PUBLIC NOTICE

INVITATION TO BID # 1014

The Springfield Electric Department will be accepting sealed bids for Substation Batteries, Charger, & Spill Containment for Sleepy Hollow Substation. Specifications may be picked up at the Springfield Electric Department, 1000 Central Ave., during normal business hours or downloaded at www.springfield-tn.org. Call Gary Noel at (615)384-6770 ext. 118 with questions. Bids must be received in the Office of the City Recorder by 2:30 PM local time, Wednesday, February 15, 2017.

The City of Springfield reserves the right to reject any or all bids.

Lisa H. Crockett
City Recorder

CITY OF SPRINGFIELD ELECTRIC DEPARTMENT
1000 CENTRAL AVENUE
SPRINGFIELD, TENNESSEE 37172

PROPOSAL CONTRACT

SUBSTATION BATTERIES, CHARGER, & SPILL CONTAINMENT FOR SLEEPY HOLLOW SUBSTATION

BID OPENING DATE: February 15, 2017

TIME: 2:30 p.m.

Contents:

I. PROPOSAL

A. Preparation

BIDDER shall submit two (2) copies of bid proposal in a sealed envelope addressed to:

Lisa Crockett
City Recorder
City of Springfield
405 North Main Street
Springfield, TN 37172

Bids will open **February 15, 2017 at 2:30 p.m. CST.** No telephone or faxed bids will be considered.

B. Pricing

The BIDDER declares that this proposal is made without connection with any other person or persons bidding for the same work. Bids shall not contain any unbalanced prices, unauthorized additions, alterations, limitations, conditions, or provisions. Non-Collusion Affidavit and Business Relationships Affidavit must be returned with bid.

BIDDER shall use* Section II Base Bid *of this document to list all prices, terms, conditions, exceptions, and warranties.

Pricing shall include delivery and installation to Sleepy Hollow Substation, 2400 South Main Street, Springfield, Tennessee 37172.

Springfield Electric reserves the right to reject any or all bids.

C. Inspections and Tests

Unless otherwise specified in the contract or purchase order, BIDDER shall be responsible for the performance of all inspection and test requirements necessary to insure compliance with this specification. This action does not prelude subsequent inspection and testing by OWNER to further determine conformance to specification requirements of quality standards of workmanship, material, and construction techniques.

D. Questions

Any questions concerning these specifications should be directed to:

Gary Noel
Technical Services Supervisor
Springfield Electric Department
1000 Central Avenue
Springfield, Tennessee 37172
(615) 384-6770 ext. 118
(615) 382-1642 (Fax)
gnoel@springfield-tn.org

II. BASE BID

Proposal of _____, herein called "BIDDER", to the City of Springfield Electric Department, herein called "OWNER":

That for and in consideration of the mutual agreements and covenants herein contained, the parties agree and bind themselves as set out below:

The BIDDER, in compliance with the invitation to bid for SUBSTATION BATTERIES, CHARGER & SPILL CONTAINMENT for SLEEPY HOLLOW SUBSTATION, having examined the plans and specifications with the related documents, and being familiar with all the conditions surrounding the proposed project including the availability of materials and labor, hereby proposes to furnish all labor, materials, and supplies, and to install the equipment in accordance with the contract documents, within the time set forth therein, at the price stated therein.

Bidder agrees to perform work in compliance with all codes applicable to this project. All work is to be performed in a neat and professional manner.

This project is to be bid by BIDDER as a LUMP SUM BID for all work described in this specification.

BIDDER hereby agrees to complete work under this contract within sixty (60) calendar days after receipt of order.

Prior to commencement of work, the successful bidder shall be required to provide OWNER the following:

a. All executed documents related to this project returned to OWNER, and;

b. Written guarantee of material and workmanship for all work to be performed under this contract including any terms and conditions of guarantee.

ANY EXCEPTIONS OR SUBSTITUTIONS FROM THESE SPECIFICATIONS ARE TO BE NOTED AND EXPLAINED WITH ALL DOCUMENTATION SUPPLIED.

SUBSTATION BATTERIES, CHARGER, AND SPILL CONTAINMENT
FOR
SLEEPY HOLLOW SUBSTATION
BID OPENING

Date: February 15, 2017 **Time: 2:30 p.m.**

Quantity	Part Number	Description	Price Each	Total
20	3DCU-5	C&D Lead-Calcium Battery	$_____	$_____
1		C&D Standard 2-tier Rack	$_____	$_____
1		Spill Containment Pan & Absorbent Pillows	$_____	$_____
1		Battery Charger	$_____	$_____
1	Labor	Installation Cost	$_____	$_____

TOTAL BID: $ _____

Delivery/Installation Date: _____

Terms and Length of Warranty/Guarantee: _____

_____

Other Terms and Conditions: _____

_____

_____

Exceptions/Substitutions:

1. _____
2. _____
3. _____
4. _____

Notes:

1. Bidder must submit with bid proposal complete specifications, pictures, and literature describing and illustrating the proposed equipment.

2. Include all shipping charges with bid proposal. Pricing shall include delivery to Sleepy Hollow Substation, 2400 S. Main Street, Springfield, Tennessee 37172.

3. Bidder must provide 130 volt temporary backup during installation.

4. Sales tax is not to be included. We are a tax-exempt local government agency.

5. Final payment shall be made to successful BIDDER by OWNER within thirty (30) days after:
   a. Delivery of product, and assembly if applicable, and;
   b. The approval by the OWNER of all work performed under the proposal, and;
   c. An affidavit has been submitted to OWNER by BIDDER stating that payment has been made for all labor, materials, and subcontractors under this proposal.

6. BIDDER agrees to be bound by the bid price in this proposal for a period of sixty (60) days from the date of the opening of the bid.

7. The OWNER reserves the right to reject any or all bids, to waive any informality in bids, and to accept in whole or part such bid or bids as may be deemed in the best interest of OWNER.

_____ _____

Signature – BIDDER Date

_____

Company Name

_____

Address

_____

Telephone No.

