CITY OF MADISON

REQUEST FOR PROPOSALS

RFP #: 12026-0-2024-BP

Title: Engineering Consulting Services for Madison Parking Division Structures

City Agency: Parking Division

Due Date: Tuesday, April 30, 2024
2:00 PM CST

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1 NOTICE TO PROPOSERS

1.1 Summary

The City of Madison Parking Division ("City") is soliciting Proposals from qualified vendors for Engineering Consulting Services for Madison Parking Division Structures. Vendors submitting Proposals ("Proposers") are required to read this Request for Proposals ("RFP") in its entirety and follow the instructions contained herein.

1.2 Important Dates

Deliver Proposals no later than the due time and date indicated below. The City will reject late Proposals:

Issue Date:	Tuesday, April 2, 2024
Questions Due Date:	Friday, April 12, 2024
Answers Posted Date:	Wednesday, April 17, 2024
Due Date:	Tuesday, April 30, 2024, 2:00 PM CST

1.3 Format

All proposals are to be submitted electronically.

Submit Technical and Cost Proposals (Form D) in separate, distinct files.

Complete and return Forms A through E to City of Madison Purchasing Services by Tuesday, April 30, 2024, 2:00 PM CST. Please do not send back this RFP document with your submission.

1.4 Labeling

All email correspondence must include RFP #12026-0-2024-BP in the subject line.

1.5 Delivery of Proposals

Delivery of electronic copy to: via email to bids@cityofmadison.com

Proposals must be delivered as instructed. Deliveries to other City departments and/or locations may result in disqualification.

1.6 Appendix A: Standard Terms & Conditions

Proposers are responsible for reviewing Appendix A, the Standard Terms and Conditions, prior to submission of their Proposals. Appendix A applies to the submission of proposals and in the absence of a signed contract becomes part of the contract terms. Part I of Appendix A provides legal terms relevant only to the submission of proposals. Part II of Appendix A provides legal terms that would apply *only in the absence of a signed contract.*

1.7 Appendix B: Sample Contract for Purchase of Services

Proposers are responsible for reviewing Appendix B, Sample Contract, prior to submission of their Proposals. A contract in the form of Appendix B will serve as the basis of the contract resulting from this RFP. The resulting contract will control over any different legal terms in this RFP, Appendix A, the proposal, etc. **By submitting a proposal, Proposers affirm their willingness to enter into a contract containing the terms found in Appendix B**. While the City strives to provide the most appropriate sample contract for this RFP, the City reserves the right to modify the sample form for any resulting contract. The City does not negotiate legal terms prior to award.

1.8 Affirmative Action Notice

If Contractor employs 15 or more employees and does aggregate annual business with the City of $50,000 or more for the calendar year in which the PO and/or Contract is in effect, Contractor shall file, within thirty (30) days from the PO/Contract effective date and BEFORE RELEASE OF PAYMENT, an Affirmative Action Plan designed to ensure that the Contractor provides equal employment opportunity to all and takes affirmative action in its utilization of applicants and employees who are women, minorities and/or persons with disabilities. A sample affirmative action plan, Request for Exemption forms, and instructions are available at: www.cityofmadison.com/civil-rights/contract-compliance/vendors-suppliers/forms or by contacting a Contract Compliance Specialist at the City of Madison Affirmative Action Division at (608) 266-4910. Vendors must register for an account to complete the required forms online, here: https://elam.cityofmadison.com/citizenaccess

Contractor shall also allow maximum feasible opportunity to small business enterprises to compete for any subcontracts entered into pursuant to this PO/Contract.

Job postings: All contractors who employ 15 or more employees (regardless of the dollar amount of this contract or their annual aggregate business with the City) must notify the City of all external job openings at locations in Dane County, Wisconsin, and agree to interview candidates referred by the City or its designated organization. Job posting information is available at: http://www.cityofmadison.com/civil-rights/programs/referrals-and-interviews-for-sustainable-employment-raise-program. Instructions for contractors: http://www.cityofmadison.com/civil-rights/documents/RaISE_Job_Posting_Instructions.pdf

The complete set of Affirmative Action requirements for this purchase can be found in **paragraph 20 of Appendix A – Standard Terms and Conditions** and, in **Section 13 of Appendix B – Sample Contract for Purchase of Services**.

