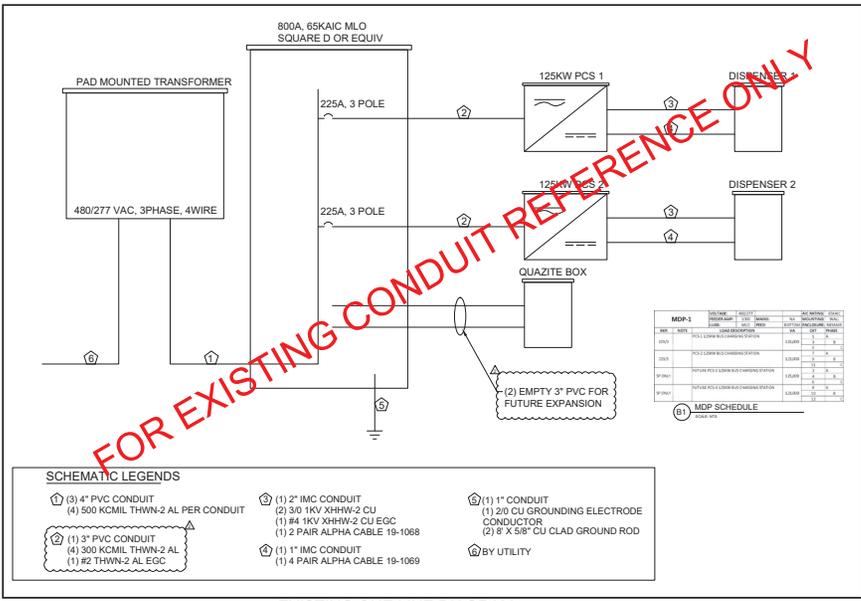
THIS SHEET FOR REFERENCE ONLY



- 1-Line Notes:**
1. Comply with ALL Adopted Building Codes.
 2. Conductor sizing is Suggested Only. Excludes Voltage Drop Calculations. Must be verified by E.O.R.

LOAD CALCULATION						
EV CHARGER DESCRIPTION	QUANTITY	KW RATING	Power Factor	KVA RATING	TOTAL KW	TOTAL NEC DEMAND KVA
EXPP POWER BLOCK	2.0	200.00	0.95	210.53	400.00	526.32
EXPP POWER BLOCK (FUTURE)	-	200.00	0.95	210.53	0.00	0.00
CPE 280	-	80.00	1.00	80.00	0.00	0.00
CPE 250	4.0	62.50	1.00	62.50	250.00	312.50
CPF 50 (port @ 48A @ 208v)	-	9.98	1.00	9.98	0.00	0.00
CPF 50 (port @ 48A @ 240v)	-	11.52	1.00	11.52	0.00	0.00
CPEK (port @ 80A @ 208v)	-	16.64	1.00	16.64	0.00	0.00
			1.00		0.00	0.00
			1.00		0.00	0.00
LOAD TOTAL					650.00	838.82
MINIMUM STANDARD SERVICE AMPACITY	1200					1008.97

*** LOAD MANAGEMENT SHALL BE IMPLEMENTED TO OPERATE WITHIN AVAILABLE AMPACITY



SCHEMATIC LEGENDS

(3) 4" PVC CONDUIT	(1) 2" IMC CONDUIT	(5) (1) 1" CONDUIT
(4) 500 KCMIL THWN-2 AL PER CONDUIT	(2) 3/0 1KV XHHW-2 CU	(1) 2/0 CU GROUNDING ELECTRODE CONDUCTOR
(1) 3" PVC CONDUIT	(1) #4 1KV XHHW-2 CU EGC	(2) 8" X 5/8" CU CLAD GROUND ROD
(4) 300 KCMIL THWN-2 AL	(1) 2 PAIR ALPHA CABLE 19-1068	(6) BY UTILITY
(1) #2 THWN-2 AL EGC	(1) 1" IMC CONDUIT	
	(1) 4 PAIR ALPHA CABLE 19-1069	

EXISTING ONE LINE DIAGRAM

STAMP

STAMP

PLANS PREPARED BY

 240 EAST HACIENDA AVE.
 CAMPBELL, CA. 95008 USA

PLANS PREPARED FOR

CLIENT NAME
Go Triangle Transit

PROJECT ADDRESS
 5201 Nelson Rd,
 Morrisville, NC 27560

PROJECT DESCRIPTION
EV CHARGING STATIONS

SHEET NAME
ONE-LINE DIAGRAM

DATE:	NO:	REVISIONS:	RESP:

PROJECT NUMBER
 XXXXXXX

DRAWN BY: _____
 DESIGNED BY: _____
 APPROVED BY: _____
 DATE: _____
 SCALE: _____

SHEET NUMBER
 EE101



ChargePoint® Express Plus with Power Link 1000
A flexible DC fast charging platform that grows with you.



Express Plus Power Module Specifications

Power Module Dimensions	430 mm (H) x 130 mm (W) x 760 mm (L) (1 1/5 in x 5 in x 2 1/8 in)
Power Module Weight	45 kg (98.5 lb.)
Power Module Cooling	Liquid Cooled Technology
Harmonics	THD < 5% (Complies with IEEE 519)

Express Plus Power Block

Express Plus Power Block Input	
Input Rating	3 phase, 400-480V VAC, 310-260 A 50/60 Hz (200 kW) Optional: 3-phase, 400-480V VAC, 255-210 A 50/60 Hz (160 kW)
Wiring	L1, L2, L3, Earth
Short Circuit Current Rating	65 kA

Express Plus Power Block Output

Max Output Power	200 kW Optional: 160 kW
Output Voltage, Charging	100 V – 1000 V
Max Current per Output	200 A, 250 A, 300 A, 350 A, 375 A
Number of Stations Served	One Power Block can serve up to 2 Power Link stations. Additional Power Blocks can be added to serve more stations or increase power output.
Maximum Power Modules per Power Block	5

