

REQUEST FOR PROPOSAL FOR A LITERATURE SEARCH ON RAINSCREEN PERFORMANCE

Issue Date: February 28, 2022

Request for Proposal for Literature Search regarding Rainscreen Performance

The Performance Committee of the Rainscreen Association in North America (RAiNA) is seeking the services of a proponent, i.e.: consulting firms, academic institutions, research organizations, etc. for a literature search on rainscreen performance. Such proponents shall have knowledge and experience in rainscreen fundamentals, building and testing of wall assemblies in all types of construction, including, but not limited to research and performance of rainscreen assemblies. Proponents must have experience designing and testing assemblies for broad building types, including pre-cast concrete, masonry, stone, metal panel claddings, window wall, stick-built curtain wall and unitized curtain wall. A proponent with experience conducting a literature search, researching rainscreen, and testing rainscreen assemblies, would be considered a qualified proponent for this project. Experience in all North American climate zones is essential and additional experience in climate zones outside of North America is preferred.

Submission Instructions

Bid Submissions

RAiNA will accept electronic proposals by email until April 19, 2022, at 11:59 pm (EDT) to Mr. Laverne Dalgleish at ldalgleish@rainscreenassociation.org.

Intention to Bid

If you are considering bidding, please notify RAiNA of your intention to bid by emailing Jenna Xec at jxec@rainscreenassociation.org by March 15, 2022, at 11:59 pm (EDT). Failure to register will not disqualify your proposal but will possibly prevent you from receiving updated information promptly.

Requests for Information (RFI)

Potential bidders shall submit Requests for Information (RFI's) by March 29, 2022, at 5:00 pm (EDT). RFI's should be directed to Jenna Xec at jxec@rainscreenassociation.org

RAiNA shall respond to RFI's by April 5, 2022, at 11:59 pm (EDT).

RAiNA shall provide RFI's and project understanding clarifications to all proponents who have confirmed submitting a proposal. All questions regarding the proposal should be

directed to Mr. Laverne Dagleish at 1(833) 206.7022 or via email at ldagleish@rainscreenassociation.org.

Project Timelines

Upon award, work would begin immediately with the final report being provided by November 18, 2022. The key timelines are:

Intention to Bid	March 15, 2022
Requests for Information Submissions	March 29, 2022
Response to RFI's	April 5, 2022
Bids Submittal	April 19, 2022
Award of Contract	May 20, 2022
Kick-off Meeting	w/o June 6, 2022
Standing Coordination Meeting with RAiNA	Monthly
Draft Report	October 3, 2022
Final Report	November 18, 2022

During the work, the chosen proponent will engage in monthly meetings to discuss the project's progress. The Technical Performance Committee shall review a draft report and provide comments and requested changes.

Introduction and Project Background

The Rainscreen Association in North America (RAiNA) is developing performance requirements for rainscreen assemblies in walls of buildings to establish a baseline of knowledge available. RAiNA has recently defined a Rainscreen Wall Assembly as an assembly applied to an exterior wall that consists of, at minimum, an outer/inner layer, and a cavity between them sufficient for the passive removal of liquid water and water vapor¹.

The focus of this work is a documented literature search to provide RAiNA with previously developed technical and performance information regarding rainscreen assemblies. Research regarding all aspects of a rainscreen will be valuable, but a specific focus of this literature search shall be moisture control including drainage,

¹ <https://rainscreenassociation.org/wp-content/uploads/2021/08/D-188-001-rev-0-RAiNA-Technical-Bulletin-Defining-Rainscreen-Wall-Performance-1.pdf>

ventilation and drying with consideration of the impact of thermal, fire and structural. Literature regarding secondary performance requirements may also be collected, however should not be the primary focus.

About RAINA

RAiNA is a nonprofit trade association representing the rainscreen assembly industry. RAINA's general membership consists of manufacturers of rainscreen materials and products, contractors who install rainscreen materials and accessories, and consultants, researchers, and individuals with a broad, academic, or business interest. The RAINA Performance Committee will oversee the project. RAINA's committees include manufacturers, architects, consultants, specifiers, testing agencies, and laboratories.

Summary of Project and Deliverables Report

The literature search should include articles, papers, research reports, and other documents that would be of assistance to RAINA. These reports may not be available on the internet but are published or are made available by various organizations. To help focus the search, finding literature that provides information that would assist in answering the following questions would be valuable:

1. What information is available that shows what affects the drainage ability of a wall assembly, and is there a performance metric or a set of prescriptive requirements for construction?
2. How is the wetting and drying capacity of a wall assembly affected by a rainscreen assembly? How do: climate zones, insulation, cladding types, and other components of the assembly impact this. For example, how do absorptive and non-absorptive cladding's impact a wall's drying ability?
3. What factors influence a wall assembly's ventilation and drying capacities, such as height, venting vs. ventilation, horizontal members creating turbulence in the wall cavity, closed top of the wall, open joints vs. closed joints, geometry in the cavity, and depth of cavity.
4. How do the following impact the performance/behavior of a rainscreen?
 - a. airflow rates
 - b. the time required to dry
 - c. wind pressures and air exchange rates in air cavities driven by thermal and moisture buoyancy
 - d. wetting and drying of cladding and backup wall
 - e. Indicate whether the information has been calculated and measured in a laboratory or the field.
5. How do climate zones, the orientation of a building, and cladding types affect the wetting and drying of a wall assembly?

- The final deliverable report shall include papers or other literature from a variety of sources, separated into the various aspects of a rainscreen assemblies' performance. The report for this project shall include research from the 1950's to present day, technical reports, articles, papers, and sources from around the world. The focus is on peer-reviewed literature that shows performance, (good or bad) of rainscreen assembly.
- A report based on google searches only, is not acceptable.

