

More Than Geotechnical Engineering

# DISTRICT GREEN INFRASTRUCTURE VENDOR REQUEST FOR QUALIFICATIONS (RFQ) FOR GREEN INFRASTRUCTURE FUNDING PROGRAMS

RFQ No. P-2634

Submittal Date: March 24, 2015 Vendor Name: CBC Engineers and Associates, LTD

> Submittal To: Mr. James Morgan jmorgan@mmsd.com Senior Contract Administrator Milwaukee Metropolitan Sewerage District 260 West Seeboth Street Milwaukee, WI 53204-1446

## REQUEST FOR QUALIFICATIONS DISTRICT GREEN INFRASTRUCTURE FUNDING PROGRAMS GREEN VENDOR PRE-QUALIFICATION LIST RFQ No. P-2634

## ATTACHMENT A

## **QUALIFICATIONS WORKSHEET**

## **VENDOR INFORMATION**

Vendor Name: CBC Engineers and Associates, LTD.

## Address:

Corporate Headquarters: 125 Westpark Road Dayton Ohio, 45459

Milwaukee Regional Office: W336 N6978 Stonefield Ct. Oconomowoc, WI 53066

Tax Identification #: 31-1443075

Year Established: 1995

## VENDOR'S CONTACT PERSON:

Name: Todd B. Weik

Title: Manager LID Design Services

**Telephone #:** 262-219-2938

Email: toddweik@cbceng.com

## **RESOURCE INFORMATION**

## Scale of Work

- X Commercial/Industrial Multifamily Residential X Transportation **Specialties** X Design X Landscaping X Engineering X Maintenance X Construction Plumbing **Downspouts and Gutters GI Type** Green Roofs X Cisterns Stormwater Trees Soil Amendments X Rain Gardens X Native Landscaping X Porous Pavement X Bioswales X Constructed Wetlands SWMBE Certified?
- No

## TECHNICAL QUALIFICATIONS AND EXPERIENCE

# Type of Green Infrastructure(s): Porous Pavement, Cisterns

## **Project Information:**

Project Name: EZ Mini Storage (MMSD GI Partnership Grant Recipient) Address: 5133 S. Pennsylvania Avenue Cudahy, WI 53110

## **Project Owner Information:**

Owner's Name: Kendal Bruenig (Sunset Investors) Address: 10535 W. College Avenue Franklin, WI. 53132 Phone: 414-529-8352 Email: <u>ken@sunsetinvestors.com</u>

## **Project Construction Information:**

Construction Management Vendor: Sunset Investors staff Project Manager Name: Ken Bruenig Project Manager's Vendor history: currently employed (owner) Email: <u>ken@sunsetinvestors.com</u> Contract Information: \$225,000 (Green Infrastructure facilities)

Construction start date (contracted): June 2014 Construction start date (actual): June 2014 Construction end date (contracted): October 2014 Construction end date (actual): October 2014

Was the project completed on-time? yes Was the project completed on budget? yes Was the project completed to the owners satisfaction? yes

**Project Description:** This project utilized a porous pavement (Pavedrain PACB/M) as the collection facility with a clear stone cistern reservoir as a storage and water quality facility. The cisterns on the site have been sized to capture the 100 year, 24 hour storm event. The site generates zero runoff from storm events that range from the 1 –year to 100-year events. The project received a MMSD Green Partnership Grant Award in 2014.

## **TECHNICAL QUALIFICATIONS AND EXPERIENCE**

# Type of Green Infrastructure(s): Porous Pavement, Cisterns

## **Project Information:**

Project Name: Rawson Avenue Green Infrastructure Initiative (MMSD GI Partnership Grant Recipient) Address: Rawson Avenue between STH 100 and S. 92<sup>nd</sup> Street

## **Project Owner Information:**

Owner's Name: Milwaukee County DOT (Andrea Weddle-Henny, PE) Address: 10437 Innovation Drive, 5<sup>th</sup> Floor Wauwatosa, WI 53226

Phone: 414-529-3998 Email: andrea.weddle-henning@milwcnty.com

## **Project Construction Information:**

Construction Management Vendor: Milwaukee County DOT Project Manager Name: Vernon Singelton Project Manager's Vendor history: currently employed Email: Vernon.singelton@milwcnty.com Contract Information: \$200,000

Construction start date (contracted): August 2014 Construction start date (actual): September 2014 Construction end date (contracted): October 2014 Construction end date (actual): October 2014

Was the project completed on-time? yes Was the project completed on budget? yes Was the project completed to the owner's satisfaction? yes

**Project Description:** This project was part of the Milwaukee County DOT's green infrastructure initiative. The gravel shoulder along the north side of Rawson Avenue was subject to annual erosion and maintenance due to the super elevated road section. A porous pavement (Pavedrain PACB/M) was used as the stormwater capture facility and as an erosion control prevention measure. A clear stone cistern

was placed below the PACB/M as a water control and quality facility. The storage cistern was sized to contain the volume from a 10-year, 24 hour storm event. Water quality and erosion control improvements will benefit the Tess Corners Creek which is where the stormwater discharge from the roadway is directed. The project received a MMSD Green Infrastructure Partnership Grant in 2012.