_____ SPECIFICATIONS FOLLOW THIS PAGE _____

Sleepy Hollow Batteries Spec

QTY.	Part Number	Description
20	3DCU-5	Lead Calcium Battery,3 cell jar,50ah at 8 hr rate down to 1.75 volts per cell
1		Standard 2 TIER RACK, 60"L x 15"W, Seismic rated EP1
1		Spill Containment Pan 2" Longer and Wider than rack including acid absorbing pillows

Battery Charger Specifications

Ac Input Voltage: 120/208/240 volts

DC Output Voltage: 130 Vdc nominal

Ampere Rating : 12A

Standard Features: AC on indicating light, AC and DC circuit breakers

Float and Equalize selector switch with lights

Self-diagnostics

Reverse polarity protection

MOV surge suppressors, input and output

Alarms: Ac failure, Dc Failure, High and Low Vdc , positive and negative ground fault

C&D TECHNOLOGIES, INC.
Power Solutions

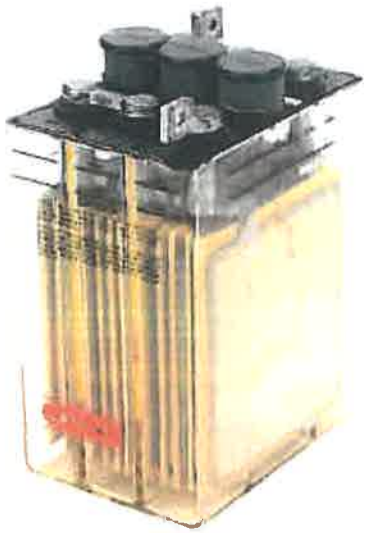
C&D FLOODED SG&C

ISO 9001 KEMA CERTIFIED

DCU LEAD-CALCIUM
DU LEAD-ANTIMONY

FOR SWITCHGEAR AND CONTROL APPLICATIONS

Capacities from 50 to 200 Ampere-hours



C&D Technologies' flooded batteries are engineered to provide superior performance and reliability over the life of the product. These batteries are designed using proprietary techniques and quality components and materials for reduced maintenance and extended battery life.

APPLICATIONS

- Electric Utility Distribution Substations
- Railway Signals
- Emergency Systems
- Manufacturing Facilities
  - Assembly Lines
  - Process Controls
- Petrochemical processing plants
- Pipelines

FEATURES & BENEFITS

- Capacities from 50 to 200 Ampere-hours
- Terminals accessible for measurement of individual cell voltages
- Transparent container allows visual inspection of plates
- Electrical capacity testing on every cell prior to shipping assures performance of every battery upon delivery
- 20-year environmental and seismic qualification (calcium) for nuclear safety related application.
- Flame-arrester with fill funnel and dust cover
- Two- and three-cell units in most sizes

SPECIFICATIONS

Plates	Height	Width	Thickness
Positive	5.88 in (149 mm)	5.63 in (143 mm)	0.266 in (6.76 mm)
Negative	5.88 in (149 mm)	5.63 in (143 mm)	0.170 in (4.32 mm)
Outside Negative	5.88 in (149 mm)	5.63 in (143 mm)	0.110 in (2.79 mm)
Electrolyte height above plates	1.75 in (45 mm) except 11 plate, 1.63 in (41 mm)		
Sediment space	0.5 in (13 mm) except 11 plate, 0.56 in (14 mm)		
Electrolyte @ 77°F (25°C)	Sulfuric acid, 1.215 specific gravity nominal		
Float voltages	2.17 - 2.22 volts per cell (calcium); 2.15 - 2.17 volts per cell (antimony)		
Container	Thermoplastic, transparent		
Cover	High-impact thermoplastic		
Separator	Microporous with fibrous glass mat		
Safety Vent Systems	Flame-arrester type with dust cover		
Terminals			
DCU/DU (5 through 11)	Two flag terminals, standard		
DCU/DU (13 through 17)	Two, 0.75 in (19.1 mm) square posts		

Additional ratings and application information is available in the Battery Selection Program at www.cdstandbypowercom.net.

RATINGS TABLE: AMPERES

	Models	8 hr Amp-Hr Ratings*	Nominal Rates @ 77°F (25°C) and 1.215 Specific Gravity (Includes connector voltage drop)									
			1 min	15 min	30 min	1 hr	2 hr	3 hr	4 hr	6 hr	8 hr	12 hr
1.75	DCU/DU-5	50	74.7	49.8	37.7	26.0	16.8	12.7	10.4	7.7	6.2	4.4
	DCU/DU-7	75	112.1	74.7	56.6	39.1	25.1	19.1	15.6	11.6	9.3	6.7
	DCU/DU-9	100	149.5	99.6	75.5	52.1	33.5	25.5	20.8	15.4	12.3	8.9
	DCU/DU-11	120	190.9	127.1	96.0	66.2	40.8	30.1	24.5	18.3	14.8	10.8
	DCU/DU-13	150	224.2	149.4	113.2	78.1	50.3	38.2	31.2	23.1	18.5	13.3
	DCU/DU-17	200	299.0	199.2	151.0	104.2	67.0	50.9	41.6	30.8	24.7	17.8
1.81	DCU/DU-5	46	58.9	41.6	32.7	23.5	15.3	11.7	9.6	7.2	5.7	4.1
	DCU/DU-7	69	88.4	62.4	49.1	35.3	23.0	17.6	14.4	10.8	8.6	6.2
	DCU/DU-9	92	117.8	83.1	65.4	47.0	30.7	23.5	19.3	14.3	11.5	8.3
	DCU/DU-11	110	150.5	106.1	83.3	59.7	37.4	27.8	22.7	17.0	13.6	10.1
	DCU/DU-13	138	176.7	124.7	98.2	70.5	46.0	35.2	28.9	21.5	17.2	12.4
	DCU/DU-17	184	235.6	166.3	130.9	94.0	61.3	47.0	38.5	28.7	23.0	16.5
1.85	DCU/DU-5	43	47.0	36.1	28.6	20.9	14.3	11.1	9.1	6.8	5.4	3.9
	DCU/DU-7	65	70.5	54.1	42.9	31.3	21.4	16.6	13.6	10.2	8.1	5.8
	DCU/DU-9	86	94.0	72.2	57.2	41.8	28.5	22.1	18.2	13.5	10.8	7.7
	DCU/DU-11	102	119.3	92.4	72.6	51.9	34.8	26.6	21.8	16.0	12.7	9.1
	DCU/DU-13	130	141.0	108.3	85.7	62.6	42.8	33.2	27.3	20.3	16.2	11.6
	DCU/DU-17	173	187.9	144.4	114.3	83.5	57.1	44.2	36.4	27.1	21.6	15.5
1.88	DCU/DU-5	39	38.3	30.1	24.6	18.4	12.8	10.0	8.2	6.2	4.9	3.5
	DCU/DU-7	59	57.4	45.1	36.7	27.6	19.2	15.0	12.4	9.2	7.4	5.3
	DCU/DU-9	79	76.6	60.1	49.0	36.8	25.6	20.0	16.5	12.3	9.9	7.1
	DCU/DU-11	94	95.3	77.2	62.2	45.4	30.9	23.9	19.7	14.7	11.7	8.4
	DCU/DU-13	118	114.9	90.2	73.5	55.2	38.4	30.0	24.7	18.5	14.8	10.6
	DCU/DU-17	158	153.2	120.2	98.0	73.6	51.2	39.9	33.0	24.6	19.7	14.1

