

**EVSE Construction Cost Estimate: City Hall Parking Garage (5th & 6th Floors)**

Item No.	Category	Item Description	Unit	Quantity	Material Unit Cost	Installation Labor Unit Cost	Total Unit Cost	Extended Cost (Qty. X Unit Cost)	Source	Notes
1	Chargers	Enphase HCS-40 Q40 Single-Port Level 2 Charger, 32A	EA	41	\$916.00	\$680.00	\$1,596.00	\$65,436.00	Enphase	Installation labor estimated at 8 labor hours at \$85/hour
2	Conduit/Conductors	Overhead 500A Cable in Ceiling/Wall Mounted Conduit, 2 Sets of 2.5" Electrical Metallic Tubing (EMT), 4x 350 kcmil + 1x #2 Ground per Set	LF	250	\$94.70	\$54.43	\$149.14	\$37,284.65	RS Means	Main 208V switchboard to 208V panels on 5th and 6th floor
3	Conduit/Conductors	Overhead 40A Cable in Ceiling/Wall Mounted Conduit, 1" Electrical Metallic Tubing (EMT), 2x #6 + 1x #10 Ground	LF	7,345	\$5.79	\$8.43	\$14.21	\$104,407.71	RS Means	Panel to Level 2 chargers
4	Electrical Equipment	Panelboard, 208Y/120V 3 Phase, 500A Main Circuit Breaker, 42 Circuits, NEMA 3R	EA	2	\$16,353.07	\$850.00	\$17,203.07	\$34,406.14	Larson Electronics	Distribution panels for Level 2 chargers. One on 5th floor, one on 6th floor. Installation labor estimated at 10 hours at \$85/hour.
5	Electrical Equipment	Circuit Breaker, 500A, 3 Pole, 600VAC, 18kA	EA	2	\$7,560.00	\$170.00	\$7,730.00	\$15,460.00	Schneider Electric	Breakers in main switchboard for panels on 5th and 6th floors
6	Electrical Equipment	Circuit Breaker, 40A, 2 Pole, 120/240VAC, 10kA	EA	41	\$91.54	\$21.25	\$112.79	\$4,624.39	Schneider Electric	Level 2 charger branch breaker. Installation labor estimated at .25 hours at \$85/hour
7	Site Civil	6 Inch Protective Bollards	EA	28	See Total Unit Cost	See Total Unit Cost	\$1,000.00	\$28,000.00	Ohio DOT EV Deployment Projects	Only for wall mounted chargers, 2 per charger
8	Site Civil	EV Parking Only Pavement Striping/Signage	EA	41	See Total Unit Cost	See Total Unit Cost	\$100.00	\$4,100.00	HDR EV Database References	1 per parking space
9	Site Civil	Level 2 Charger Column/Wall Mount System	EA	41	See Total Unit Cost	See Total Unit Cost	\$400.00	\$16,400.00	HDR EV Database References	1 per wall- or column-mounted charger

**Construction Subtotal \$310,119**

**Percentage Based Costs**

Engineering Design (8%) \$24,810  
 Permitting/Environmental (4%) \$12,405  
 Construction Administration (4%) \$12,405  
 Contingency (20%) \$62,024