## TECHNICAL QUALIFICATIONS AND EXPERIENCE

## Type of Green Infrastructure(s): Porous Pavement, Cisterns

## Project Information:

Project Name: Martin Road Green Infrastructure Pilot Project Address: Martin and Egofske Road

## **Project Owner Information:**

Owner's Name: City of New Berlin (J.P.Walker, City Engineer) Address: 3805 S. Casper New Berlin, WI 53151 Phone: 262-786-8610 Email: jwalker@newberlin.org

## **Project Construction Information:**

Construction Management Vendor: Endpoint Solutions, Corp. Project Manager Name: Todd B. Weik Project Manager's Vendor history: currently employed by CBC Engineers and Associates, Ltd. Email: <u>toddweik@cbceng.com</u> Contract Information: \$175,000

Construction start date (contracted): July 2013 Construction start date (actual): September 2013 Construction end date (contracted): October 2013 Construction end date (actual): October 2013

Was the project completed on-time? yes Was the project completed on budget? yes Was the project completed to the owner's satisfaction? yes

## **Project Description:**

This project was part of the Martin Road Reconstruction Project. A permeable articulating concrete block invert was installed above a 4-foot deep by 6'wide clear stone cistern at the bottom of the newly

constructed ditch along the west side of Martin Road. The lined ditch served three purposes, eliminate erosion, enhance water quality and collect and store a 10 year discharge event from an upstream stormwater detention facility.

## TECHNICAL QUALIFICATIONS AND EXPERIENCE

## Type of Green Infrastructure(s): Rain Garden

## **Project Information:**

Project Name: STH 164 Regional Rain Garden Address: STH 164 and Poplar Circle (east side of road) Town of Waterford, WI

## **Project Owner Information:**

Owner's Name: Waterford Waterway Management District Address: P.O. Box 416 Waterford, WI 53185

Phone: 847-234-2819 (Norm Abplanalp, retired commissioner that was the project contact) Email: <u>loisandnorm@aol.com</u>

## **Project Construction Information:**

Construction Management Vendor: Crispell-Snyder, Inc. (GAI) Project Manager Name: Todd B. Weik Project Manager's Vendor history: currently employed @ CBC Engineers and Associates Email: toddweik@cbceng.com Contract Information: \$150,000

Construction start date (contracted): April 2008 Construction start date (actual): May 2008 Construction end date (contracted): September 2008 Construction end date (actual): September 2008

Was the project completed on-time? yes Was the project completed on budget? yes Was the project completed to the owner's satisfaction? yes

## Attachment A

**Project Description:** The Waterford Waterway Management District targeted specific water quality problem areas within the watershed of the Fox River Impoundment and Tichigan Lake. One of the problem areas identified was along STH 164 in the Town of Waterford. In response to this situation, a regional rain garden was designed and installed to treat stormwater runoff from agricultural fields and private residences. The rain garden was sized to capture 1-inch of runoff from approximately 20 acres. The project also included downstream erosion controls to reduce sediments from being discharged into Tichigan Lake.

## **TECHNICAL QUALIFICATIONS AND EXPERIENCE**

# Type of Green Infrastructure(s): Bioswale, Infiltration System

## **Project Information:**

Project Name: Idlewood Lane Biofilter Address: Idlewood Lane and Sandy Lane Town of Waterford, WI 53185

## **Project Owner Information:**

Owner's Name: Waterford Waterway Management District Address: P.O. Box 416 Waterford, WI 53185

Phone: 847-234-2819 (Norm Abplanalp: retired commissioner and contact for project) Email: loisandnorm@aol.com

## **Project Construction Information:**

Construction Management Vendor: Crispell-Snyder, Inc. (GAI) Project Manager Name: Todd B. Weik Project Manager's Vendor history: currently employed @ CBC Engineers and Associates Email: toddweik@cbceng.com Contract Information: \$75,000

Construction start date (contracted): April 2009 Construction start date (actual): May 2009 Construction end date (contracted): September 2009 Construction end date (actual): September 2009

Was the project completed on-time? yes

Was the project completed on budget? yes Was the project completed to the owner's satisfaction? yes

**Project Description:** The Waterford Waterway Management District identified specific problem areas within the Fox River Impoundment and Lake Tichigan. One area was along Idlewood Drive. This area was selected for the construction of a bioswale/infiltration basin that would improve stormwater discharge into the Fox River Impoundment. The facility was designed to capture and treat the 1-inch storm event. Rock check dams where placed upstream to act as energy dissipaters and a pretreatment facility.

## **TECHNICAL QUALIFICATIONS AND EXPERIENCE**

# Type of Green Infrastructure(s): Native Landscaping, Constructed Wetlands, Greenway

## **Project Information:**

Project Name: Pike River Restoration Project Address: Old Spring Street to STH 11 Mount Pleasant, WI

## **Project Owner Information:**

Owner's Name: Village of Mount Pleasant Address: 8811 Campus Drive Mount Pleasant, WI 53406

Phone: 262-664-7800 (Bill Sasse, DPW) Email: <u>bsasse@mtpleasantwi.gov</u>

## **Project Construction Information:**

Construction Management Vendor: Crispell-Snyder, Inc. (GAI) Project Manager Name: Todd B. Weik Project Manager's Vendor history: currently employed @ CBC Engineers and Associates Email: toddweik@cbceng.com Contract Information: \$10,000,000

Construction start date (contracted): January 2002 Construction start date (actual): February 2002 Construction end date (contracted): September 2011 Construction end date (actual): October 2011 (Six of nine phases were constructed over this period of time)

Was the project completed on-time? yes Was the project completed on budget? yes Was the project completed to the owner's satisfaction? Yes

**Project Description:** The Pike River Restoration Project is a nine phase, multimillion dollar, river restoration project. The project features include flood control, constructed wetlands, native prairie creation, water quality ponds, multi-use trails, in-stream fish habitat, a naturalized cooling system for hot water discharge, and a public greenway. Six of the nine phases were constructed between 2001 and 2011. The project was funded through the Village of Mount Pleasant Stormwater Utility, Coastal Zone Management grants, WDNR Stewardship grants, WDNR Non-Point Grants, Win Root Grant, Ducks Unlimited Grants, and a grant from WDOT to construct wetlands for their project mitigation purposes. The project has received an EPA Clean Water Partnership Award.