Additional ratings and application information is available in the Battery Selection Program at www.cdstandbypowercom.net.
* 8 hour Amp-Hr ratings based on final cell voltage of 1.75 vpc @ 77°F (25°C).

Type of Cell		Cells per unit	8 hr Amp-Hr Ratings*	Overall dimensions			Approx. wt. lbs (kgs)		Electrolyte per cell lbs (kgs)	Pure sulfuric acid per cell lbs (kgs)	Internal resistance w/ connectors (ohms/cell)	CPR code number (DCU only)
Calcium	Antimony			L in (mm)	W in (mm)	H in (mm)	Net Filled	Dom. Packed				
2DCU-5	2DU-5	2	50	5.28 (134)	7.38 (187)	10.31 (262)	24 (10.8)	28 (12.6)	2.8 (1.3)	0.8 (.36)	0.0032	269589
3DCU-5	3DU-5	3	50				33 (15.0)	28 (17.2)				269594
2DCU-7	2DU-7	2	75	9.45 (240)			36 (17.1)	42 (18.9)	5.8 (2.6)	1.7 (.77)	0.00213	269590
3DCU-7	3DU-7	3	75				53 (24.0)	58 (25.3)				269595
2DCU-9	2DU-9	2	100				42 (18.9)	46 (20.7)	5.3 (2.4)	1.5 (.68)	0.0016	269591
3DCU-9	3DU-9	3	100				60 (27.2)	65 (29.5)				269596
2DCU-11	2DU-11	2	120	11.13 (283)	7.19 (183)		49.5 (22.3)	53.5 (24.1)	5.8 (2.6)	1.7 (.77)	0.00129	269592
3DCU-11	3DU-11	3	120				71 (32.2)	79 (35.8)				269597
DCU-13	DU-13	1	150	6.38 (157)	7.38 (187)	10.75 (273)	38 (17.2)	44 (20.0)	12.5 (5.7)	3.7 (1.6)	0.0011	269585
DCU-17	DU-17	1	200				42 (19.1)	48 (21.8)	10.5 (4.8)	3.1 (1.4)	0.0008	269587

Note: 1. Electrolyte weighs approximately 10 lbs per gallon (1.215 kgs per liter)
2. Two-cell units are three-cell units with one dummy cell.
* 8 hour Amp-Hr ratings based on final cell voltage of 1.75 vpc @ 77°F (25°C).

For information on battery racks, please refer to brochure 12-560.

C&D TECHNOLOGIES, INC.

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(215) 619-2700 • Fax (215) 619-7899 • (800) 543-8630
customersvc@cdtechno.com
www.cdtechno.com

CD TECHNOLOGIES
Power Solutions

12-560

CD TECHNOLOGIES FLOODED

RETURN RECYCLE LEAD

FLOODED BATTERY RACKS

SELECTION GUIDE FOR RDB & RDC SERIES, STANDBY POWER RACKS

- Non-seismic and Earthquake Protected (EP1, EP2), IEEE-693
- 1-Tier, 2-Tier, 3-Tier, 2-Step
- D, DJ, DJU, J, K, and L/XT Cell Types
- Heavy Gauge Steel Construction

Shown: L-Series, 2-tier, EP, painted rail, back-to-back installation, with standard 2-rail and optional third (center) support rail.

RDB & RDC RACK FEATURES AND BENEFITS

C&D Technologies RDB and RDC racks offer a variety of quality and value-added features. Most notably, both rack series take advantage of a "common-frame" design among the Standard, EP1, and EP2 series for all but the RDC 3 Tier EP2 rack. This allows the racks to be field upgradeable by simply installing additional bracing, while not having to remove any batteries! Additionally, the racks use a "C-Channel" frame cross-section that is more robust than competitive designs. The RDB EP racks are qualified to meet UBC 1994 Section 1630 seismic loading conditions. The RDC EP racks are qualified to IBC 2009 Section 1613. Other features, such as built-in grounding provisions, are listed below.

RDB 693 racks are qualified to IEEE 693-2005. C&D strives to be the leader in supplying the best quality racks to support its highly regarded flooded product line. The RDB and RDC racks offer a range of quality features while maintaining a competitive price structure.

