

**Contract Change Order # 1**

Project Name: Events Park Security Lighting Project Number: 176041  
 Project Location: Events Park Date of Application: Tuesday, January 9, 2018  
 Contractor: Third Generation Electric Submitted By: Daniel S.

**Summary of Change in Scope of Work**

The following scope of work consisting of work location, work description, established quantities, and timeline for completion has been reviewed and agreed upon by the contractor, the origin funding department, and the Engineering and Construction Department.

**Change of Work Items Included in this Change Order:**

Due to revisions to the Events Park Restroom project, the 15Kv extension part of the additional alternate associated with this Security Lighting contract will be extended to service the restroom and playground complex. This extension is to include the line extension to the restroom building (1000 LF of service), installation of a 75Kva transformer, and all associated terminations and lines. The installation of  
 1) the 1000 LF of 4" conduit installed in place shall be extended through line item overruns in the base contract. The plans for installation are attached within and are to be incorporated into the contract documents. The costs summarized below are inclusive of all work described above and all applicable markups.

**Change in Contractual Project Time:**

1) None, required. Substantial completion has been reached on the base contract.

Plan Sheets or Additional Documents Attached:  Yes  No  Other: \_\_\_\_\_

**Work Order Quantities**

Item#	(Spec)	Item Description	Units	Price	Quantity	Total Amount
CO1-1		15Kva Service Extension	LS	\$ 30,298.50	1	\$ 30,298.50
Total Change Cost:						\$ 30,298.50

**Summary of Project Costs**

Total Previous Change Orders:	\$ -	Original Contract Amount:	\$ 248,295.22
Current Change Order:	\$ 30,298.50	Amended Contract Amount:	\$ 278,593.72
Total Cost of Change Orders:	\$ 30,298.50	Percent Change in Contract:	12.20%
Total Cost Applicable to CBA:	\$ 30,298.50	Percent Change Applicable to CBA:	12.20%

**Change Order Authorization**

Change Order # <u>1</u> in the sum of: \$ <u>30,298.50</u>	has been reviewed by all parties and is recommended for approval by:	
Contractor Submitting Change Order:	_____	_____
	Name	Signature
Construction Division Manager:	<u>Timothy S Robins, PE</u>	_____
	Name	Signature
Director of Engineering & Construction:	<u>Alex Mills, PE</u>	_____
	Name	Signature
Assistant City Manager - Operations:	<u>Kenneth D Schwab, PE</u>	_____
	Name	Signature
City Manager:	<u>Michael Spurgeon</u>	_____
	Name	Signature

**This Change is Executed Through:**

- This change to the contract documents is authorized by the City Manager's authority in accordance with the applicable state statutes and COBA Code of Ordinances.  
 or  
 This change to the contract documents was approved at the City Council/BAMA meeting held on : \_\_\_\_\_



Timothy Robins, P.E. CWI  
 Construction Department Manager  
 City of Broken Arrow

12-21-17

Mr. Robins,

Electrical work per keynote 12,13,14, 15 Sheet E1 Events Park Lighting.

Events Park Restrooms Electrical Service					
				Engineer's Estimate	
ITEM	DESCRIPTION	Unit	Quantity	Unit Price	Extension
1	75 KVA Pad MTD. Transformer Per Key Note. 13 On Sheet E 15 KV	EA	1	\$ 8,524.00	\$ 8,524.00
2	15 KV,3/0 EPR/EP ALUMINUM cable Installed in conduit	FT	3150	\$ 4.23	\$ 13,324.50
3	2 AWG, 600V THWN installed in conduit	FT	1050	\$ 3.00	\$ 3,150.00
4	4 PVC Schedule 40 Conduit Underground at 48" to Top Of Contuit	FT	1020	\$ 11.63	\$ 11,862.60
5	15 KV Terminations	EA	6	\$ 750.00	\$ 4,500.00
6	Transformer Pad	EA	1	\$ 800.00	\$ 800.00
<b>TOTAL</b>					<b>\$ 42,161.10</b>

Regards,

Daniel Stefanoff  
 President  
 Third Generation Electric, Inc.