## TECHNICAL QUALIFICATIONS AND EXPERIENCE

# Type of Green Infrastructure(s): Bioswale

## **Project Information:**

Project Name: Freiss Lake Boat Launch Address: Lake Drive Village of Richfield, WI

## Project Owner Information:

Owner's Name: Wisconsin Department of Natural Resources (Managed by Village of Richfield) Address: 4128 Hubertus Road Richfield, WI 53076

Phone: 262-628-2260 (Josh Shumann was the contact during construction now at Washington Cty.) Email: <u>administrator@richfieldwi.gov</u>

## **Project Construction Information:**

Construction Management Vendor: Crispell-Snyder, Inc. (GAI) Project Manager Name: Todd B. Weik Project Manager's Vendor history: currently employed @ CBC Engineers and Associates Email: toddweik@cbceng.com Contract Information: \$125,000

Construction start date (contracted): April 2010

Construction start date (actual): May 2010 Construction end date (contracted): September 2010 Construction end date (actual): September 2010

Was the project completed on-time? yes Was the project completed on budget? No, additional cost to remove an underground storage tank that was encountered added \$8000 to the contract. Was the project completed to the owner's satisfaction? yes

**Project Description:** The Friess Lake Boat Launch project is a project that funded through a Lake Management grant administered by the WDNR. The boat launch is owned by the WDNR and managed by the Village of Richfield. A bioswale was designed by Bonestroo Engineers. Mr. Weik was responsible for the construction management associated with the completion of the project. This included on-site redesign of the parking and bioswale facility to improve vehicular movement through the site.

## TECHNICAL QUALIFICATIONS AND EXPERIENCE

Experience

 Project # 1: EZ Mini Storage (MMSD GI Partnership Grant Recipient)
Property Owner's: Kendal Bruenig (Sunset Investors)
Address/City/ State/ Zip: 10535 W. College Avenue Franklin, WI. 53132

Type of green infrastructure installed

Green Roofs	Rain Barrels	Greenways
Constructed wetlands	X Cisterns	Rain Gardens
Native Landscaping	Stormwater Trees	Other
X Porous Pavement	Bioswales	

## Experience

Project # 2: Rawson Avenue Green Infrastructure Initiative (MMSD GI Partnership Grant Recipient)
Property Owner's: Milwaukee County DOT
Address/City/ State/ Zip: 10437 Innovation Drive, 5<sup>th</sup> Floor
Wauwatosa, WI 53226

## Type of green infrastructure installed

Green Roofs	Rain Barrels	
Constructed wetlands	X Cisterns	
Native Landscaping	Stormwater Trees	
X Porous Pavement	Bioswales	

Greenways Rain Gardens Other Experience <u>Project # 3:</u> Martin Road Green Infrastructure Pilot Project Property Owner's: City of New Berlin, WI Address/City/ State/ Zip: 3805 S. Casper Drive, City of New Berlin, WI 53151

## Type of green infrastructure installed

Green Roofs Constructed wetlands Native Landscaping X Porous Pavement Rain Barrels X Cisterns Stormwater Trees Bioswales Greenways Rain Gardens Other

## Experience

Project # 4: STH 164 Regional Rain Garden
Property Owner's: Waterford Waterway Management District
Address/City/ State/ Zip: P.O. Box 416
Waterford, WI 53185

## Type of green infrastructure installed

Green Roofs Constructed wetlands Native Landscaping Porous Pavement Rain Barrels Cisterns Stormwater Trees Bioswales

Greenways X Rain Gardens Other

## Experience

Project # 5: Idlewood Lane Biofilter Property Owner's: Waterford Waterway Management District Address/City/ State/ Zip: P.O. Box 416 Waterford, WI 53185 Turne of group infractivity installed

## Type of green infrastructure installed

Green Roofs	Rain Barrels	Greenways
Constructed wetlands	Cisterns	Rain Gardens
Native Landscaping	Stormwater Trees	Other
Porous Pavement	X Bioswales	

Experience <u>Project # 6:</u> Pike River Restoration Project Property Owner's: Village of Mount Pleasant

## Address/City/ State/ Zip: 8811 Campus Drive Mount Pleasant, WI 53406 Type of green infrastructure installed

Green Roofs	Rain Barrels	X Greenways
X Constructed wetlands	Cisterns	Rain Gardens
X Native Landscaping	Stormwater Trees	Other
Porous Pavement	Bioswales	

## Experience <u>Project # 6:</u> Freiss Lake Boat Launch Property Owner's: Wisconsin Department of Natural Resources (Managed by Village of Richfield) Address/City/ State/ Zip: 4128 Hubertus Road Richfield, WI 53076 Type of green infrastructure installed

Green Roofs Constructed wetlands Native Landscaping Porous Pavement Rain Barrels Cisterns Stormwater Trees X Bioswales Greenways Rain Gardens Other

## TECHNICAL QUALIFICATIONS AND EXPERIENCE

# Type of Green Infrastructure(s): Green Infrastructure Planning

## Project Information:

Project Name: Southeast Atlanta Green Infrastructure Initiative Address: City of Atlanta Department of Watershed Management