STANDARD RACK FEATURES:

- 1-Tier, 2-Tier, 3-Tier, and 2-Step styles in Standard and Custom Lengths
- Strut Rails with Flame Retardant Polyethylene Rail Covers, Provide Electrical Isolation
- Rugged "C-Channel" Frame Design
- Welded Steel Frames with an Acid Resistant, Electrostatically Applied Epoxy Powder Coat, Telephone Gray
- Electrical Grounding Provisions Built into Base of Each Frame
- Flame Retardant PVC Battery Spacers Included with EP Racks (L-Racks Only) Spacers for all Other Sizes are Open-Cell Styrene (Styrofoam). Optional flame-retardant foam spacers also available.
- Rails Accommodate Clip Nuts for Bolt-on Accessories
- Simplified Installation with Accessible Anchor Bolt Locations
- Racks are Shipped Unassembled

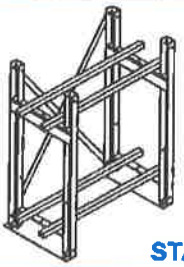
RACK SEISMIC OPTIONS:

- RDB EP Racks Qualified to Meet Maximum UBC 1994 Seismic Requirements, Section 1630, for Essential and Above Grade, Zones 1-4. RDB models can be upgraded to UBC 1997. Contact C&D for information.
- RDC EP Racks are Qualified to Meet Maximum IBC 2009 Seismic Requirements, Section 1613, for Essential, Top of Building, Site Class D, up to S_s=300%. Available For L/XT Cells only.
- RDB 693 Racks are Qualified to Meet Maximum IEEE 693 2005 requirements are available for some models.

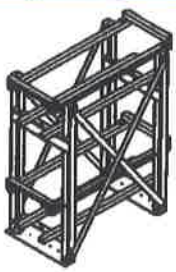
OPTIONAL RACK FEATURES:

- Third "Center" Support Rail (L-Series Only)
- Field Upgradeable from STD to EP1 to EP2

RACK DETAILS

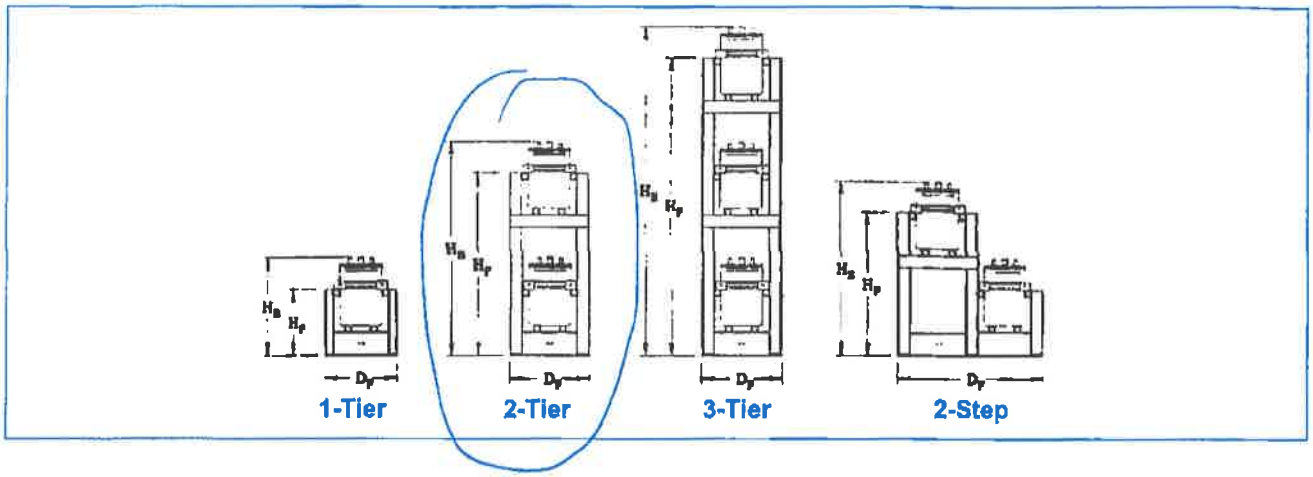


TWO-TIER STANDARD RACK



TWO-TIER EP RACK

RACK DETAILS AND DIMENSIONS



Battery Type	Series	Configuration	D_F in. (mm)	H_F in. (mm)	H_B in. (mm)
D	RDB0700	1-Tier	15.13 (381)	13.50 (342)	18.44 (468)
	RDB0701	2-Tier	15.13 (381)	37.00 (940)	41.94 (1065)
	RDB0702	3-Tier	16.13 (410)	60.50 (1537)	65.44 (1662)
	RDB0703	2-Step	28.00 (711)	29.50 (749)	34.44 (875)
DJ,J, DJU K	RDB0800	1-Tier	18.19 (462)	16.69 (424)	22.50 (571)
	RDB0801	2-Tier	20.19 (513)	45.88 (1165)	51.69 (1313)
	RDB0802	3-Tier	20.31 (516)	75.06 (1907)	80.88 (2054)
	RDB0803	2-Step	37.13 (943)	35.88 (911)	41.69 (1059)
	RDB0800	1-Tier	18.19 (462)	16.69 (424)	25.94 (659)
	RDB0801	2-Tier	20.19 (513)	45.88 (1165)	55.12 (1400)
	RDB0802	3-Tier	20.31 (511)	75.06 (1906)	84.31 (2141)
	RDB0803	2-Step	37.13 (943)	35.88 (911)	45.12 (1146)
L, XTL	RDC0900	1-Tier	24.06 (611)	19.00 (483)	30.31 (770)
	RDC0901	2-Tier	24.06 (611)	54.00 (1372)	66.81 (1672)
	RDC0902	3-Tier	25.06 (637)	83.50 (2121)	94.82 (2408)
	RDC0903	2-Step	44.75 (1137)	41.00 (1041)	52.31 (1329)
XTH	RDC0900	1-Tier	24.06 (611)	19.00 (483)	30.61 (777)
	RDC0901	2-Tier	24.06 (611)	54.00 (1372)	66.11 (1679)
	RDC0902	3-Tier	25.06 (637)	83.50 (2121)	95.11 (2415)
	RDC0903	2-Step	44.75 (1137)	41.00 (1041)	52.61 (1336)

NOTES:

1. Consult engineering assembly drawings for more detailed dimensions and specific rack weights.
2. Rack depth does not include thickness of cross bracing and hardware.
3. The 800 series RDB racks will support either DJ, DJU, J or K cell types. Spacer blocks are included to position cell restraint rails for the J-series, EP racks.
4. Typical clearance: 2 in. (51 mm) minimum around rack perimeter, 36 in. (914 mm) typical isle clearance.
5. Multiple rack configurations: Back-to-back racks may be bolted together. 5 in. (127 mm) minimum separation required between end-to-end EP rack installations. End-to-end Standard rack installations need no minimum separation.