1.9 Multiple Proposals

Multiple Proposals from Proposers are permitted; however, each must fully conform to the requirements for submission. Proposers must sequentially label (e.g., Proposal #1, Proposal #2) and separately package each Proposal. Proposers may submit alternate pricing schemes without having to submit multiple Proposals.

1.10 City of Madison Contact Information

The City of Madison Parking Division is the procuring agency:	Bill Putnam City of Madison Parking Division PH: (608) 266-6528 wputnam@cityofmadison.com
The City of Madison Purchasing Services administers the procurement function:	Brian Pittelli Purchasing Services City-County Bldg, Room 407 210 Martin Luther King, Jr. Blvd. Madison, WI 53703-3346 PH: (608) 267-4969 FAX: (608) 266-5948 bpittelli@cityofmadison.com

For questions regarding Affirmative Action Plans please contact:	Contract Compliance Department of Civil Rights City-County Bldg., Room 523 210 Martin Luther King, Jr. Blvd. Madison, WI 53703 PH: (608) 266-4910 dcr@cityofmadison.com

The City employs spam filtering that occasionally blocks legitimate emails, holding them in 'quarantine" for four calendar days. The contacts listed in this RFP will acknowledge all emails received. Proposers not receiving acknowledgement within twenty-four hours shall follow-up via phone with specific information identifying the originating email address for message recovery.

1.11 Inquiries and Clarifications

Proposers are to raise any questions they have about the RFP document without delay. Direct all questions, ***in writing,*** to the Purchasing Services administrator listed in Section 1.10.

Proposers finding any significant ambiguity, error, conflict, discrepancy, omission, or other deficiency in this RFP document shall immediately notify the Buyer and request clarification. In the event that it is necessary to provide additional clarification or revision to the RFP, the City will post addenda – see 1.12 below. Proposers are strongly encouraged to check for addenda regularly.

Proposals should be as responsive as possible to the provisions stated herein. Exceptions are not permitted. The City of Madison reserves the right to disqualify any and all bids that are non-responsive or that include exceptions.

1.12 Addenda

In the event that it is necessary to provide additional clarification or revision to the RFP, the City will post addenda to its Proposals distribution websites – see 1.13 below. It is the Proposers responsibility to regularly monitor the websites for any such postings. Proposers must acknowledge the receipt of any addenda on Form B. Failure to retrieve addenda and include their provisions may result in disqualification.

1.13 Bid Distribution Networks

The City of Madison posts all Request for Proposals, addenda, tabulations, awards and related announcements on two distribution networks – VendorNet and DemandStar. The aforementioned documents are available **exclusively** from these websites. It is the Proposers responsibility to regularly monitor the bid distribution network for any such postings. Proposers failure to retrieve such addenda and incorporate their appropriate provisions in their response may result in disqualification. Both sites offer free registration to City Proposers.

State of Wisconsin VendorNet System:	State of Wisconsin and local agencies bid network. Registration is free. http://vendornet.state.wi.us/vendornet
DemandStar by Onvia:	National bid network – Free subscription is available to access Proposals from the City of Madison and other Wisconsin agencies, participating in the Wisconsin Association of Public Purchasers (WAPP). A fee is required if subscribing to multiple agencies that are not included in WAPP.
Bid Opportunities:	www.cityofmadison.com/finance/purchasing/bidDemandStar.cfm
Home Page:	www.demandstar.com

To Register: https://www.demandstar.com/app/registration

Please note when registering: Pick the **Wisconsin Association of Public Procurement (WAPP)** to select all current Wisconsin government agencies.

1.14 Local Vendor Preference

The City of Madison has adopted a local preference purchasing policy granting a scoring preference to local suppliers. Only suppliers registered as of the bid's due date will receive preference. Learn more and register at the City of Madison website: www.cityofmadison.com/business/localPurchasing.