## Project Owner Information:

Owner's Name: City of Atlanta, GA Address: 72 Marietta Street NW – 5<sup>th</sup> Floor Atlanta, GA 30303

Phone: 404-546-3241 Email: <u>njohnson@atlanatga.gov</u>

## Project Construction Information:

Construction Management Vendor: N/A Project Manager Name: Todd B. Weik Project Manager's Vendor history: currently employed @ CBC Engineers and Associates Email: toddweik@cbceng.com Contract Information: \$325,000

Construction start date (contracted): N/A Construction start date (actual): N/A Construction end date (contracted): N/A Construction end date (actual): N/A

Was the project completed on-time? yes Was the project completed on budget? yes Was the project completed to the owner's satisfaction? yes

**Project Description:** This project focused on the planning, testing and integration of green infrastructure strategies to eliminate historic combined sewer overflows in the central city watershed that encompassed over 2600 acres. Responsibilities included project management, XP-SWMM modeling, volumetric design, strategic implementation strategies and analysis, technical memorandums, and public information meetings.

# Type of Green Infrastructure(s): Green Infrastructure Planning

## Project Information:

Project Name: Bellaire Ravine Stormwater Management Plan Address: City of Appleton

## Project Owner Information:

Owner's Name: City of Appleton Address: 100 N. Appleton St. Appelton, WI 54911

Phone: 920-832-6173 Email: <u>Sue.Olson@appleton.org</u>

<u>Project Construction Information:</u> Construction Management Vendor: N/A Project Manager Name: Todd B. Weik Project Manager's Vendor history: currently employed @ CBC Engineers and Associates Email: toddweik@cbceng.com Contract Information: \$56,000

Construction start date (contracted): N/A Construction start date (actual): N/A Construction end date (contracted): N/A Construction end date (actual): N/A

Was the project completed on-time? yes Was the project completed on budget? yes Was the project completed to the owner's satisfaction? yes

**Project Description:** The City of Appleton was experiencing localized flooding in the Bellaire Ravine watershed. Typical grey infrastructure approaches were not alleviating the problems. Three alternative solutions, upsizing pipes and providing an additional outlet, a traditional green infrastructure approach and a hybrid green infrastructure approach was evaluated and a preferred alternative was recommended for implementation. Project responsibilities included project management and system analysis, inlet capacity evaluations, volumetric analysis, TMDL evaluation and integration, and water quality simulations.

# Type of Green Infrastructure(s): Green Infrastructure Planning

## **Project Information:**

Project Name: Rain Garden and Bioswale Strategic Master Plan Address: Waterford Waterway Management District

## Project Owner Information:

Owner's Name: Waterford Waterway Management District Address: P.O. Box 416 Waterford, WI 53185

Phone: N/A Email: gary.bluemel@outlook.com

## **Project Construction Information:**

Construction Management Vendor: N/A Project Manager Name: Todd B. Weik Project Manager's Vendor history: currently employed @ CBC Engineers and Associates Email: toddweik@cbceng.com Contract Information: \$12,000

Construction start date (contracted): N/A Construction start date (actual): N/A Construction end date (contracted): N/A Construction end date (actual): N/A

Was the project completed on-time? yes Was the project completed on budget? yes Was the project completed to the owner's satisfaction? yes

**Project Description:** The Waterford Waterway District was interested in developing a strategic plan to implement local rain gardens and bioswales at selected locations that were contributory to the Fox River Impoundment. A planning and guidance document was developed utilizing on-site evaluation and Win-SLAMM to strategically locate bioswales and site specific rain gardens. A capital improvement budget and prioritization schedule was completed. The document will be used to obtain nonpoint source grants and demonstrate water quality initiatives by the District.

# **Customer Service Approach**

## Project: Martin Road Green infrastructure Pilot Project, City of New Berlin

This project was incorporated into the City's overall design for the reconstruction of Martin Road. Components of the project included widening the road and rural ditch sections on both sides of the road. Within the limits of the Green Infrastructure Pilot Project limits, three large evergreen trees, on private property where at the very edge of the proposed slope intercept of the newly widened ditch. The potential for the loss of the trees due to root damage was very high. The land owner was very passionate about not losing any of the trees. Mr. Weik directed the surveyors to mark the extent of the slope intercept with paint and stakes to visually show the land owners where the edge of the ditch would be following construction. Mr. Weik met with the homeowners on three separate occasions to discuss the tree lose potential. Alternatives to not removing the trees were discussed which included retaining the trees with the understanding that if they did succumb due to root damage, it would be the property owners responsibility to bear the cost for removal; retaining at least one tree that was located at point where a proposed culvert would be installed and although root damage would occur, it would be less severe. The owners agreed to allow the contract remove two of the three trees. Mr. Weik provided on site design and construction overview to protect the remaining tree from extensive root damage by limiting the width of the excavation next to the tree. The homeowners where happy with the results of the project upon completion.

## Project: Pike River Restoration Project, Village of Mount Pleasant

A component of this project was the outright acquisition of the stream corridor. Within the limits of Phase 3 of the project the riparian owner was a condominium group. There were in excess of 100 owners of the condominium which meant that the Village needed to obtain a signoff from all the owners in order to acquire the land for the project. All the owners were not in agreement with the sale of the land to the Village. Mr. Weik coordinated information meetings with the condominium association that presented the project plans and extent of lands that would be needed from the condominium association. As it became apparent that outright acquisition would not be a plausible approach we recommended that a permanent drainage easement be obtained. To seal the deal, we recommended that the Village improve the condominium parking lot with an asphalt overlay as well as paying an easement acquisition fee. The condominium association agreed with this solution, signed the easement documents and the project construction moved forward.