Express Plus Power Block Specifications

Power Block Dimensions	2191 mm (H) x 988 mm (W) x 1038 mm (L) (7 ft 3 in x 3 ft 3 in x 3 ft 5 in)
Power Block Weight	455 kg (1000 lbs) without Power Modules
Power Block Enclosure Rating	Type 3R, IP56

Express Plus Power Link

Express Plus Power Link Output	
Max Output Power	Up to 375 kW with Power Blocks
Output Voltage, Charging	100 V – 1000 V
CCS1 Max Output Current**	Option 1: 200 A with Power Blocks Option 2: 250 A with Power Blocks Option 3: 375 A with Power Blocks
North American Charging Standard J3400 (NACS) Max Output Current**	375 A with Power Blocks
CHAdeMO Max Output Current**	200 A with Power Blocks

Express Plus Power Link Specifications

Station Dimensions	See Diagrams below
Station Footprint	See Diagrams below
Station Weight	250 kg (550 lbs)
Number of Connectors	Up to 2 connectors per station
Supported Connector Types	NACS (J3400), CCS1 (SAE J1772** Combo), CCS2 (IEC 61851-23), CHAdeMO
Cable Length*	Standard 5.8 m (19 ft) with Cable Management Kit (CMK) Optional 7.6 m (25 ft) with overhead or Tall Cable Management Kit (CMK)
Station Enclosure Rating	Type 3R, IP56, K10
Mounting Type	Ground, Wall, Overhead

*Horizontal reach to typical vehicle charging port is 3.76 m (12 ft 4 in) with standard cable and 6m (20 ft) with optional cable. Available of 7.6m cable varies by connector type and enclosure.

Functional Interfaces

Indicators	Multicolor LEDs
LCD Display	Optional: Full color 203 mm (8 in) interactive display with full motion video, UV protection, gesture touch controls, and multi-locale support RFID, ISO 15693, ISO 14443, NEMA EVSE 1.2-2015 (UR) Tap to Charge (NFC on Apple & Android) Contactless credit card
Authentication	ISO 15118-2, Plug&Charge Remote: Mobile and in vehicle (if supported by vehicle) Optional: Credit card chip reader pedestal

Connectivity Features

Local Area Network	2.4 GHz and 5 GHz WiFi (802.11 b/g/n)
Wide Area Network	4G LTE
Supported Communication Protocols	OCPP 2.0.1
Service and Maintenance	Remote system monitoring, diagnostic, and proactive maintenance

Safety and Operational Ratings

Vehicle Safety Communication	NACS (uses CCS1 protocols) CHAdeMO – JEVS G104 over CAN, CCS1 – SAE J1772 over PLC and CCS2 – IEC 61851-23
Plug-In Detection	Power terminated per JEVS G104 (CHAdeMO), SAE J2931 (CCS1) and IEC 61851-23 (CCS2)
Safety Compliance	Complies with UL 2202, UL 2231-1, UL 2231-2, CSA 107-1 Complies with IEC 61851-1 and IEC 61851-23, Energy Star, C-TEP Tested to IEC 61000-4-5, Level 5 (6 kV @ 3.000A) in geographic areas subject to frequent thunderstorms, supplemental surge protection at the service panel is recommended.
Surge Protection	Complies with IEC 61000-4-5, Level 5 (6 kV @ 3.000A) in geographic areas subject to frequent thunderstorms, supplemental surge protection at the service panel is recommended.
EMC Compliance	US and Canada: FCC 15 (Subpart A Class B, EU: EN55011, EN55022 and IEC61000-6-3 Class B

Generic Specifications

Operational Altitude	<3,000 m (<9,800 ft)
Operating Temperature	-40°C to 50°C (-40°F to 122°F) with derating
Storage Temperature	-40°C to 70°C (-40°F to 158°F)
Operating Humidity	Up to 95% @ 50°C (122°F) non-condensing
Standard Warranty	Limited 2-Year Parts Warranty

Energy Management Features

Dynamic Power Management	Allows a fixed maximum power output per station or lets the system dynamically manage the power distribution per station.
Remote Energy Management	Manage output power via the ChargePoint Admin Portal, API, and OpenADR 2.0b VEN.

Express Plus Power Module

Express Plus Power Module Output	
Max Output Power	40 kW
Max Output Current	100 A
Power Conversion Efficiency	Up to 96%
Power Factor	0.99 at full load

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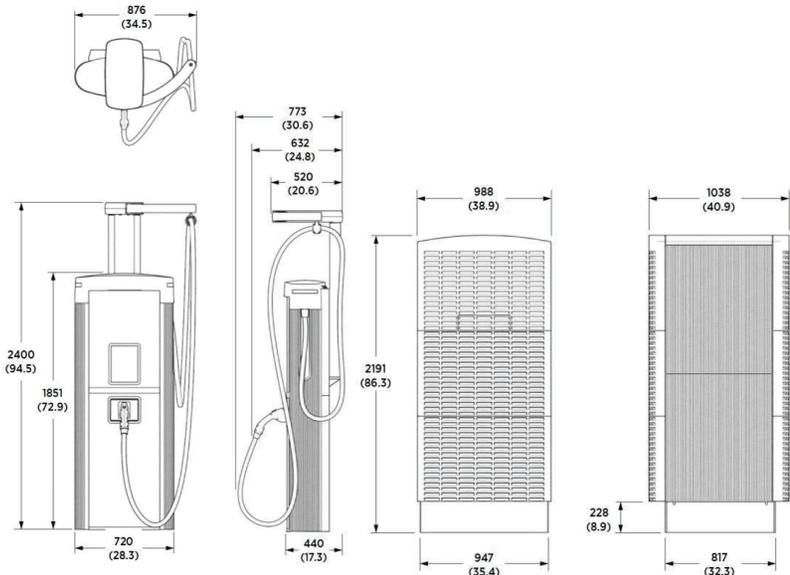
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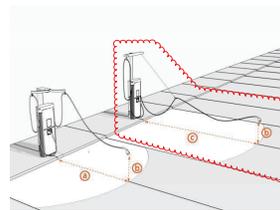
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EQUIPMENT INFORMATION