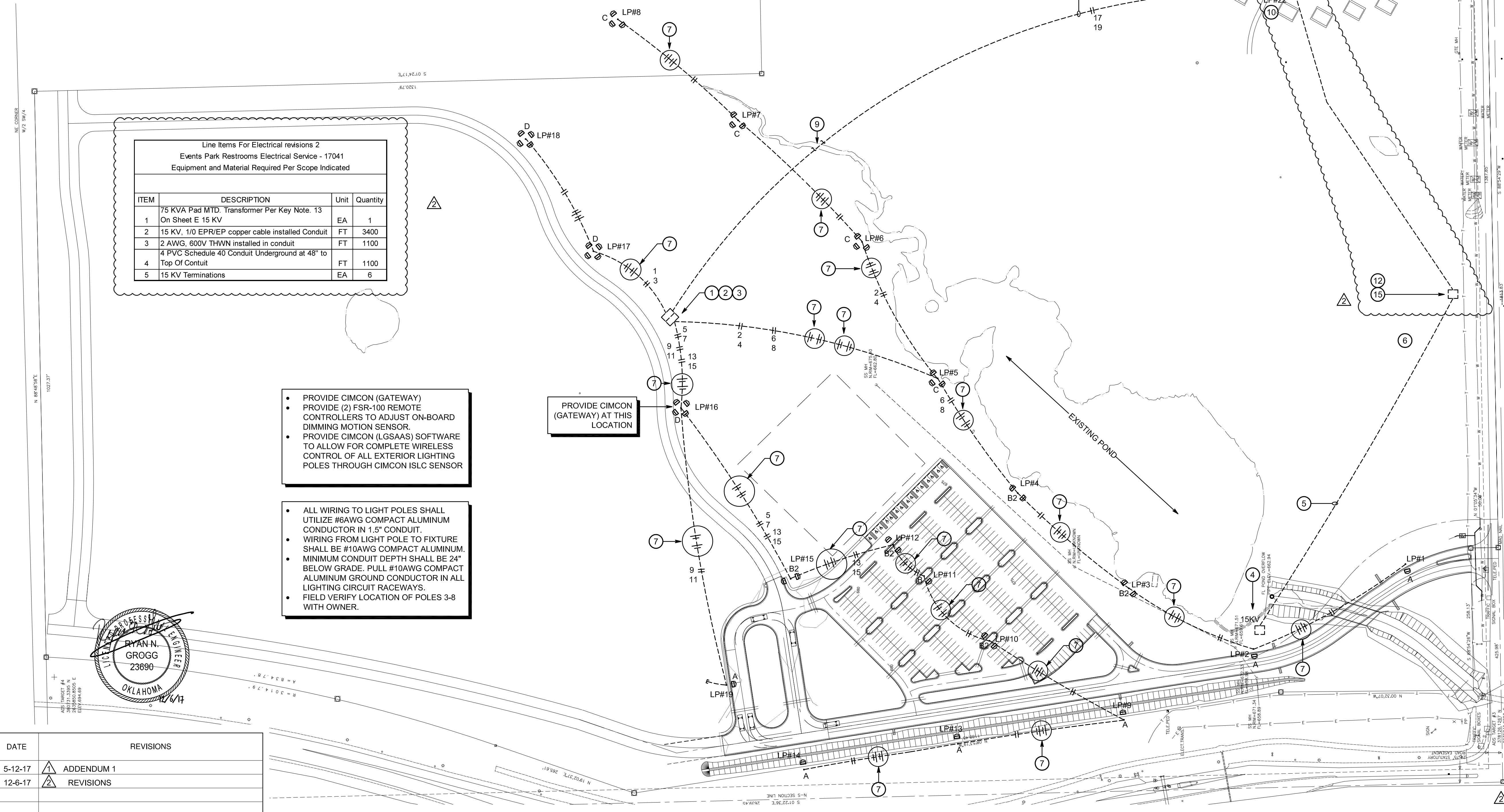
LIGHTING FIXTURE SCHEDULE								
TYPE	MANUFACTURER	MODEL NUMBER	LAMPS		MOUNTING	FINISH	VOLT	REMARKS
			QTY.	REF.				
A	MCGRAW EDISON	GLEON-AF-06-LED-E1-T3R-BZ ADJA MS/DIM-L40W-PER7-1200 ISLC-3100-7P-A-10-G-CATB-2.0-480V	LED	LED	POLE	BZ	480	POLE # R340845906T4D1313 (ANODIZED FINISH) VALMONT
B	MCGRAW EDISON	GLEON-AF-06-LED-E1-T4W-BZ ADJA MS/DIM-L40W-PER7-1200 ISLC-3100-7P-A-10-G-CATB-2.0-480V	LED	LED	POLE	BZ	480	POLE # R340845906T4D1313 (ANODIZED FINISH) VALMONT
B2	MCGRAW EDISON	(2)GLEON-AF-06-LED-E1-T4W-BZ ADJA MS/DIM-L40W-PER7-1200 (3)ISLC-3100-7P-A-10-G-CATB-2.0-480V	LED	LED	POLE	BZ	480	POLE # R340845906T4D2313 (ANODIZED FINISH) VALMONT
C	MCGRAW EDISON	(3)GLEON-AF-06-LED-E1-T4W-BZ ADJA MS/DIM-L40W-PER7-1200 (3)ISLC-3100-7P-A-10-G-CATB-2.0-480V	LED	LED	POLE	BZ	480	POLE # R340845906T4D3313 (ANODIZED FINISH) VALMONT
D	MCGRAW EDISON	(4)GLEON-AF-06-LED-E1-T4W-BZ ADJA MS/DIM-L40W-PER7-1200 (4)ISLC-3100-7P-A-10-G-CATB-2.0-480V	LED	LED	POLE	BZ	480	POLE # R340845906T4D4313 (ANODIZED FINISH) VALMONT