# CBC Engineers and Associates, Ltd.

# Organizational Chart





# Vice President & Chief Engineer

## **CBC Engineers & Associates, Ltd. Overview**

CBC is a privately owned company that is dedicated to staying lean, innovative, and current on engineering practices, technologies and regulations. CBC strives to deliver high quality, cost effective engineering solutions and services on schedule and on budget by supporting the motivated, flexible, and focused teams of experienced employees. CBC values the importance of client relationships and will strive to continue to offer the best client-consultant experience in the business. CBC operates offices in Dayton, Ohio; Lexington and Hazard, Kentucky; Charleston, West Virginia; Harrisburg, Illinois; and Milwaukee, Office.

#### **CONTACT INFORMATION**

125 Westpark Road Centerville, Ohio 45459 Phone : (937) 428-6150 Cell : (937) 313-4355 Email : mitchhardert@cbceng.com

#### **EXPERTISE**

Geotechnical Engineering Foundation Engineering Coal Impoundment Design & Permitting Buried Structure Design & Evaluation Small Bridge Load Rating Retaining Wall Design CANDE Finite Element Analysis Stormwater Design / LID

#### **WORK HISTORY**

#### CBC Engineers & Associates, Ltd.

2011 to current - VP & Chief Engineer 2006 to 2011 - Operations Manager 2000 to 2006 - Sr. Project Engineer 1996 to 2000 - Project Engineer

#### **EDUCATION**

University of Dayton 1998 B.S. Civil Engineering

#### PROFESSIONAL ACCREDITATION, MEMBERSHIPS & CERTIFICATIONS

**P.E. Registration** : AL, AR, AZ, CT, CO, DC, DE, FL, GA, HI, ID, IL, IN, IA, ID, KS, KY, LA, MA, ME, MD, MI, MN, MS, MO, MT, NE, NC, ND, NH, NJ, NM, NV, NY, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY.

MSHA Certified Impoundment Instructor and Inspector.

ODOT NBIS Certification (Level 1 & 2)

Member - American Society of Civil Engineers (ASCE)

# **PROFESSIONAL EXPERIENCE AND RESPONSIBILITIES**

#### **Chief Engineer**

As Chief Engineer of CBC, Mitch is responsible for all engineering activities across five offices. He has 11 engineers and 10 field technicians working under his responsibility with many of the engineers being Professional Engineers and or Land Surveyors.

#### **Geotechnical Engineering Investigations**

Manages all aspects of subsurface geotechnical investigations for schools, airports, commercial and residential developments, bridges, buried culverts, dams and slurry impoundments projects. Supervises both the engineering and field services teams to develop and recommend a proper solution to our Client. Having a broad experience in foundation engineering, Mitch and his team are able to select the most cost effective solution for any given challenging site. These solutions could range from a simple remove and replace to a more aggressive deep foundation solution such as piles or deep dynamic compaction.

#### **Coal Refuse Impoundment Design, Evaluation & Inspection**

Supervises all aspects of slurry impoundment layout, design, storage, drainage, stability, permitting and inspection. CBC has worked on hundreds of coal impoundments over four states over nearly the last two decades. Mitch and his geotechnical engineering team are experts at landslide and slope stability analysis including seismic deformation which leads to creditability when a CBC design refuse impoundment is submitted to MSHA for comments and approval. CBC, under Mitch's leadership, can provide a full package complete with design, MSHA permitting and all state and CORPS required permits for any given slurry impoundment.

#### Buried Structure Design, Evaluation, Remediation & Load Rating

Manages the daily engineering and field operations for both new structure design and installation of buried culvert structures. He also prepares evaluation plans for existing distressed structures where CBC's field inspectors gather information during field evaluation. This information is used to evaluate the structure in its insitu shape, load rating and remediation if required. Under Mitch's leadership, CBC designs, evaluates and load rates hundreds of buried structures, both flexible and concrete every year. CBC has worked with Montana, Ohio, Louisiana, and New York DOT's to aid their development of both their culvert inspection programs and load rating processes.

#### Low Impact Development (LID) Stormwater Design

Manages the daily engineering and field operations for stormwater projects that involve a Green Infrastructure or LID approach. Under Mitch's leadership, CBC designs, retrofits and evaluates new and existing developments to improve stormwater runoff through using the newest Green Infrastructure technology and products.



# **Director Business Development**

## **CBC Engineers & Associates, Ltd. Overview**

CBC is a privately owned company that is dedicated to staying lean, innovative, and current on engineering practices, technologies and regulations. CBC strives to deliver high quality, cost effective engineering solutions and services on schedule and on budget by supporting the motivated, flexible, and focused teams of experienced employees. CBC values the importance of client relationships and will strive to continue to offer the best client-consultant experience in the business. CBC operates offices in Dayton, Ohio; Lexington and Hazard, Kentucky; Charleston, West Virginia; Harrisburg, Illinois; and Milwaukee, Wisconsin.