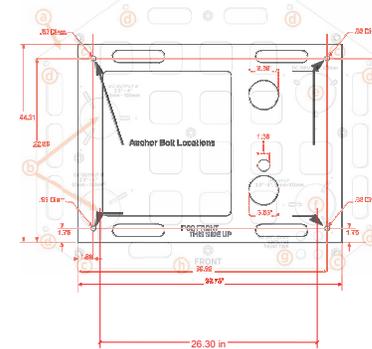
The maximum reach from the station to charge port on a typical vehicle is approximately 3.76 m (12 ft 4 in) (a) at a height of 0.6 m (2 ft) (b) above the ground.

The following table provides the maximum cable reach from the station to charge port on a vehicle:

Note: The cable reach specifications for both the tall CMK and overhead CMK include the full extension of a tether cord from the CMKs, as depicted in the illustration above.

	Pedestal or wall-mount Power Link 1000		Overhead-mount Power Link 1000
	Standard CMK	Tall CMK	Overhead CMK
Cable length	5.8 m (19 ft)	7.6 m (25 ft)	7.6 m (25 ft)
Cable reach	Horizontal or vertical reach	3.76 m (12 ft 4 in)	4.57 m (15 ft)
	Height above ground	Horizontal (a) Vertical (b)	Horizontal (c) Vertical (d)
		0.6 m (2 ft) (b)	Not applicable

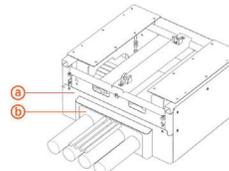
CABLE REACH



POWER BLOCK OVERLAY of EXISTING CONDUIT on EXISTING PADS. CMT IS NOT REQUIRED. (Image Above is Only for Conduit Alignment Confirmation)

NEW 5/8" Epoxy anchors Required.
Existing AC Conduit **MUST** Be Extended with RT Flexible Conduit to the Appropriate Gland Plate.
ALL HVDC, 48Vdc w/CAT 6 STP Outdoor Rated Cable Will be Routed from the Appropriate Gland Plate to the Rear of the Power Block where an (SCEK) Surface Mount Conduit Entry Kit **MUST** be installed for all wiring extending to (2) Power Link Dispensers. (image below)
SEE SITE DESIGN & INSTALLATION GUIDES FOR MORE INFORMATION

SCE gland plate is installed on rear side of the Power Block pedestal, use the rear cover.
a. Pedestal rear cover
b. SCE gland plate



STAMP

STAMP

PLANS PREPARED BY



240 EAST HACIENDA AVE.
CAMPBELL, CA. 95008 USA

PLANS PREPARED FOR

CLIENT NAME
Go Triangle Transit

PROJECT ADDRESS
**5201 Nelson Rd,
Morrisville, NC 27560**

PROJECT DESCRIPTION
EV CHARGING STATIONS

SHEET NAME
Equipment Specifications

DATE: NO: REVISIONS: RESP:

PROJECT NUMBER
XXXXXX

DRAWN BY: _____
DESIGNED BY: _____
APPROVED BY: _____
DATE: _____
SCALE: _____

SHEET NUMBER
EE801



Express 250

General Specifications

Station Electrical Input

Input Rating	400V AC, 3-phase, 96A, 50 Hz 480Y/277V AC, 3-phase, 80A, 60 Hz
Wiring	L1, L2, L3 & Earth
Short Circuit Current Rating	65 kA

Station Electrical Output

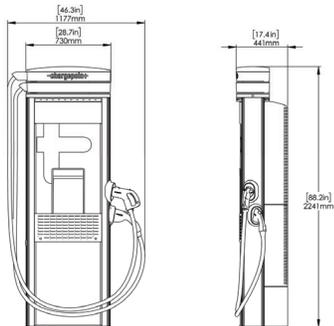
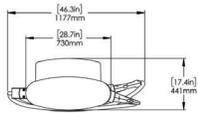
Max Output Power	62.5 kW
Output Voltage, Charging	200–1,000V DC
Max Output Current	156A
Max Modules per Station	2

Paired Station Electrical Output

Paired Max Output Power	125 kW
Paired Max Output Current	CCS1: 200A North American Charging Standard (NACS): 200 A CCS2: 200A
	CHAdEMO; US: 140A, EU: 125A

Power Module

Max Output Power	31.25 kW
Max Output Current	78 A
Power Conversion Efficiency	> 95%
Power Factor	0.99 at full load
Harmonics	ITHD < 5% (Complies with IEEE 519 Requirements)
Power Module Cooling	Liquid Cooling Technology



EQUIPMENT INFORMATION

Functional Interfaces

Max Connector Types per Station	Up to two different connector types per station
Supported Connector Types	CHAdEMO, CCS1 (SAE J1772™ Combo), CCS2 (IEC 61851-23), NACS
Cable Length with Swing Arm*	Full Horizontal Reach: 4.27m (14')
LCD Display	Full-color 254 mm (10 in) display for driver interaction
Top Display	Full-color 508 mm (20 in) LED display for notifications
Authentication	RFID: ISO 15693, ISO 14443, NEMA EVSE 1.2-2015 (UR) Tap to Charge (NFC on Apple & Android): 15118-2 (EIM) Remote: Mobile and in vehicle (if supported by vehicle)