**Percentage Based Costs Subtotal \$111,643**

**Grand Total (Rounded) \$422,000**

**EVSE Construction Cost Estimate: Public Safety Center (Level 2 Charging Layout)**

Item No.	Category	Item Description	Unit	Quantity	Material Unit Cost	Installation Labor Unit Cost	Total Unit Cost	Extended Cost (Qty. X Unit Cost)	Source	Notes
1	Chargers	Enphase HCS-40 Q40 Single-Port Level 2 Charger, 32A	EA	33	\$916.00	\$680.00	\$1,596.00	\$52,668.00	Enphase	
2	Electrical Equipment	Pad Mount Utility Transformer, 25 kV Primary, 120/208V Secondary, 225 kVA	EA	1	\$54,203.06	\$8,500.00	\$62,703.06	\$62,703.06	Larson Electronics	Utility transformer. Actual costs dependent on NV Energy. Installation labor estimated at 100 labors
3	Electrical Equipment	Panelboard, 208Y/120V 3 Phase, 800A Main Circuit Breaker, NEMA 3R	EA	1	\$37,693.45	\$850.00	\$38,543.45	\$38,543.45	RS Means	Distribution panel for Level 2 chargers. Installation labor estimated at 10 hours at
4	Electrical Equipment	Circuit Breaker, 40A, 2 Pole, 120/240VAC, 10kA	EA	33	\$91.54	\$21.25	\$112.79	\$3,722.07	Schneider Electric	Level 2 charger branch breaker. Installation labor
5	Conduit/Conductors	Underground 800A Cable in Trenched Conduit, 2 Sets of 4" SCH40 PVC, 4x 600 KCMIL per Set	LF	20	\$241.81	\$70.07	\$311.88	\$6,237.52	RS Means	Utility transformer to panelboard
6	Conduit/Conductors	Underground 40A Cable in Trenched Conduit, 1" SCH40 PVC, 2x #6 + 1x #10 Ground	LF	5,150	\$7.56	\$7.98	\$15.53	\$80,004.22	RS Means	
7	Conduit/Conductors	Underground Conduit Trenching, Including Excavation & Backfill	LF	350	\$0.00	\$50.00	\$50.00	\$17,500.00	Engineering Estimate	Quantity estimated on total trench LF
8	Site Civil	6 Inch Protective Bollards	EA	66	See Total Unit Cost	See Total Unit Cost	\$1,000.00	\$66,000.00	Ohio DOT EV Deployment Projects	2 per charger
9	Site Civil	EV Parking Only Pavement Striping/Signage	EA	33	See Total Unit Cost	See Total Unit Cost	\$100.00	\$3,300.00	HDR EV Database References	1 per parking space
10	Site Civil	Site Upgrades (Tree Removal, Landscaping, Signage, etc.)	EA	1	See Total Unit Cost	See Total Unit Cost	\$20,000.00	\$20,000.00	Engineering Estimate	Placeholder estimate, deferred to detail design
11	Site Civil	Level 2 Charger Concrete Pad	EA	33	See Total Unit Cost	See Total Unit Cost	\$1,500.00	\$49,500.00	NY State EV Infrastructure Estimating	1 per charger
12	Site Civil	Switchboard/Panelboard/Step-Down Transformer Concrete Pad	EA	1	See Total Unit Cost	See Total Unit Cost	\$2,500.00	\$2,500.00	HDR EV Database References	1 per switchboard/panelboard
13	Site Civil	Transformer Pad, 7' x 7', Precast	EA	1	\$0.00	\$0.00	\$3,900.00	\$3,900.00	HDR EV Database References	1 per transformer

**Construction Subtotal \$406,578**

**Percentage Based Costs**

Engineering Design (8%)	\$32,526
Permitting/Environmental (4%)	\$16,263
Construction Administration (4%)	\$16,263
Contingency (20%)	\$81,316