RDB SERIES EARTHQUAKE PROTECTED (EP) RACKS

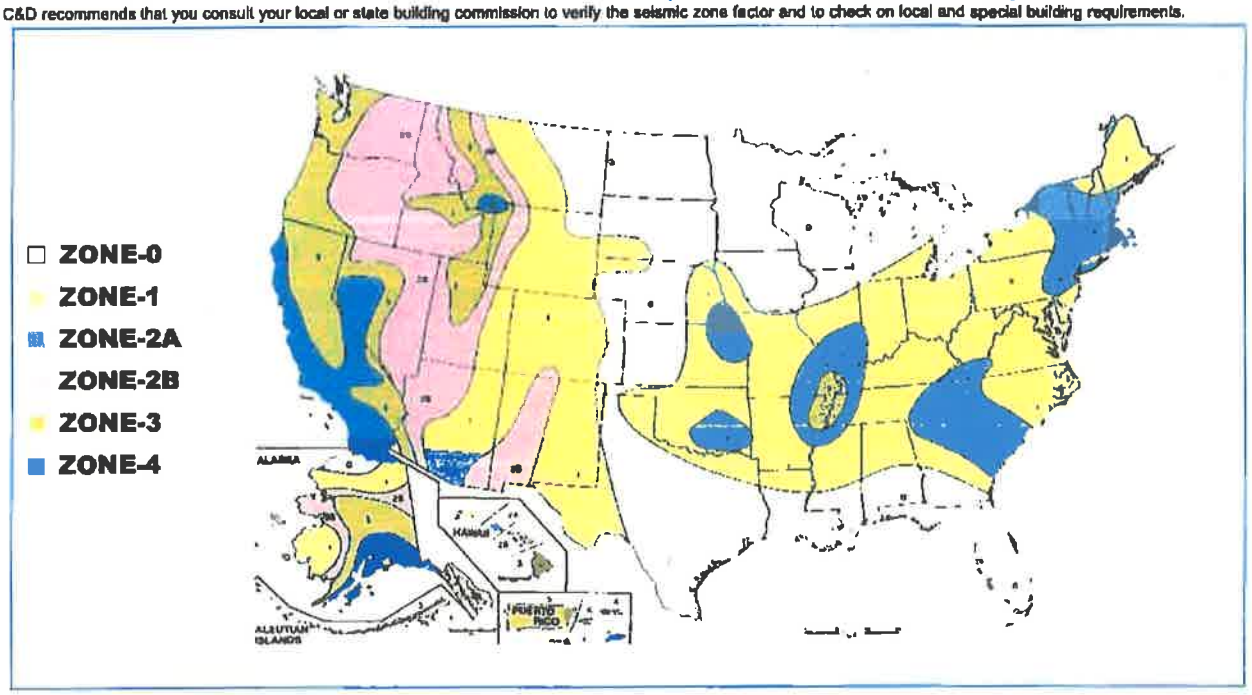
C&D offers a complete line of steel standby battery racks for use in locations that are subject to seismic disturbances. Two Earthquake Protected battery storage rack categories (EP1 and EP2) are offered to suit a variety of seismic loading conditions. These designs have been qualified to the 1994 Uniform Building Code (UBC), Chapter 16, Division III, "Earthquake Design", Section 1630, "Lateral Force on Elements of Structures, Nonstructural Components and Equipment Supported by Structures."

SELECTING THE RIGHT RDB RACK EP CATEGORY:

1. Determine the UBC seismic zone corresponding with the exact geographic location of the installation site. See map below.
2. Determine if the installation is (a) essential or non-essential and (b) located above grade or located at or below grade.
3. Choose the C&D seismic RDB rack category from the chart below which is qualified for that location.

SEISMIC ZONE MAP OF THE UNITED STATES (REFERENCE 1994 UBC)

C&D recommends that you consult your local or state building commission to verify the seismic zone factor and to check on local and special building requirements.



C&D BATTERY RACK SELECTION BASED ON UBC SEISMIC LOADS (G)

UBC Seismic Zone	Non-essential, at or below grade (g)	Non-essential, above grade OR Essential at or below grade (g)	Essential above grade (g)	Use C&D Battery Rack Type:
ZONE-0	0.000	0.000	0.000	Standard
ZONE-1	0.075	0.113	0.169	EP1 (Qualified to 0.45 g)
ZONE-2A	0.150	0.225	0.338	
ZONE-2B	0.200	0.300	0.450	
ZONE-3	0.300	0.450	0.675	EP2 (Qualified to 0.90 g)
ZONE-4	0.400	0.600	0.900	

C&D recommends that you consult your local or state building commission to verify the seismic zone factor and to check on local and special building requirements. RDB racks can be upgraded to UBC 1997 essential at or below grade contact C&D.