Line Items For Electrical revisions 2  
Events Park Restrooms Electrical Service - 17041  
Equipment and Material Required Per Scope Indicated

ITEM	DESCRIPTION	Unit	Quantity
1	75 KVA Pad MTD. Transformer Per Key Note. 13 On Sheet E 15 KV	EA	1
2	15 KV, 1/0 EPR/EP copper cable installed Conduit	FT	3400
3	2 AWG, 600V THWN installed in conduit	FT	1100
4	4 PVC Schedule 40 Conduit Underground at 48" to Top Of Conduit	FT	1100
5	15 KV Terminations	EA	6

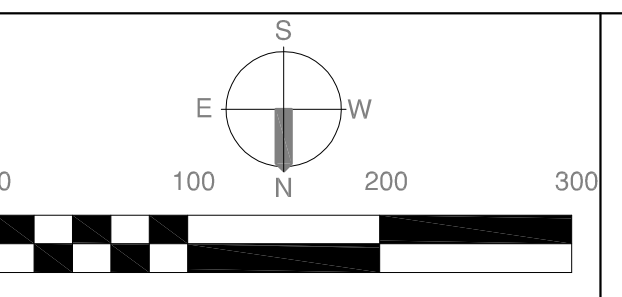
- PROVIDE CIMCON (GATEWAY)
  - PROVIDE (2) FSR-100 REMOTE CONTROLLERS TO ADJUST ON-BOARD DIMMING MOTION SENSOR.
  - PROVIDE CIMCON (LGSAS) SOFTWARE TO ALLOW FOR COMPLETE WIRELESS CONTROL OF ALL EXTERIOR LIGHTING POLES THROUGH CIMCON ISLC SENSOR
- ALL WIRING TO LIGHT POLES SHALL UTILIZE #6AWG COMPACT ALUMINUM CONDUCTOR IN 1.5" CONDUIT.
  - WIRING FROM LIGHT POLE TO FIXTURE SHALL BE #10AWG COMPACT ALUMINUM.
  - MINIMUM CONDUIT DEPTH SHALL BE 24" BELOW GRADE. PULL #10AWG COMPACT ALUMINUM GROUND CONDUCTOR IN ALL LIGHTING CIRCUIT RACEWAYS.
  - FIELD VERIFY LOCATION OF POLES 3-8 WITH OWNER.