**Percentage Based Costs Subtotal \$146,368**

**Grand Total (Rounded) \$553,000**

**EVSE Construction Cost Estimate: Public Safety Center (DCFC + Level 2 Charging Layout)**

Item No.	Category	Item Description	Unit	Quantity	Material Unit Cost	Installation Labor Unit Cost	Total Unit Cost	Extended Cost (Qty. X Unit Cost)	Source	Notes
1	Chargers	Enphase HCS-40 Q40 Single-Port Level 2 Charger, 32A	EA	20	\$916.00	\$680.00	\$1,596.00	\$31,920.00	Enphase	Installation labor estimated at 8 labor hours at \$85/hour
2	Chargers	BTC Power 360 kW Charging Cabinet & Dual-Port Dispenser	EA	5	\$150,000.00	\$2,040.00	\$152,040.00	\$760,200.00	BTC Power	Installation labor estimated at 16 labor hours at \$85/hour
3	Electrical Equipment	Pad Mount Utility Transformer, 25 kV Primary, 277/480V Secondary, 2000 kVA	EA	1	\$189,288.60	\$8,500.00	\$197,788.60	\$197,788.60	RS Means	Utility transformer. Actual costs dependent on NV Energy. Installation labor estimated at 100 labor hours at \$85/hour.
4	Electrical Equipment	Switchboard, 480Y/277V 3 Phase, 3000A Main Circuit Breaker, NEMA 3R	EA	1	\$97,537.22	\$1,700.00	\$99,237.22	\$99,237.22	RS Means	Main switchboard fed by utility transformer. Installation labor estimated at 20 hours at
5	Electrical Equipment	Panelboard, 208Y/120V 3 Phase, 500A Main Circuit Breaker, 42 Circuits, NEMA 3R	EA	1	\$16,353.07	\$850.00	\$17,203.07	\$17,203.07	Larson Electronics	Distribution panel for Level 2 chargers. Installation labor estimated at 10 hours at \$85/hour.
6	Electrical Equipment	Circuit Breaker, 250A, 3 Pole, 600VAC, 14kA	EA	1	\$3,749.00	\$170.00	\$3,919.00	\$3,919.00	Schneider Electric	Breaker for step-down transformer
7	Electrical Equipment	Circuit Breaker, 600A, 3 Pole, 600VAC, 18kA	EA	5	\$7,560.00	\$170.00	\$7,730.00	\$38,650.00	Schneider Electric	360kW DCFC breaker
8	Electrical Equipment	Circuit Breaker, 40A, 2 Pole, 120/240VAC, 10kA	EA	20	\$91.54	\$21.25	\$112.79	\$2,255.80	Schneider Electric	Level 2 charger branch breaker. Installation labor estimated at .25 hours at \$85/hour
9	Electrical Equipment	Step-Down Transformer, 480V Primary, 208Y/120V Secondary, 3 Phase, 150 kVA, Pad Mounted	EA	1	\$0.00	\$0.00	\$10,453.77	\$10,453.77	RS Means	Step-down transformer for Level 2 chargers
10	Conduit/Conductors	Underground 3000A Cable in Trenched Conduit, 10 Sets of 4" SCH40 PVC, 4x 750 KCMIL per Set	LF	10	\$1,239.52	\$386.74	\$1,626.26	\$16,262.60	RS Means	Utility transformer to 480V switchboard
11	Conduit/Conductors	Underground 600A Cable in Trenched Conduit, 2 Sets	LF	355	\$79.77	\$51.21	\$130.98	\$46,496.91	RS Means	480V switchboard to DCFC cabinets + dispensers
12	Conduit/Conductors	Underground 250A Cable in Trenched Conduit, 2.5"	LF	25	\$29.56	\$20.41	\$49.97	\$1,249.20	RS Means	480V switchboard to step-down transformer
13	Conduit/Conductors	Underground 500A Cable in Trenched Conduit, 2 Sets of 3" SCH40 PVC, 4x 300 KCMIL + 1x #2 Ground per Set	LF	10	\$89.93	\$54.61	\$144.55	\$1,445.45	RS Means	Step-down transformer to 208V panel
14	Conduit/Conductors	Underground 40A Cable in Trenched Conduit, 1" SCH40 PVC, 2x #6 + 1x #10 Ground	LF	2,170	\$7.56	\$7.98	\$15.53	\$33,710.52	RS Means	208V panel to Level 2 chargers
15	Conduit/Conductors	Underground Conduit Trenching, Including Excavation & Backfill	LF	400	\$0.00	\$50.00	\$50.00	\$20,000.00	Engineering Estimate	Quantity estimated on total trench LF
16	Site Civil	6 Inch Protective Bollards	EA	60	See Total Unit Cost	See Total Unit Cost	\$1,000.00	\$60,000.00	Ohio DOT EV Deployment Projects	2 per charger
17	Site Civil	EV Parking Only Pavement Striping/Signage	EA	30	See Total Unit Cost	See Total Unit Cost	\$100.00	\$3,000.00	HDR EV Database References	1 per parking space
18	Site Civil	Site Upgrades (Tree Removal, Landscaping, Signage, etc.)	EA	1	See Total Unit Cost	See Total Unit Cost	\$20,000.00	\$20,000.00	Engineering Estimate	Placeholder estimate, deferred to detail design
19	Site Civil	DC Fast Charger Concrete Pad	EA	10	See Total Unit Cost	See Total Unit Cost	\$2,100.00	\$21,000.00	NY State EV Infrastructure Estimating	1 per charge cabinet (5) and dispenser (5)
20	Site Civil	Level 2 Charger Concrete Pad	EA	20	See Total Unit Cost	See Total Unit Cost	\$1,500.00	\$30,000.00	NY State EV Infrastructure Estimating	1 per charger
21	Site Civil	Switchboard/Panelboard/Step-Down Transformer Concrete Pad	EA	2	See Total Unit Cost	See Total Unit Cost	\$2,500.00	\$5,000.00	HDR EV Database References	1 per switchboard/panelboard