RDC SERIES EARTHQUAKE PROTECTED (EP) RACKS

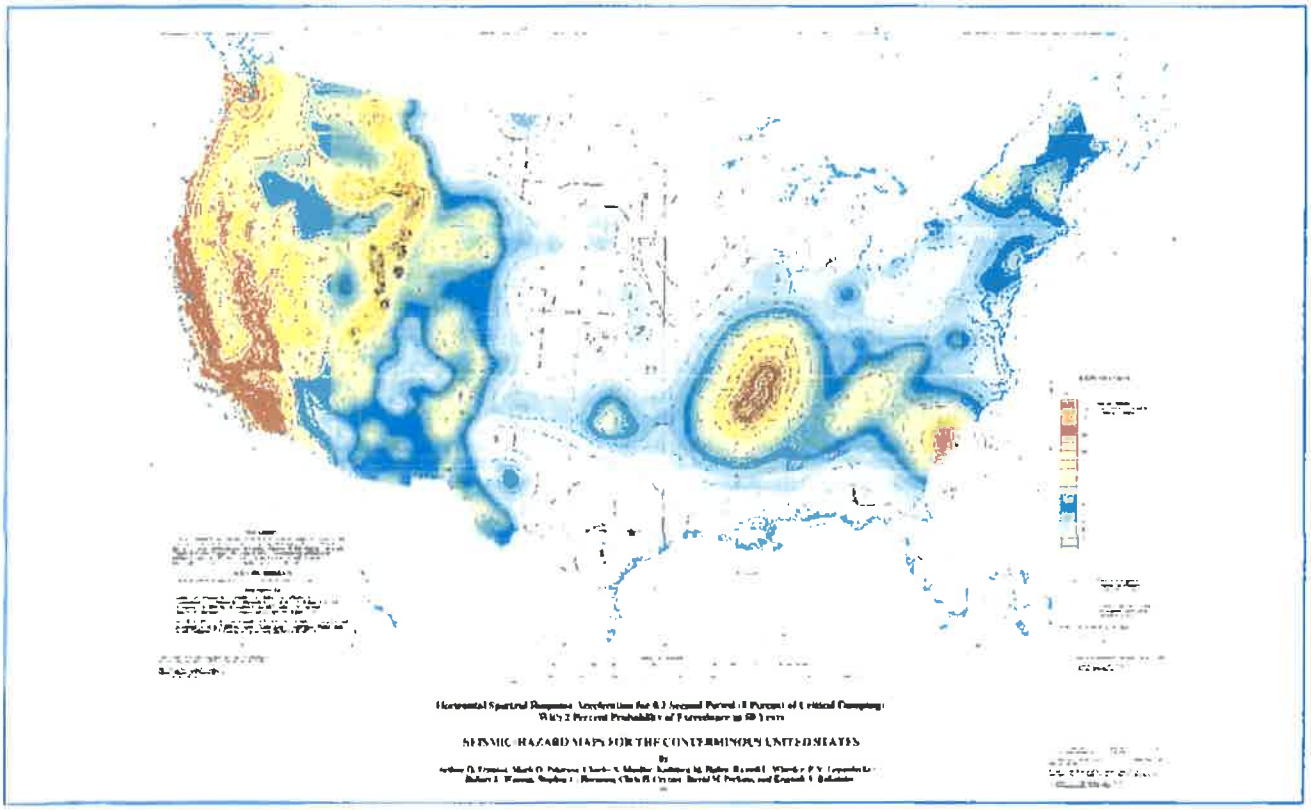
C&D now offers a complete line of IBC 2009 certified stand-by battery racks, the RDC series, for the XT and L Series Batteries. Two Earthquake Protected battery storage rack categories (EP1 and EP2) are offered to suit a variety of seismic loading conditions. These designs have been qualified to the 2009 International Building Code (IBC), Chapter 16, "Structural Design", Section 1613, "Earthquake Loads." The qualification also covers the 2000, 2003, and 2006 versions of IBC as well as UBC 1994 and UBC 1997.

SELECTING THE RIGHT RDC RACK EP CATEGORY FOR IBC

1. Determine the IBC parameters required for the site. If all the site IBC parameters are below the IBC Input Parameters shown in the table below for a specific EP rack, then that rack will meet the IBC requirements of the site.
2. If any IBC input parameters exceed the parameters shown in the table, the resultant Horizontal and Vertical g's will need to be calculated by a qualified professional engineer (PE). Select the EP rack category from the table below where all three g values listed exceed the three PE calculated g values of the site.

		IBC Input Parameters			IBC 2009/2006 Certification g - levels			
Application	Height Location in Building	Mapped MCE spectral response Accel at short periods S_s	Site Class	Corresponding S_{ds}	Load Combination Horizontal Force (g's)	Load Combination Vertical Up + Dead Load (g's)	Load Combination Vertical Down + Dead Load (g's)	Use C&D RDC Rack Type
ESSENTIAL	TOP OF BLDG	1.375	D	0.917	0.471	0.769	1.131	EP1
ESSENTIAL	TOP OF BLDG	3.000	D	2.000	1.029	0.614	1.286	EP2

HORIZONTAL SPECTRAL RESPONSE ACCELERATION FOR 0.2 SEC PERIOD, S_s (2005)*



** Map above shown for reference only. Consult IBC 2009 for the most up to date Acceleration Maps for use in analyses.*

SELECTING THE RIGHT RDC RACK EP CATEGORY FOR UBC 1994/1997:

1. Determine the UBC Seismic Zone required for your geographic area (see map on page 4)
2. Determine if the installation is (a) Essential or Non-Essential and (b) located above grade or located at or below grade.
3. Choose the C&D seismic RDC rack category from the chart below which is qualified for that location.

UBC Siesmic Zone	Max Non-essential, at or below grade (g)	Max Non-essential above grade OR Essential at or below grade (g)	Max Essential above grade (g)	Use C&D RDC Series Battery Rack Type:
UBC 1994				
Zone-0	0.000	0.000	0.000	Standard
Zone-2B or less	0.200	0.300	0.450	EP1 (Qualified to 0.471 g)
Zone-4 or less	0.400	0.600	0.900	EP2 (Qualified to 1.029 g)
UBC 1997				
Zone-0	0.000	0.000	0.000	Standard
Zone-2B or less	0.140	0.267	0.400	EP1 (Qualified to 0.471 g)
Zone-4 or less	0.330	0.629	0.943	EP2 (Qualified to 1.029 g)

IEEE-693 QUALIFIED RDB RACKS

C&D now offers several RDB rack models qualified to the IEEE-693 2005 standard. The following 2 Tier and 2 Step racks have been qualified:

- RDB0801-693 HIGH
- RDB0803-693 HIGH
- RDB0901-693 HIGH
- RDB0903-693 HIGH

The RDB design was enhanced to make these racks compliant to the IEEE-693 standard. See rack drawings for detailed information.