*Horizontal reach to typical vehicle charging port: 3.76 (12'4")

Connectivity Features

Vehicle Safety Communication	CHAdEMO – JEVIS G104 over CAN, CCS1 – SAE J1772 over PLC and CCS2 – IEC 61851-23
Plug-Out Detection	Power terminated per JEVIS G104 (CHAdEMO), SAE J2931 (CCS1) and IEC 61851-23 (CCS2)
Local Area Network	2.4 GHz and 5 GHz WiFi (802.11 b/g/n)
Wide Area Network	4G LTE (fall back to 3G GSM)
Supported Communication Protocols	OCPP 1.6
Service and Maintenance	Remote system monitoring, diagnostic, and proactive maintenance

Safety and Operational Ratings

Station Enclosure Rating	Type 3R, IP54
Station Impact Rating	IK10
Safety and Compliance	UL and cUL listed: complies with UL 2202, UL 2231-1, UL 2231-2, CSA 107.1 CE marking: complies with IEC 62196, IEC 61851

Clearances

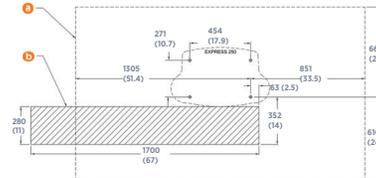
The Express 250 requires minimum functional and service clearances as listed in the table below.

Front Clearance	330.2 mm (13 in) at grade; 609.6mm (24 in) minimum open space
Side Clearance*	712 mm (28 in) required; 863.6 mm (34 in) recommended**
Rear Clearance	304.8 mm (12 in) required; 609.6 mm (24 in) recommended
Top Clearance	304.8 mm (12 in)

*Side clearance is measured from extrusion to extrusion.

**Side clearance can be shared between two charging stations. However, if the charge handles of both stations are facing each other, add an extra 254 mm (10 in).

Measurements are provided in millimeters (inches).



- a. Service clearance of open space (not necessarily at system grade)
- b. Power Module service clearance at grade from the front right anchor, extending 1700 mm (67 in) to the left, without any permanent obstructions (fencing, bollards, wheel stops, etc.)

Note: Listed side clearances are the minimum required for operation and service. For paired charging stations, the bend radius of the DC cable and conduit might require spacing them further apart.

Rear clearance, and the front and side clearance for Power Module service, must be at grade level +/- 25 mm (1 in).

Refer to the "Ventilation" section, and check local and regional code, for any additional clearance requirements.

Station Surge Protection	Tested to IEC 6100-4-5, Level 5 (6 kV @ 3,000A). In geographic areas subject to frequent thunder storms, supplemental surge protection at the service panel is recommended.
EMC Compliance	U.S.: FCC part 15 Class A; EU: EN55011, EN55022 and IEC61000-4
Storage Temperature	-40°C to 50°C (-40°F to 122°F)
Operating Temperature	-40°C to 50°C (-40°F to 122°F)
Operational Altitude	<3,000 m (<9,800 ft)
Operating Humidity	Up to 95% @ 50°C (122°F) non-condensing

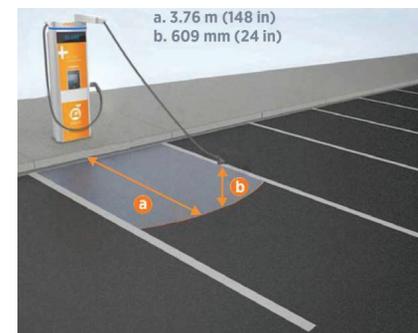
Generic Specifications

Station Enclosure Dimensions	2,241 mm H x 730 mm W x 441 mm D (7'4" x 2'6" x 1'5")
Power Module Dimensions	760 mm H x 430 mm W x 130 mm D (2'6" x 1'5" x 5")
Station Weight (without Power Modules)	250 kg (551 lb)
Power Module Weight	45 kg (98.5 lb)
Standard Warranty	Limited 2-Year Parts Warranty

Energy Management Features

Dynamic Power Management	Allows a fixed maximum power output per station or lets the system dynamically manage the power distribution per station
Remote Energy Management	Manage output power via the ChargePoint Admin Portal, API, and Open ADR 2.0b VEN

Note that the station's two charge cables are different types of connectors to maximize usability across EV models. The cables cannot both be used at the same time. Therefore, do not position an Express 250 to share two parking spots.



CABLE REACH

STAMP

STAMP

PLANS PREPARED BY



240 EAST HACIENDA AVE.
CAMPBELL, CA. 95008 USA

PLANS PREPARED FOR

CLIENT NAME

Go Triangle Transit

PROJECT ADDRESS
5201 Nelson Rd,
Morrisville, NC 27560

PROJECT DESCRIPTION
EV CHARGING STATIONS

SHEET NAME
Equipment Specifications

DATE:	NO:	REVISIONS:	RESP:

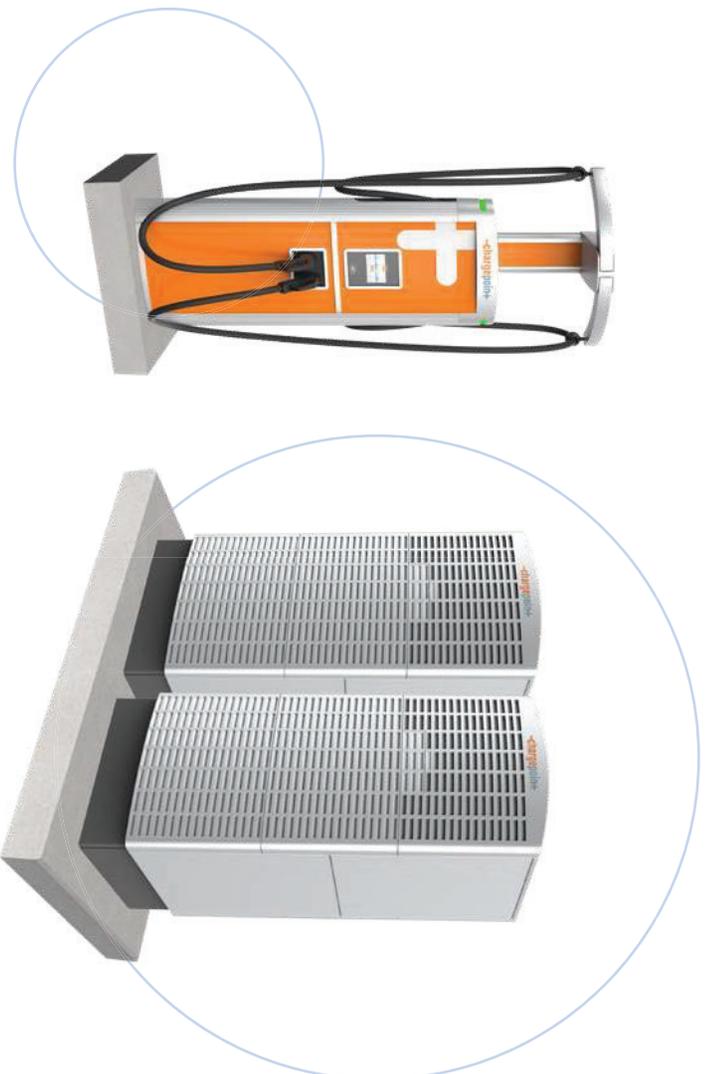
PROJECT NUMBER
XXXXXXX

DRAWN BY: _____
DESIGNED BY: _____
APPROVED BY: _____
DATE: _____
SCALE: _____

SHEET NUMBER
EE802

EVNext Solutions

by Oldcastle Infrastructure



Precast pad foundations save time and cost on-site

Oldcastle Infrastructure has teamed up with ChargePoint to provide a precast foundation solution that will speed up and simplify your installation. EVNext pads arrive at the job site ready-to-go, with openings and fixing points customized specifically for ChargePoint equipment and bollards. These durable foundations can be installed above or at grade and can accommodate the ChargePoint Express Plus Power Link, Express Plus Power Blocks, and the CPE 250/280 chargers.

Designed specifically for ChargePoint

Our engineering team created customized solutions that fit ChargePoint specifications and are designed with openings and fixing points precisely where you need them. Engineer stamp can be provided as needed: *please contact Oldcastle Infrastructure Engineering for support.*

Install foundation and equipment in one day

Precast pad foundations arrive on-site, ready for installation and equipment connections. Eliminate the wait time and cost of cast-in-place concrete and get everything done in the same day.

Precast pad foundations

Precast pad foundations are available for Power Link and Power Block (single or double). Our precast foundations also include anchor points for surface mounted bollards (bollards supplied by others) and ChargePoint equipment (threaded bolts, nuts & washers by others).

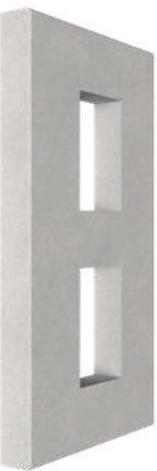
See Attached Submittal Drawing.



Power Link Pad



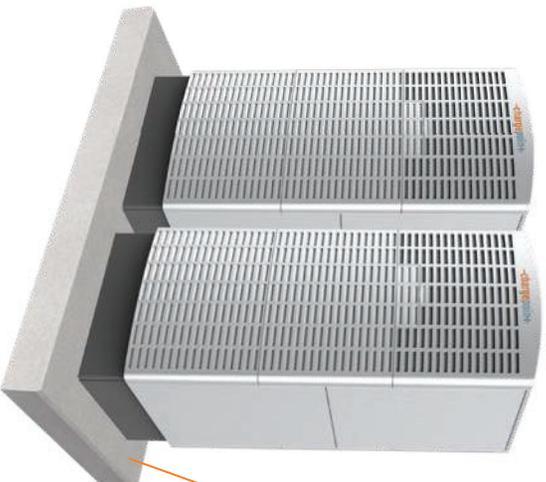
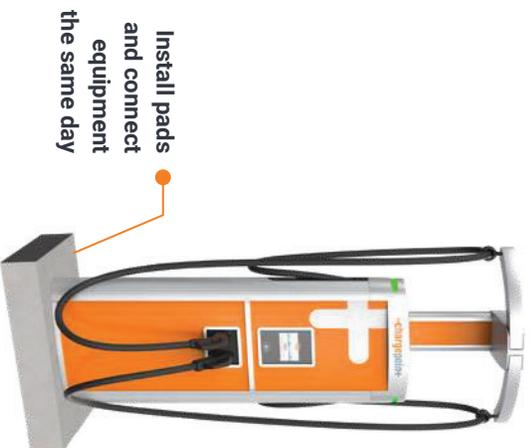
Power Block Pad Single



Power Block Pad Double

Product details and specifications

ChargePoint Equipment		Oldcastle Infrastructure Products		
Equipment Name	Equipment Type	EVNext Product Type	EV Next Product Size	SKU
Power Link	L3/DCCFC	Precast Pad (No EVNext Frame)	4' x 6' x 12"	CP305012
Power Block	Cabinet / Panel	Precast Pad (No EVNext Frame)	5' x 6' x 8"	CP506080
Double Power Block	Cabinet / Panel	Precast Pad (No EVNext Frame)	5' x 9.5' x 10"	CP509010



For further information please contact:

Greg Dicoستا
 greg.dicosta@oldcastle.com
 or Your Local Dealer

Precast pad foundations

Precast pad foundations are available for the CPE250 and CPE280 chargers. Our precast foundations also include anchor points for surface mounted bollards (bollards supplied by others) and ChargePoint equipment (threaded bolts, nuts & washers by others).