**Construction Subtotal \$1,419,792**

**Percentage Based Costs**

Engineering Design (8%)	\$113,583
Permitting/Environmental (4%)	\$56,792
Construction Administration (4%)	\$56,792
Contingency (20%)	\$283,958

**Percentage Based Costs Subtotal \$511,125**

**Grand Total (Rounded) \$1,931,000**

**EVSE Construction Cost Estimate: 9th St Complex**

Item No.	Category	Item Description	Unit	Quantity	Material Unit Cost	Installation Labor Unit Cost	Total Unit Cost	Extended Cost (Qty. X Unit Cost)	Source	Notes
1	Chargers	ChargePoint CPF50 Dual-Port Level 2 Charger, 32A per Port	EA	10	\$4,400.00	\$680.00	\$5,080.00	\$50,800.00	ChargePoint	Installation labor estimated at 8 labor hours at \$85/hour
2	Chargers	ABB Terra184 180 kW Dual-Port DC Fast Charger	EA	1	\$100,000.00	\$2,040.00	\$102,040.00	\$102,040.00	Recent Project Quote	Installation labor estimated at 24 labor hours at \$85/hour
3	Electrical Equipment	Panelboard, 208Y/120V 3 Phase, 500A Main Circuit Breaker, 42 Circuits, NEMA	EA	1	\$16,353.07	\$850.00	\$17,203.07	\$17,203.07	Larson Electronics	Distribution panel for Level 2 chargers. Installation labor estimated
4	Electrical Equipment	Circuit Breaker, 250A, 3 Pole, 600VAC, 14kA	EA	1	\$3,749.00	\$170.00	\$3,919.00	\$3,919.00	Schneider Electric	Breaker for step-down transformer
5	Electrical Equipment	Circuit Breaker, 350A, 3 Pole, 600VAC, 18kA	EA	1	\$7,560.00	\$170.00	\$7,730.00	\$7,730.00	Schneider Electric	
6	Electrical Equipment	Circuit Breaker, 40A, 2 Pole, 120/240VAC, 10kA	EA	20	\$91.54	\$21.25	\$112.79	\$2,255.80	Schneider Electric	Level 2 charger branch breaker. Installation labor estimated at .25 hours at \$85/hour
7	Electrical Equipment	Step-Down Transformer, 480V Primary, 208Y/120V Secondary, 3 Phase, 150 kVA, Pad Mounted	EA	1	\$0.00	\$0.00	\$10,453.77	\$10,453.77	RS Means	Step-down transformer for Level 2 chargers
8	Conduit/Conductors	Underground 40A Cable in Trenched Conduit, 1" SCH40 PVC, 2x #6 + 1x #10 Ground	LF	1,430	\$7.56	\$7.98	\$15.53	\$22,214.76	RS Means	
9	Conduit/Conductors	Underground 500A Cable in Trenched Conduit, 4" SCH40 PVC, 4x 750 kcmil + 1x	LF	330	\$125.89	\$40.14	\$166.03	\$54,790.46	RS Means	
10	Conduit/Conductors	Underground 350A Cable in Trenched Conduit, 2.5" SCH40 PVC, 3x 300 kcmil +	LF	50	\$36.02	\$21.99	\$58.01	\$2,900.67	RS Means	
11	Conduit/Conductors	Underground 200A Cable in Trenched Conduit, 2.5" SCH40 PVC, 3x 3/0 + 1x #6 Ground	LF	10	\$26.10	\$19.09	\$45.18	\$451.84	RS Means	
12	Conduit/Conductors	Underground Conduit Trenching, Including Excavation & Backfill	LF	605	\$0.00	\$50.00	\$50.00	\$30,250.00	Engineering Estimate	Quantity estimated on total trench LF
13	Site Civil	6 Inch Protective Bollards	EA	22	See Total Unit Cost	See Total Unit Cost	\$1,000.00	\$22,000.00	Ohio DOT EV Deployment Projects	2 per charger
14	Site Civil	EV Parking Only Pavement Striping/Signage	EA	22	See Total Unit Cost	See Total Unit Cost	\$100.00	\$2,200.00	HDR EV Database References	1 per parking space
15	Site Civil	Site Upgrades (Tree Removal, Landscaping, Signage, etc.)	EA	1	See Total Unit Cost	See Total Unit Cost	\$20,000.00	\$20,000.00	Engineering Estimate	Placeholder estimate, deferred to detail design
16	Site Civil	DC Fast Charger Concrete Pad	EA	1	See Total Unit Cost	See Total Unit Cost	\$2,100.00	\$2,100.00	NY State EV Infrastructure Estimating	1 per dual-port charger
17	Site Civil	Level 2 Charger Concrete Pad	EA	10	See Total Unit Cost	See Total Unit Cost	\$1,500.00	\$15,000.00	NY State EV Infrastructure Estimating	1 per dual-port charger
18	Site Civil	Switchboard/Panelboard/Step-Down Transformer Concrete Pad	EA	3	See Total Unit Cost	See Total Unit Cost	\$2,500.00	\$7,500.00	HDR EV Database References	