#### **CONTACT INFORMATION**

125 Westpark Road Centerville, Ohio 45459 Phone : (937) 428-6150 Cell : (513) 444-5080 Email : joedennis@cbceng.com Website : www.cbceng.com

#### **EXPERTISE**

Buried Structure Design & Evaluation Small Bridge Load Rating Project Management Field Marketing Technical Presentations

#### **WORK HISTORY**

CBC Engineers & Associates, Ltd. 2011 to present - Director Business Development

2009 to 2011 - Director of Marketing

#### **CONTECH Engineered Solutions, LLC.** 2006 to 2008 - Sales Manager

2003 to 2006 - VP Engineered Products & Services

2000 to 2003—Manager Engineered Products

1995 to 2000 - Regional Engineer

1989 to 1995 - Sales Engineer

#### **EDUCATION**

The Ohio State University 1988 B.S. Civil Engineering

#### PROFESSIONAL ACCREDITATION, MEMBERSHIPS & CERTIFICATIONS

Member, American Society of Civil Engineers (ASCE)

Past President, American Society of Civil Engineers (ASCE), Geotechnical Group, Cincinnati Chapter

Past President, Ohio Contractors Association (OCA), SW Ohio Chapter

# **PROFESSIONAL EXPERIENCE AND RESPONSIBILITIES**

#### **Director Business Development**

As the Director Business Development of CBC, Joe is responsible for creating business strategies that focus on emerging markets and new potential Clients which will add growth opportunities. All marketing material and website development is also under his supervision. Joe also serves as a Project Manager for some of CBC's largest coal impoundments and buried structure evaluation projects.

#### Buried Structure Design, Evaluation, Durability, Remediation & Load Rating

Brings broad knowledge from his 20 years of experience with CONTECH where became an expert in the design, installation, durability and remediation of buried flexible culverts. In this 20 year career he was responsible for hiring and training both sales professionals and engineering support. Joe has seen hundreds of flexible pipe installations nationwide and has performed numerous evaluations of in-place buried flexible structures and is an expert in metal pipe durability and corrosion. Joe has worked with ODOT, LADOTD, NYSDOT, KYTC, NCDOT, SCDOT, MDOT, VDOT through the years in the evaluation of metal pipe installations and has aided in developing methods for on going inspection practices for their buried metal pipe and bridge culverts.

#### **Project Management**

Manages some of CBC's larger projects especially when related to either buried pipe evaluations or the need for multiple office participation in the preparation of detailed design of Coal Refuse Impoundments and permitting. Joe has successfully managed a culvert inspection and load rating program for LADOTD where CBC was responsible for developing a routine culvert inspection program as well as load rate 270 buried structures, both concrete and metal. He has managed the evaluation of a triple barrel 35'-9" x 15'-3" Super-Span structures which were installed in 1980 and 2300 feet long each for the City of Plano, Texas. Joe coordinated CBC's five (5) office collaboration to provide all required engineering and environmental permitting for a coal slurry impoundment for Sugar Camp Energy in Franklin County Illinois. Pulling resources and expertise from each office allowed CBC to deliver a turn-key solution to their Client.

#### **Design / Supply Partner Management**

Manages all Partner relationships where CBC provides technical engineering support to leading site solutions manufacturing and development companies. CBC supports technical sales team nation-wide with a variety of site civil and green infrastructure (LID) stormwater solutions. These companies bring game changing world class products that can be used to save time, money and improve the environment.

#### **Technical Presentations / Seminars**

Gives technical presentations on buried flexible pipe design, installation, evaluation, durability, remediation and load rating. He has presented, as example, at The Midwest Working Bridge Group in 2010, NYSDOT District 9 in 2009 and OTEC in 2012.



# Manager LID Design Services

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#### **CONTACT INFORMATION**

Milwaukee Regional Office W336 N6978 Stonefield Ct. Oconomowoc, WI 53066 262-219-2938 cell 937-428-6150 corp. office Email: toddweik@cbceng.com

#### **EXPERTISE**

LID/Green Infrastructure Design Comprehensive Stormwater Management Planning Erosion / Sediment Control Design Floodplain Analysis Site Design River Restoration Regulatory Permits Grant Administration

#### **WORK HISTORY**

CBC Engineers & Associates, Ltd. 2015—Present Endpoint Solutions Corp. 2012—2014

Shaw Environmental and Infrastructure

2012

Crispell-Snyder, Inc.

2001-2012

Ruekert / Mielke, Inc.

1981-2001

Cox, McKee and Okerlund

1980-1981

EDUCATION University of Wisconsin 1980 B.S. Landscape Architecture

#### PROFESSIONAL ACCREDITATION, MEMBERSHIPS & CERTIFICATIONS

Professional Landscape Architect: Wisconsin, Michigan

Certified Professional Erosion and Sediment Control Specialist: #901

# **PROFESSIONAL EXPERIENCE AND RESPONSIBILITIES**

#### **Manager LID Design Services**

Mr. Weik has more than 30 years of experience in surface water resource planning and design, LID /green infrastructure implementation, floodplain management, and municipal park and recreation services for both public and private-sector clients. He has over 18 years of project management responsibility, including business development, cost estimating, client management, regulatory permitting and agency coordination, grant procurement, municipal ordinance preparation, municipal capital improvement budget assistance, public hearing and informational meeting facilitation, and project cost/scheduling control and oversight.

#### **Stormwater Management**

Mr. Weik's project experience includes: comprehensive storm water management planning, water quality analysis planning and design, floodplain evaluation and management, LID/green infrastructure planning and design, construction site erosion control planning and design, wetland mitigation planning, storm water conveyance and facility planning and design, neighborhood planning, municipal park and recreation facility planning and design, comprehensive outdoor recreation planning, boat launch facilities, river restoration and stream bank erosion control planning and design, site development, NPDES permit procurement, State and Federal grant procurement and administration, and construction administration of public works projects.