**Images Do Not Show Conduit Openings Correctly
See Attached Submittal Drawing.**



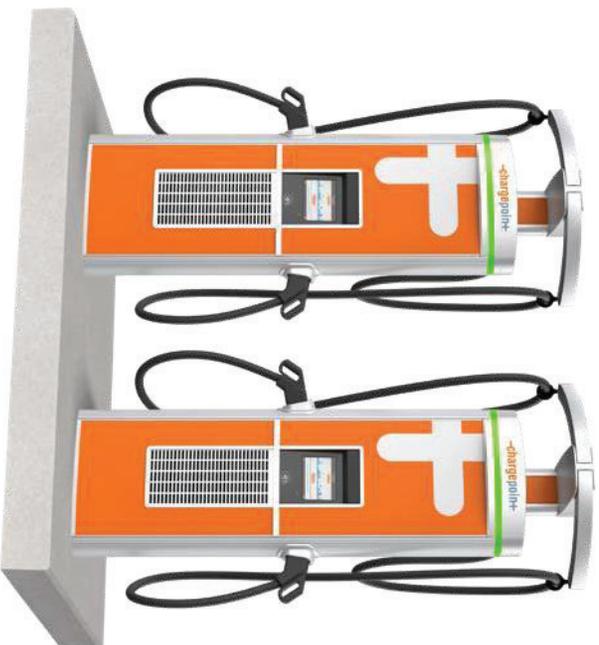
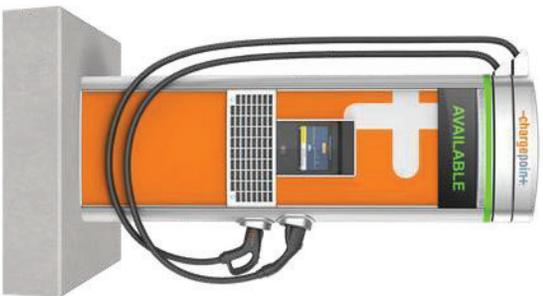
CPE250 Single Pad



CPE280 Double Pad

Product details and specifications

ChargePoint Equipment		Oldcastle Infrastructure Products		
Equipment Name	Equipment Type	EVNext Product Type	EV Next Product Size	SKU
CPE250 Single Pad	Express 250	Precast Pad (No EVNext Frame)	4' 2" x 5' 6" x 12"	CP506612
CPE280 Double Pad	Express 280	Precast Pad (No EVNext Frame)	5' x 14' x 8"	CP6016808

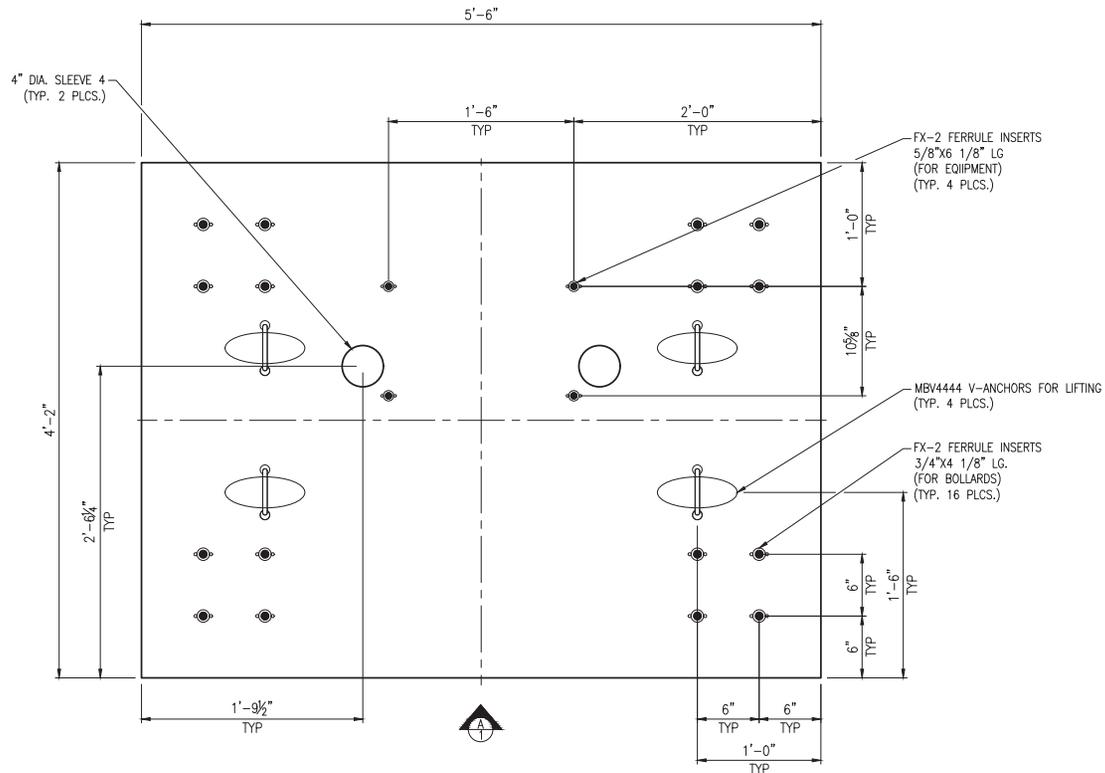


For further information please contact:

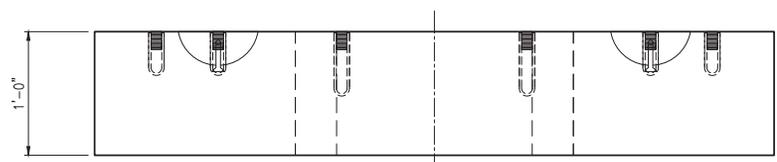
Greg Dicoستا
greg.dicosta@oldcastle.com
 or Your Local Dealer



Trusted
Partnership



PLAN VIEW
SCALE: 1" = 1'-0"



VIEW A
SCALE: 1" = 1'-0"

CONTACT OLDCASTLE
FOR ENGINEERING
STAMP IF REQUIRED.