RDB0801-693 and RDB0803-693 racks have been qualified for use with all DJ and KCR models.

RDB0901-693 and RDB0903-693 racks have been qualified for use with all LCR, LCUN and 4LCY models.

For other battery models, contact C&D Technologies to confirm compliance.

RACK ORDERING INFORMATION

UBC 1994 QUALIFIED RDB RACK ORDERING INFORMATION

Battery	Rack Model	Series		Length	Seismic Qualification Category UBC 1994
D - Series	RDB	0700	1-Tier	3 ft. and Larger	(blank) = Non-Seismic, EP1, or EP2
		0701	2-Tier		
		0702	3-Tier		
		0703	2-Step		
DJ, DJU, J, K - Series	RDB	0800	1-Tier	3 ft. and Larger	(blank) = Non-Seismic, EP1, or EP2
		0801	2-Tier		
		0802	3-Tier		
		0803	2-Step		

IBC 2009 QUALIFIED RDC RACK ORDERING INFORMATION

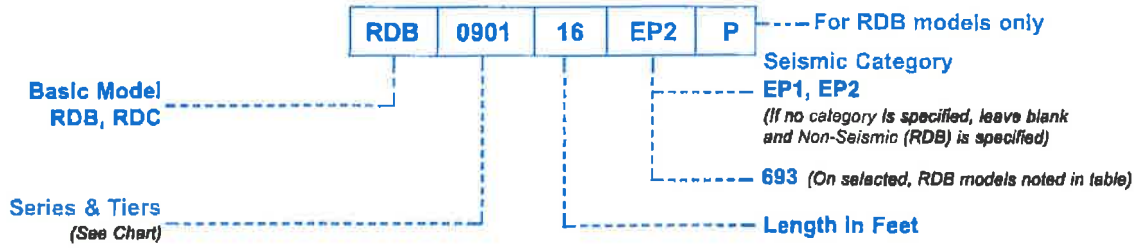
Battery	Rack Model	Series		Length	Seismic Qualification Category* IBC 2009
L, XT - Series	RDC	0900	1-Tier	3 ft. and Larger	(blank) = Non-Seismic, EP1, or EP2
		0901	2-Tier		
		0902	3-Tier		
		0903	2-Step		

RDC Racks are also qualified to UBC 1994 and 1997, IBC 2000, 2003 and 2006.

IEEE-693 QUALIFIED RDB RACK ORDERING INFORMATION

Battery	Rack Model	Series		Length	Seismic Qualification Category IEEE-693 2005
DJ, DJU, J, K - Series	RDB	0801	2-Tier	3 ft. and Larger	693
		0803	2-Step		
L, XT-Series	RDB	0901	2-Tier	3 ft. and Larger	693
		0903	2-Step		

MODEL NUMBER AND DESCRIPTION — EXAMPLE



EXAMPLES:

1. RDB0700-09P : D-Series, RDB 1-Tier, 9 feet
2. RDB0802-10 EP1P : J or K Series, RDB 3-Tier, 10 feet, EP1 (note "P" on end of P/N)
3. RDC0901-11EP2: LSeries, 2Tier, 11 Feet, EP2
4. RDB0901-12-693 XT or L Series, 2 Tier, 12 feet, IEEE-693

NOTES:

1. Calculate Rack Rail Lengths as follows:

   Number of units (jars) per row x (unit length "L" +0.5 inch) - 0.5 inch
   Example: for 12 LCT-1680 units per row, "L" = 10.63 (from spec sheet)
   so the rack length = 12 x (10.63 + 0.5) - 0.5 = 133.06 inches = 11.09 feet
   Round up to nearest full foot = 12 feet

   Number of units (jars) per row x (unit length "L" +13 mm) - 13 mm
   Example: for 12 LCT-1680 units per row, "L" = 270 (from spec sheet)
   so the rack length = 12 x (270 + 13) - 13 = 3383 mm

2. Add 5 inches (127 mm) to overall rack length to account for worst-case battery end restraint protrusion (EP only), where space is critical.

RACK ORDERING INFORMATION

THIRD-RAIL KIT — (PURCHASE SEPARATELY FOR L/XT SERIES ONLY)

3R	Number of Tiers	Length
3R	1T	3 ft.
3R	2T	and
3R	3T	larger

EXAMPLE:

3R2T-12: Third rail kit, 2-tier, 12 feet, Painted

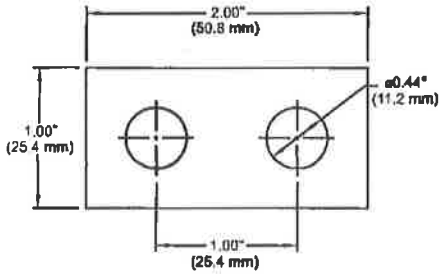
NOTE:

For RDB Rack Assembly Instructions, refer to RS-937.

For more information on Spill Containment, refer to 12-201.

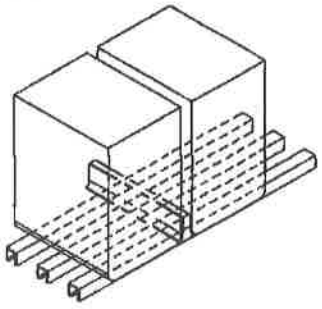
FRAME GROUND PROVISION

(Located at the base of each frame)



CELL SPACER AND THIRD CENTER RAIL

L/XT Series Only



MISCELLANEOUS

ENGINEERING NOTES:

EP racks are qualified to specific lateral forces (g) as determined from the following formulas:

Lateral force formula per Section 1630 of the 1994 UBC:

$$F_p = ZI_pC_pW_p$$

where,

F_p = total design lateral seismic force as defined by section 1630.2

I_p = occupancy importance factor as defined by Table 16-K — Occupancy Category
- = 1.00 for standard occupancy structures
- = 1.50 for essential facilities which includes all facilities providing emergency response (hospitals, fire & police stations, aviation control towers, etc.)