#### **Project Management and Compliance**

Mr. Weik's experience also includes the coordination and supervision of multi-disciplinary teams related to complex public works projects. His responsibilities have included owner, engineer and contractor contract agreement preparation and execution, price and change order negotiations, letter of credit review and approvals, construction document review for compliance with municipal codes and ordinances, subdivision plat reviews, and conflict resolution services.

#### "Sustainable, Low Impact, Volume Control System" (SLVS)

Mr. Weik also developed a revolutionary stormwater management approach that is named "Sustainable, Low Impact, Volume Control System" (SLVS). The SLVS approach virtually eliminates the need for stormwater pipes and ponds. Utilizing an integrated green infrastructure system and highly permeable concrete articulating concrete block /mats (P-ABC/M) stormwater capture, volume control and water quality can easily be accomplished on any site ranging from small private developments to large municipal applications. The system is very flexible, is not an all or nothing application similar to traditional stormwater management systems and is cost competitive.



# **Geotechnical Project Engineer**

## **CBC Engineers & Associates, Ltd. Overview**

CBC is a privately owned company that is dedicated to staying lean, innovative, and current on engineering practices, technologies and regulations. CBC strives to deliver high quality, cost effective engineering solutions and services on schedule and on budget by supporting the motivated, flexible, and focused teams of experienced employees. CBC values the importance of client relationships and will strive to continue to offer the best client-consultant experience in the business. CBC operates offices in Dayton, Ohio; Lexington and Hazard, Kentucky; Charleston, West Virginia; Harrisburg, Illinois; and Milwaukee, Wisconsin.

#### **CONTACT INFORMATION**

125 Westpark Road Centerville, Ohio 45459 Phone : (937) 428-6150 Email : deepanair@cbceng.com

#### **EXPERTISE**

Civil Engineering Geotechnical Engineering Finite Element Analysis MSE Retaining Wall Design Buried Structure Evaluation Buried Structure Load Rating Shallow & Deep Foundation Design Slope Stability Analysis Low Impact Development (LID) Green Infrastructure Stormwater Engineering

#### WORK HISTORY

CBC Engineers & Associates, Ltd. 2005 – Present

#### **EDUCATION**

Purdue University 2005- M.S. Civil Engineering

University of Kerala, India 2002- B.S. Technology

PROFESSIONAL ACCREDITATION, MEMBERSHIPS & CERTIFICATIONS P.E. Registration: OH

# **PROFESSIONAL EXPERIENCE AND RESPONSIBILITIES**

#### **Geotechnical Project Engineer**

Deepa has 8 years of experience across all of CBC's engineering service offerings. She has become and expert in evaluating and load rating buried structures using finite element analysis and BRASS Culvert. She assists the Chief Engineer with all Geotechnical Engineering Investigation proposals, evaluations and report preparation. Deepa also assists the Senior Geotechnical Engineer with various design aspects of coal impoundments. She has earned her Professional Engineer Accreditation from the State of Ohio.

#### **Buried Structure Evaluation, Design & Load Rating**

Deepa's responsibilities include the evaluation, design and load rating of flexible and rigid buried structures. She is currently managing all engineering aspects of a 5 year \$875,000 buried bridge load rating program for the Louisiana Department of Transportation & Development (LADOTD) consisting of inspection and load rating of 270 buried metal and concrete structures.

#### Subsurface Investigations

Evaluates soil samples taken from any specific project site in order to provide the Client with a soil classification. With the aid of further laboratory testing, she also determines the soil's strength parameters. Deepa develops her foundation recommendations based on this information and provides a Geotechnical Investigation Report to the Client containing this information for used in construction.

#### **Retaining Wall & Foundation Design**

Designs both temporary and permanent retaining structures, mechanically stabilized wall systems and wire walls, geogrid soil reinforcement, design of anchors and tiebacks, geotechnical and structural design of shallow and deep foundations including drilled piers and driven piles, site soil condition improvement techniques.

#### Impoundment Design

Responsible for assisting with the evaluation and design of coal impoundments including the analysis of slope stability, impoundment break through potential, finite element analysis of embankment seepage and various other hydrological design aspects.

#### Low Impact Development Design (LID)

Responsible for assisting with the evaluation and design of low impact development (LID) designs using the latest product and software technology to create the most cost effective and green design for CBC's Nationwide Design / Supply Partners.



# Geotechnical Staff Engineer

## **CBC Engineers & Associates, Ltd. Overview**

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#### **CONTACT INFORMATION**

125 Westpark Road Centerville, Ohio 45459 Phone : (937) 428-6150 Cell : (859) 428-8746 Email : rickteachey@cbceng.com Website : www.cbceng.com

#### **EXPERTISE**

Geotechnical Engineering Finite Element Analysis Environmental Site Assessments (ESA's) Buried Structure Evaluation Groundwater and Air Quality Testing Low Impact Development (LID) Green Infrastructure Stormwater Engineering

#### **WORK HISTORY**

CBC Engineers & Associates, Ltd. 2012 – Present

University of Kentucky 2010 - 2012 - Research Assistant & Teacher's aid

Alpha Omega Environmental Management 2008 - 2009—Project Engineer

Equitable Resources Summer 2007—Summer Internship

#### **EDUCATION**

University of Kentucky 2010–2012 - M.S. Civil Engineering (Thesis Pending)