DESIGN NOTES

1. DESIGN CODE: ASCET-16
2. CONCRETE: 28 DAY COMPRESSIVE STRENGTH f_c = 6000 PSI
3. REBAR: ASTM A-615 GRADE 60
4. CEMENT: ASTM C-150 SPECIFICATIONS
5. LOADS:
 - A. WIND SPEED = 135 MPH
 - i. IMPORTANCE FACTOR = 1
 - ii. EXPOSURE CATEGORY = C
 - iii. RISK CATEGORY = 2
 - B. SEISMIC SDS = 1.9 (ASSUMED SITE CLASS D)
 - C. CONCRETE WEIGHT = 150 PCF
 - D. DESIGN FILL RANGE: AT GRADE
 - E. ASSUMED WATER TABLE: 9' BELOW FINISHED GRADE
6. NO HEAVY EQUIPMENT / CONSTRUCTION LOADS SHALL BE APPLIED. PRECAST STRUCTURE NOT DESIGNED FOR ADDITIONAL LIVE OR SURCHARGE LOADING.
7. U.N.O., SUBGRADE, SUBBASE AND FILL REQUIREMENTS ARE BY OTHERS AND SHALL PRECLUDE ENVIRONMENTAL HAZARDS SUCH AS FROST HEAVE, THAW WEAKENING, ISSUES DUE TO HIGH WATER TABLE AND SIMILAR. REQUIREMENTS SHALL CONFORM TO LOCAL, MUNICIPAL, STATE/PROVINCIAL AND/OR FEDERAL GUIDELINES AND/OR PROJECT SPECIFICATIONS. CONSULT WITH (PROJECT) GEOTECHNICAL ENGINEER WHERE NEEDED. CONTRACTOR IS RESPONSIBLE FOR SUBGRADE AND SUB BASE PREPARATION.
8. INSERT SIZES AND LOCATIONS FOR EQUIPMENT PER CLIENT DIRECTION.
9. CLIENT TO CONFIRM EXACT LOCATIONS OF BLOCKOUTS.
10. MIN. ASSUMED ALLOWABLE BEARING PRESSURE = 2000PSF
11. ALL EARTHWORKS AND DRAINAGE SHALL BE BY OTHERS. IT IS ASSUMED THAT GRADING, DRAINAGE AND SLOPING REQUIREMENTS SHALL PRECLUDE FLOODING, PONDING, GROUND WATER INFILTRATION AND SIMILAR IN AND AROUND THE EQUIPMENT.
12. FINISHED GRADE ASSUMED LEVEL WITH TOP OF SLAB.