Z = seismic zone factor as defined by Table 16-I — Seismic Zone Factor Z and applied to Figure 16-2 — Seismic Zone Map of the United States

zone 1 = 0.075 zone 3 = 0.30
zone 2A = 0.15 zone 4 = 0.40
zone 2B = 0.20

C_p = horizontal force factor as defined by Table 16-O — Horizontal Force Factor, C_p
- = 1.50 for flexible items (above grade)
- = 1.00 for at or below grade installations

Wp = weight

SEISMIC QUALIFICATION CERTIFICATES


SEISMIC QUALIFICATION CERTIFICATE

C&D TECHNOLOGIES, INC.
1400 Union Meeting Road
P.O. Box 3053 • Blue Bell, PA 19422-0858
(215) 619-2700 • Fax (215) 619-7899 • (800) 543-8630
customersvc@cdtechno.com
www.cdtechno.com

CITY OF SPRINGFIELD

NON-COLLUSION AFFIDAVIT TO ACCOMPANY BID

STATE OF_____)
) SS:
COUNTY OF_____)

_____, of lawful age, being first duly sworn, on oath says that (s)he is the agent authorized by the bidder to submit the attached bid. Affiant further states that the bidder has not been a party to any collusion among bidders in restraint of freedom of competition by agreement to bid at a fixed price or to refrain from bidding; or with any City official or employee as to quantity, quality or price in the prospective contract, or any other terms of said prospective contract; or in any discussions between bidders and any state official concerning exchange of money or other thing of value for special consideration in the letting of a contract.

_____
Authorized Agent

SUBSCRIBED AND SWORN to before me this _____day of_____, 20_____.

_____
Notary Public

My Commission Expires:

_____

CITY OF SPRINGFIELD

BUSINESS RELATIONSHIPS AFFIDAVIT TO ACCOMPANY BID

STATE OF_____)
) SS:
COUNTY OF_____)

_____, of lawful age, being first duly sworn on oath state that (s)he is the agent authorized by the bidder to submit the attached bid. The affiant further on his oath discloses the following information:

(1) The nature of any partnership, joint venture or other business relationships then in effect or which existed within one (1) year prior to the date of such statement with the architect, engineer or other party to project.

(2) Any such business relationship then in effect or which existed within one (1) year prior to the date of such statement between any officer or director of the bidding company and any officer or director of the architectural or engineering firm or other party to the project.

(3) The names of all persons having any such business relationships and the positions they hold with their respective companies or firms.

(4) If none of the business relationships hereinabove mentioned exist, then a statement to that effect.

FURTHER AFFIANT SAYETH NOT.

_____
Authorized Agent

SUBSCRIBED AND SWORN to before me this _____day of _____, 20_____.

My Commission Expires:

_____ _____
Notary Public

IRAN DIVESTMENT ACT NOTICE

Tenn. Code Ann. § 12-12-106 requires the chief procurement officer to publish, using credible information freely available to the public, a list of persons it determines engage in investment activities in Iran, as described in § 12-12-105.

For these purposes, the State intends to use the attached list of "Entities Ineligible to Contract with the State of South Carolina or any Political Subdivision of the State per the Iran Divestment Act of 2014, S.C. Code Ann §§ 11-57-10, et. Seq."

While in conclusion on the list would make a person ineligible to contract with the state of Tennessee, if a person ceases its engagement in investment activities in Iran, it may be removed from the list.

If you feel as though you have been erroneously included on this list, please contact the Central Procurement Office at CPO.Website@tn.gov.

List Date: July 1, 2016

Entities Ineligible to Contract with the State of South Carolina or any Political Subdivision of the State per the Iran Divestment Act of 2014, S.C. Code Ann. §§ 11-57-10, et seq.

1. Ahadan Petrochemical Co.
2. Aban Offshore Ltd.
3. Arak Petrochemical Co.
4. Arvandan Oil & Gas
5. Behran Oil Co.
6. Bharat Petroleum Corporation Ltd.
7. China National Petroleum Corp. (CNPC)
8. China Petroleum & Chemical Corp
9. Cosmo Energy Holdings Company Limited
10. Dragon Oil Plc
11. Eni Spa
12. Esfahan Oil Refining Co.
13. Essar Oil Ltd.
14. Panavaran Petrochemical Co.
15. Farabi Petrochemical Co.
16. Gail (India) Ltd.
17. Gazprom OAO
18. Gubre Fabrikalari T.A.S.
19. Hindustan Petroleum Corporation Ltd.
20. Hyundai Heavy Industries
21. Idemitsu Kosan Co. Ltd.
22. Indian Oil Corporation Ltd.
23. JX Holdings, Inc.
24. Koc Holding A.S.
25. Lukoil Oil Co.
26. Maire Tecnimont S.P.A.
27. Mangalore Refinery & Petrochemicals Ltd.
28. Mitsubishi Corporation
29. Mitsui & Co. Ltd.
30. National Iranian Oil Co.
31. National Iranian South Oil Co.
32. Oil & Natural Gas Corporation Ltd.
33. Pardis Petrochemical Co.
34. Pars Oil Co.
35. Parsian Oil and Gas Development Co.
36. Petro China Co. Ltd.
37. Polskie Gornictwo Nafowe I Gazonictwo SA
38. Royal Dutch Shell Plc
39. Sepehr Energy
40. Shiraz Petrochemical Co.
41. Showa Shell Sekiyu K.K
42. Tabriz Oil Refining Co.
43. Total S.A.
44. Toyota Tsusho Corporation
45. Tupras Turkiye Petrol Rafinerileri AS

Contact irandivestment@mmo.sc.gov with questions regarding this list.

IRAN DIVESTMENT ACT

"By the submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each of a joint bid each party thereto certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief that each bidder is not a person included within the list created pursuant to § 12-12-106."

Signature:_____

Date: _____

Title: _____