PROVIDE CIMCON (GATEWAY) AT THIS LOCATION



- ### KEYNOTES:
- EXISTING LOCATION OF PAD MOUNTED TRANSFORMER & ASSOCIATED SWITCHBOARDS. INSTALL NEW 45KVA 208V "DELTA" CONNECTED PRIMARY, 480/277V, "WYE" CONNECTED SECONDARY, NEMA 3R TRANSFORMER & CONNECT TO A NEW 480/277V, 3PH, 4W, 70A, 14KA MAIN CIRCUIT BREAKER PANELBOARD, 30 POLES, NEMA 3R. REFERENCE PANEL SCHEDULE.
  - EXTEND EXISTING CONCRETE PAD TO ACCOMMODATE NEW 45KVA TRANSFORMER & NEW PANELBOARD 'HPA'.
  - INSTALL 12 POLE, 30A, LIGHTING CONTACTOR IN NEMA 3R ENCLOSURE, CONTROLLED BY A PHOTOCELL TO CONTROL ALL LIGHTING CIRCUITS. MOUNT PANEL & CONTACTOR ON UNISTRUT RACK.
  - EXISTING 15KV SECTIONALIZING CABINET. TERMINATE NEW 15KV FEEDER TO SPARE TERMINALS.
  - NEW U/G 15KV FEEDER, 4" C WITH 3#1/0, SHIELDED, 'EPR' INSULATION, EP JACKET, COPPER CONDUCTOR & #2AWG THWN GROUND CONDUCTOR. MAINTAIN MINIMUM 52" TO TOP OF CONDUIT. INSTALL "HIGH VOLTAGE" WARNING TAPE. REFERENCE INSTALLATION DETAIL.
  - INSTALL 3 POSITION SECTIONALIZING CABINET, SIMILAR TO COOPER "SECTER" SERIES #SEC330223F2153 AOG, COMPLETE WITH JUNCTION BAR, LOAD BREAK JUNCTION, LOAD BREAK CONNECTORS, PARKING STAND BUSHINGS. MOUNT UNIT ON FIBERGLASS GROUND SLEEVE, SIMILAR TO COOPER GS183022. MOUNT ASSEMBLY ON 8" REINFORCED CONCRETE PAD EXTENDED 4" BEYOND CABINET ON ALL SIDES. FIELD VERIFY FINAL LOCATION WITH OWNER.
  - PULL 4#8, #10G (2-120V CIRCUITS) IN SAME CONDUIT. TERMINATE AT 2-20A/1P BREAKERS AT EXISTING PANELBOARDS (TOTAL 10 CIRCUITS). EXTEND TO TOP OF POLE & TERMINATE AT SENSOR & WIRELESS HUB AS REQUIRED.
  - 1 1/2" C WITH 2#3, #8G.
  - BORE CONDUIT MINIMUM 24" BELOW BOTTOM OF CREEK.
  - TOP OF POLE BASE AT 24" ABOVE GROUND.
  - NEW RESTROOM STRUCTURE, CONSTRUCTED UNDER SEPARATE CONTRACT.
  - EXISTING 15KV TAP CABINET. EXTEND 15 KV FEEDER FROM TAP CABINET USING 3#1/0, SHIELDED, 'EPR' INSULATION, EP JACKET COPPER CONDUCTOR, #2AWG THWN GROUND IN 4" PVC CONDUIT & FEED NEW 75KVA PAD MOUNTED TRANSFORMER REF: KEYNOTE 15. MAINTAIN 15KV FEEDER MINIMUM 52" (TO TOP OF CONDUIT) BELOW GRADE. REFER TO INSTALLATION DETAIL.
  - NEW PAD MOUNTED 13.2KV/208-120V, 3PH, 4W, DEAD FRONT, LOOP FEED WITH DRY CANISTERS & CURRENT LIMITING FUSES.  
TRANSFORMER WITH:  
a. COOLING PANELS  
b. TANK WITH WELDED COVER  
c. LIFTING LUGS  
d. JACK LUGS  
e. HANDHOLE  
f. COMPARTMENT  
g. STEEL DIVIDER  
h. DRY WELL CANISTER WITH EATON 'ELX' FULL RANGE, 6A CURRENT LIMITING FUSES  
i. H.V. BUSHING WELLS  
j. PARKING STANDS  
k. 1" FILL PLUG & FILTER PRESS CONNECTION  
l. S.S. CONNECTION DIAGRAM NAME PLATE  
m. PRESSURE RELIEF VALVE  
n. LIQUID LEVEL GAUGE  
o. NO-LOAD TAP CHANGER  
p. L.V. BUSHINGS  
q. 1" DRAIN PLUG WITH DRAIN VALVE & SAMPLING DEVICE  
r. GROUND PADS PER ANSI  
s. REMOVABLE FRONT SILL
  - EXTEND SECONDARY SERVICE, 4#4/0, #4G, 2.5" C FROM TRANSFORMER TO J-BOX ON EXTERIOR WALL & FROM J-BOX TO PANEL INSIDE BUILDING BY MEANS OF UNDER GROUND FEEDER. KEYNOTE IS FOR REFERENCE ONLY. THIS FEEDER IS BEING INSTALLED UNDER A SEPARATE CONTRACT.
  - ALL 15 KV TERMINATIONS MUST BE PERFORMED BY TRAINED & CERTIFIED TECH. USE 3M, COLD SHRINK QT-II, 15 KV 5633K OR EQUAL TERMINATION KIT.

DATE	REVISIONS
5-12-17	ADDENDUM 1
12-6-17	REVISIONS



## EVENTS PARK SECURITY LIGHTING

## ELECTRICAL PLAN

PROFILE SCALE:	DESIGN	DATE	DRAFTED	DATE
HORIZ.	CN	3-23-2017	CH	3-23-2017
VERT.	CN	3-23-2017	CH	3-23-2017
DRAWING NAME:	SHEET	E1	PROJECT NO.	
ELECTRICAL PLAN	OF	3	176041	

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