**Construction Subtotal \$373,809**

**Percentage Based Costs**

Engineering Design (8%)	\$29,905
Permitting/Environmental (4%)	\$14,952
Construction Administration (4%)	\$14,952
Contingency (20%)	\$74,762

**Percentage Based Costs Subtotal \$134,571**

**Grand Total (Rounded) \$508,000**

**EVSE Construction Cost Estimate: Liberty Center Parking Garage (2nd Floor)**

Item No.	Category	Item Description	Unit	Quantity	Material Unit Cost	Installation Labor Unit Cost	Total Unit Cost	Extended Cost (Qty. X Unit Cost)	Source	Notes
1	Chargers	ChargePoint CPF50 Single-Port Level 2 Charger, 32A	EA	10	\$2,300.00	\$680.00	\$2,980.00	\$29,800.00	ChargePoint	Installation labor estimated at 8 labor hours at \$85/hour
2	Electrical Equipment	Panelboard, 208Y/120V 3 Phase, 225A Main Circuit Breaker, 41 Breakers, NEMA 3R	EA	1	15,399	850	\$16,249.14	\$16,249.14	Larson Electronics	Distribution panel for chargers. Item includes branch breakers
3	Electrical Equipment	Circuit Breaker, 250A, 3 Pole, 600VAC, 14kA	EA	1	3,749	170	\$3,919.00	\$3,919.00	Schneider Electric	Breaker in main switchboard for panel on 2nd floor
4	Conduit/Conductors	Overhead 40A Cable in Ceiling/Wall Mounted Conduit, 1" Electrical Metallic Tubing (EMT), 2x #6 + 1x #10 Ground	LF	275	6	8	\$14.21	\$3,909.07	RS Means	Panel to Level 2 chargers
5	Conduit/Conductors	Overhead 250A Cable in Ceiling/Wall Mounted Conduit, 2.5" Electrical Metallic Tubing (EMT), 4x 250 KCMIL + 1x #4	LF	25	37	26	\$62.27	\$1,556.69	RS Means	Existing switchboard in electrical room to panel on 2nd floor
6	Site Civil	6 Inch Protective Bollards	EA	6	See Total Unit Cost	See Total Unit Cost	\$1,000.00	\$6,000.00	Ohio DOT EV Deployment Projects	Only for pedestal mounted chargers (3), 2 per charger
7	Site Civil	Level 2 Charger Column/Wall Mount System	EA	5	See Total Unit Cost	See Total Unit Cost	\$400.00	\$2,000.00	HDR EV Database References	1 per dual-port charger

**Construction Subtotal \$63,434**

**Percentage Based Costs**

Engineering Design (8%)	\$5,075
Permitting/Environmental (4%)	\$2,537
Construction Administration (4%)	\$2,537
Contingency (20%)	\$12,687

**Percentage Based Costs Subtotal \$22,836**

**Grand Total (Rounded) \$86,000**