The budget for this work in 2022 is \$20,000 USD.

Key Tasks and Deliverables

The selected proponent shall undertake the following tasks and provide the following deliverables:

Task 1: Literature Review

A review of available sources of research such as academic publications, industry guidelines, and research specific to rainscreen assembly applications where available.

A summary of the research findings related to rainscreen assemblies.

Deliverables:

- Bibliographic list of all appropriate documents discovered, including their location and whether they are available at a cost or no charge. Provide them each document were possible.
- List of documents that specifically deal with the performance of rainscreen assemblies, including their location and whether they are available at a cost or no charge. Provide them each document were possible.
- Half-page summaries of each provided reference.

Task 2: Draft Report

- Provide a draft report including each deliverable outlined under Task 1 above to RAiNA for one (1) round of review.
- The draft report shall be in Word format.

Deliverables:

- Draft report

Task 3: Final Draft Report

- A final draft report with all comments addressed provided to RAiNA for approval.
- The draft report shall be in both Word and PDF format.

Deliverables:

- Final draft report

Task 4: Final Report

- A “camera ready” final report ready for publication provided to RAiNA for acceptance.
- The final report shall be in both Word and PDF format.

Deliverables:

- Final report

Proposal Submission Requirements

Proponents must comply with the submission requirements outlined below and include the following information:

Organization Overview

- Provide a brief narrative on the proponent’s company, purpose, and history of successes. Include a list of current/past construction-related and trade association clients.

Project Understanding

- A statement clearly and concisely states the proponent's understanding of the project and describes its capability and staffing to perform the work.

Key Personnel

- Provide a list of the key personnel assigned to the project, including number of years of experience, a list of relevant projects, and intended role. Individuals should have experience designing and testing rainscreens for real projects.
- The Lead Investigator must have a minimum of 10 years’ experience in the building science/building envelope/building consulting field. The lead investigator

should highlight experience with researching, designing, building, testing and monitoring, rainscreen walls.

Resumes

- Provide CVs of the firm's personnel assigned to the project.
- CVs provided as an appendix to the proposal.

Similar Projects

- Include a summary of specific projects the individual or firm has conducted similar to the proposed project.
- Project experience should illustrate the individual or firm's experience knowledge and experience in rainscreen fundamentals, building and testing of wall assemblies in all types of construction, and research and performance of rainscreen assemblies.
- Project experience should illustrate the individual or firm's experience researching, designing, and testing assemblies for broad building types, including pre-cast concrete, masonry, stone, metal panel claddings, window wall, stick-built curtain wall and unitized curtain wall.
- Project experience should illustrate the individual or firm's experience conducting literature searches, researching rainscreens, testing rainscreen assemblies, and association construction.

Provide a work sample as an appendix to the proposal.

Project Management

The proposal shall include the following statement:

Once delivered to RAiNA, [Proponent] acknowledges that all deliverables produced for this project are wholly and entirely owned by RAiNA. This does not include the actual found literature.

Work Plan

The proposal shall include a detailed schedule of the process by which the proponent proposes to undertake the work, including each deliverable and a project timeline, as necessary.

References

Provide three (3) references from past clients - those related to the construction industry are preferable. Reference information should include name, company/organization, address, phone number, and website address.

Fee Proposal

Provide a detailed estimate of the costs, broken out, for completing this project, including labor hours and project timelines. Provide the fee for each individual deliverable. Upon award, work would begin immediately.

The Basis for Proponent Selection

The selection of the proponent will be based on the personnel identified in the proposal and the proponent’s experience in conducting literature searches of documents for the construction industry. Criteria and a weighting factor for selecting the proponent shall include:

	Total % Value
1. Contractor's understanding of Work Statements as demonstrated in the proposal including, but not limited to: <ul style="list-style-type: none"> a. Proposed timeline for the deliverable. b. Identify the project team and sub-contractors used for completing the project. c. Completeness of the proposal in addressing each of the identified deliverables 	20%
2. Organization's experience with literature searches for the construction industry.	30%
3. Expertise in creating a report on literature searches and understanding of rainscreens, drainage, and drying.	40%
4. Ability to meet project schedule milestones and final product delivery.	10%

Acceptance or Rejection of Proposals

RAiNA reserves the right, in its sole discretion, to:

- (a) accept or reject any or all Proposals,
- (b) accept or reject any part of any Proposal,
- (c) accept a Proposal which is not the lowest cost Proposal,
- (d) accept a Proposal that deviates from the requirements, scope/specifications or conditions specified in this RFP,
- (e) accept or reject any irregular, informal, defective, incomplete, or otherwise non-compliant Proposal, regardless of the nature or cause of the irregularity, informality, defect, incompleteness, or non-compliance, including non-compliance with mandatory terms such as “must” or “shall”,
- (f) reject a Proposal even if it is the only Proposal received in response to this RFP,
- (g) to award all or part of the Work; and
- (h) split the scope/specifications between one or more Proponents.

RAiNA further reserves the right, in its sole discretion, to accept or reject all or part of any Proposal which:

- (a) is incomplete, obscure, irregular or unrealistic,
- (b) contains unauthorized erasures or corrections,
- (c) contains terms, conditions, or provisions unacceptable to RAiNA,
- (d) is a conditional or qualified offer which is unacceptable to RAiNA,
- (e) fails to comply with, or omits, any required or mandatory information; or
- (f) is materially non-compliant with the requirements of this RFP.

RAiNA does not conduct debriefings to any unsuccessful Proponent(s).