University of Kentucky 2006–2009 B.S. Civil Engineering

#### PROFESSIONAL ACCREDITATION, MEMBERSHIPS & CERTIFICATIONS E.I.T. Registration: KY

# **PROFESSIONAL EXPERIENCE AND RESPONSIBILITIES**

#### **Geotechnical Staff Engineer**

Rick joined CBC in June of 2012 upon completing his course requirements and research portion of his master's thesis from the University of Kentucky. While at UK, Rick's master's research included the comparison of disparate soil models, study of trial embankment settlement data, developing experimental correlations between triaxial and electrical testing data, and modeling of static and dynamic geotechnical systems using the finite element software package PLAXIS. While at CBC Rick has assisted on many projects using his finite modeling and triaxial testing expertise, as well as his independently obtained software engineering skills, analyzing buried flexible corrugated metal pipe structures using another finite modeling program, CANDE. In addition to these tasks Rick has participated in buried structure evaluations performed by CBC for the state of Louisiana as well as a large mall owner in Plano, Texas.

#### **Finite Element Analysis**

Rick's responsibilities include the derivation of hyperbolic soil modeling parameters from triaxial data for the finite element analysis of flexible and rigid buried structures in CANDE. Currently he is also developing a new software tool using more sophisticated meshing techniques than CBC has employed in the past. This tool will not only provide more accuracy, but also faster means for CBC to analyze buried structures- including concrete boxes and arches-reducing the time required to about 10% of what it took just a year ago.

#### **Foundation Design of Buried Flexible Metal Pipe Structures**

Rick provides reinforced concrete spread footing designs for various shaped flexible corrugated metal pipe structures to support the design supply business of a large U.S. Client who specializes in the manufacturing of corrugated metal pipe products. CBC services this Client in all 50 states, Puerto Rico, Mexico, Columbia, and other locations as well.

#### **Coal – Ash Impoundment Design**

Prior to joining CBC and while earning his master's degree, Rick's first professional engineering experience was evaluating sites for a coal-ash landfill for a large energy company. Activities for this project included waste cell design, preparation of leachate treatment options, evaluation of potential environmental impacts to local water resources, preparation of project drawings, evaluation of applicable regulations, and assisting in cost estimation and preparation of presentation materials. This work resulted in the client choosing to locate the landfill at an alternative site due to problems uncovered in the design phase of the original site.

#### Low Impact Development Design (LID)

Responsible for assisting with the evaluation and design of low impact development (LID) designs using the latest product and software technology to create the most cost effective and green design for CBC's Nationwide Design / Supply Partners.



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# **PROFESSIONAL EXPERIENCE AND RESPONSIBILITIES**

#### **Director Field Services**

As the Director of Field Services, Bill uses his 14 years of experience to schedule and coordinate the field construction observation and drilling services on all project within the local Dayton area. Bill also coordinates all Geotechnical Drilling Operations for CBC with our six offices in 5 states. Bill is responsible for making sure all of CBC's field technicians are properly trained and their skill set matches the projects assigned to them. He reviews daily job site observation reports and visits all local jobsites to coordinate activities with the contractor.

## **Buried Structure Field Evaluation**

Bill has become an expert in using the CBC developed and patented laser measuring device called AccuShape when evaluating buried flexible structures. CBC has developed a full process of evaluation for buried flexible structures that depends on accurate and repeatable field measurements. Bill travels across the country performing these field evaluations for DOT's, Counties, Cities and private owners. Bill also teaches the process to the rest of the Field Technicians to keep our people cross trained.

#### Project Management

Bill is responsible for quoting all Field Services activities in the local Dayton Area as well as all drilling services across all of our offices. Bill ensures that CBC Field Technicians are performing field and laboratory inspection, testing and sampling of engineering materials, such as soils, aggregates, concrete and asphalt in accordance with standard practices, site specific project specifications and any applicable building codes. All daily observation reports and material testing is collected by Bill and assembled for the final report prepared by one of CBC's engineers.

## **Notable Projects:**

- Field Evaluation of Triple 35' Span CMP Arches 3200 feet long in Plano, Texas
- Field Evaluation of 142" x 91" CMP, 200 feet long under Cary Parkway for NCDOT, Cary, NC
- Field Evaluation of Twin 2300' x 16 foot Diameter Coal Conveyor Tunnels, Kinder Morgan, Newport News, Virginia
- Field Evaluation of Existing Distressed 26'-1" x 18'-2" Super-Span Wildlife Crossing in Missoula County Montana for the Montana Department of Transportation
- Field Evaluation and Construction Observation of a Partially Collapsed and Replaced 19'-4" x 12'-9" Horizontal Ellipse Super-Span, City of Zanesville, Ohio

# More Than Geotechnical Engineering

## CONTACT INFORMATION

125 Westpark Road Centerville, OH 45459 Phone : (937) 428-6150 Cell : (937) 603-2114 E-mail : billrobertson@cbceng.com Website : www.cbceng.com

#### **EXPERTISE**

Project Management Quality Control Inspections Buried Structure Field Evaluations Field & Laboratory Testing Forensic Investigations Geotechnical Drilling Coordination Foundation Inspections Soils, Aggregates, Concrete & Asphalt

#### **WORK HISTORY**

#### CBC Engineers & Associates, Ltd.

Director Field Services - 2005 - Present

Field Technician- 2000 - 2005

#### **PROFESSIONAL CERTIFICATIONS**

ACI Field Level I Certification

Certification to Operate a Nuclear Moisture-Density Gauge

Internal Training on Inspection / Evaluation of Buried Flexible Metal Pipe

Certified Impoundment Inspector -Mine Safety and Health Administration (MSHA)