WEIGHT TABLE

	LBS	CY.
PAD	3,411	0.84

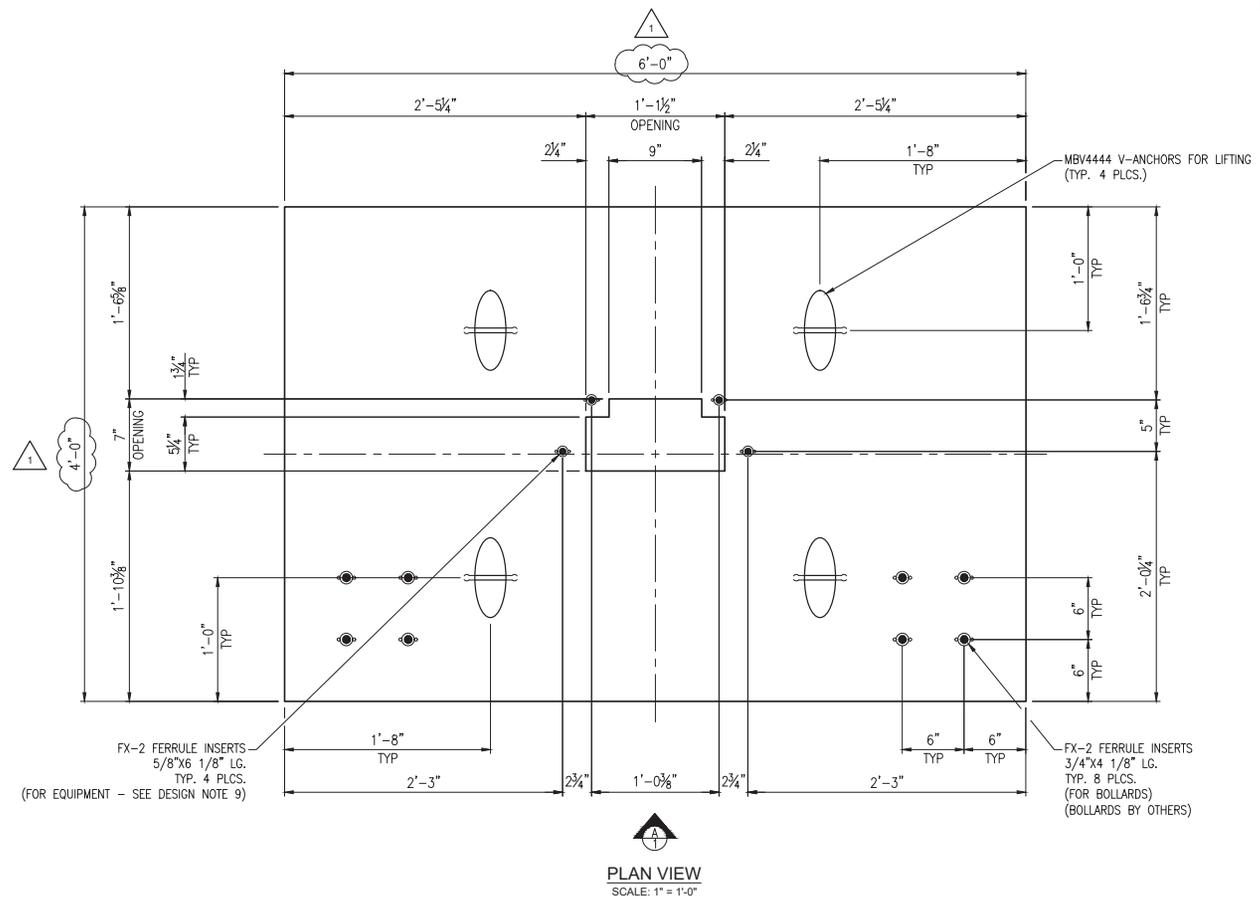


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CPE250 PAD - SINGLE
SUBMITTAL

CUSTOMER CHARGE POINT					
DATE	SALES	DRAWN	ENGINEER	CHECKED	SALES ORDER
07/18/24	BG	PPS	RR	---	-
DRAWING NUMBER				REVISION	SHEET
CPE250 PAD - SINGLE				REV DATE	1 OF 3

REVISION	DATE	BY	DESCRIPTION
1	10/14/2024	LS	SLAB LENGTH & WIDTH UPDATED PER CLIENT DIRECTION. WIND SPEED UPDATED.
2	11/20/2024	LS	WIND SPEED UPDATED. SLAB FINISH ADDED.



- ### DESIGN NOTES
- DESIGN CODE: ASCE-10
 - CONCRETE: 28 DAY COMPRESSIVE STRENGTH $f_c = 6000$ PSI
 - REBAR: ASTM A-615 GRADE 60
 - CEMENT: ASTM C-595 SPECIFICATIONS
 - LOADS:
 - A. WIND SPEED = 150 MPH
 - B. WIND EXPOSURE CATEGORY = I
 - C. EXPOSURE CATEGORY = C
 - D. RISK CATEGORY = 2
 - E. SEISMIC SDS = 1.9 (ASSUMED SITE CLASS D)
 - F. CONCRETE WEIGHT = 150 PCF
 - G. DESIGN FILL RANGE: AT GRADE
 - H. ASSUMED WATER TABLE: 5' BELOW FINISHED GRADE
 - NO HEAVY EQUIPMENT/CONSTRUCTION LOADS SHALL BE APPLIED. PRECAST STRUCTURE NOT DESIGNED FOR ADDITIONAL LIVE OR SURCHARGE LOADING.
 - UNDO. SUBGRADE, SUBBASE AND FILL REQUIREMENTS ARE BY OTHERS AND SHALL PRECLUDE ENVIRONMENTAL HAZARDS SUCH AS FROST HEAVE, THAW WEAKENING, ISSUES DUE TO HIGH WATER TABLE AND SIMILAR. REQUIREMENTS SHALL CONFORM TO LOCAL, MUNICIPAL, STATE/PROVINCIAL AND/OR FEDERAL GUIDELINES AND/OR PROJECT SPECIFICATIONS. CONSULT WITH (PROJECT) GEOTECHNICAL ENGINEER WHERE NEEDED. CONTRACTOR IS RESPONSIBLE FOR SUBGRADE AND SUB BASE PREPARATION.
 - INSERT SIZES AND LOCATIONS FOR EQUIPMENT PER CLIENT DIRECTION.
 - CLIENT TO CONFIRM EXACT LOCATIONS OF BLOCKOUTS.
 - MIN. ASSUMED ALLOWABLE BEARING PRESSURE = 2000PSF
 - ALL EARTHWORKS AND DRAINAGE SHALL BE BY OTHERS. IT IS ASSUMED THAT GRADING, DRAINAGE AND SLOPING REQUIREMENTS SHALL PRECLUDE FLOODING, PONDING, GROUND WATER INFILTRATION AND SIMILAR IN AND AROUND THE EQUIPMENT.
 - FINISHED GRADE ASSUMED LEVEL WITH TOP OF SLAB.
 - CONCRETE FINISH: STANDARD SMOOTH FINISH.

WEIGHT TABLE

PAD	LBS	CY.
	3,510	0.87



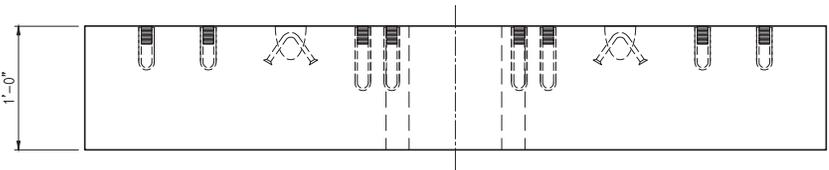
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POWER LINK PAD - B
SUBMITTAL

CUSTOMER: CHARGE POINT

DATE	SALES	DRAWN	ENGINEER	CHECKED	SALES ORDER
09/07/23	RC	LS	RR	---	---
DRAWING NUMBER				REVISION	SHEET
				2	1 OF 1
Power Link Pad				REV DATE	
				11/20/24	

CONTACT OLDCASTLE FOR ENGINEERING STAMP IF REQUIRED.



VIEW A
SCALE: 1" = 1'-0"