1.15 Oral Presentations/Site Visits/Meetings

Proposers may be asked to attend meetings, make oral presentations, inspect City locations or make their facilities available for a site inspection as part of this RFP process. Such presentations, meetings or site visits will be at the Proposers expense.

1.16 Acceptance/Rejection of Proposals

The City reserves the right to accept or reject any or all proposals submitted, in whole or in part, and to waive any informalities or technicalities, which at the City's discretion is determined to be in the best interests of the City. Further, the City makes no representations that a contract will be awarded to any proposer responding to this request. The City expressly reserves the right to reject any and all proposals responding to this invitation without indicating any reasons for such rejection(s).

The City reserves the right to postpone due dates and openings for its own convenience and to withdraw this solicitation at any time without prior notice.

1.17 Withdrawal or Revision of Proposals

Proposers may, without prejudice, withdraw Proposals submitted prior to the date and time specified for receipt of Proposals by requesting such withdrawal before the due time and date of the submission of Proposals. After the due date of submission of Proposals, no Proposals may be withdrawn for a period of 90 days or as otherwise specified or provided by law. Proposers may modify their Proposals at any time prior to opening of Proposals.

1.18 Non-Material and Material Variances

The City reserves the right to waive or permit cure of nonmaterial variances in the offer if, in the judgment of the City, it is in the City's best interest to do so. The determination of materiality is in the sole discretion of the City.

1.19 Public Records

Proposers are hereby notified that all information submitted in response to this RFP may be made available for public inspection according to the Public Records Law of the State of Wisconsin or other applicable public record laws. Information qualifying as a "trade secret"—defined in State of Wisconsin Statutes—may be held confidential.

Proposers shall seal separately and clearly identify all information they deem to be "trade secrets," as defined in the State of Wisconsin Statutes. Do not duplicate or co-mingle information, deemed confidential and sealed, elsewhere in your response.

S. 19.36(5)
(5) TRADE SECRETS. An authority may withhold access to any record or portion of a record containing information qualifying as a trade secret as defined in s. 134.90(1)(c).

s. 134.90(1)(c)
(c) "Trade secret" means information, including a formula, pattern, compilation, program, device, method, technique or process to which all of the following apply:
1. The information derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use.
2. The information is the subject of efforts to maintain its secrecy that are reasonable under the circumstances.

The City cannot ensure that information will not be subject to release if a request is made under applicable public records laws. The City cannot consider the following confidential: a bid in its entirety, price information, or the entire contents of any resulting contract. The City will not provide advance notice to Proposers prior to release of any requested record.

To the extent permitted by such laws, it is the intention of the City to withhold the contents of Proposals from public view—until such times as competitive or bargaining reasons no longer require non-disclosure, in the City's opinion. At that time, all Proposals will be available for review in accordance with such laws.

1.20 Usage Reports

Annually, the successful Proposers shall furnish to City Purchasing usage reports summarizing the ordering history for each department served during the previous contract year. The report, at a minimum, must include each and every item or service ordered during the period, its total quantities and dollars by item/service and in total. The City reserves the right to request usage reports at any time and request additional information, if required, when reviewing contract activity.

1.21 Partial Award

Unless otherwise noted, it will be assumed that Proposers will accept an order for all or part of the items/services priced.

1.22 Tax Exempt

The City of Madison as a municipality is exempt from payment of federal excise taxes (Registration Number 008-1020421147-08) and State of Wisconsin taxes per Wisconsin statute 77.54(9a). Federal Tax ID #39-6005507. A completed Wisconsin Department of Revenue Form S-211 (R.2-00) can be found on the City website. Our tax-exempt number is ES 42916.

1.23 Cooperative Purchasing

Bidders may choose to extend prices offered on bids to other municipalities. Under Wisconsin Statutes, a municipality is defined as a county; city; village; town; school district; board of school directors; sewer district; drainage district; vocational, technical and adult education district; or any other public or quasi-public corporation, officer, board or other body having the authority to award public contracts. This is known as "cooperative" or "piggyback" purchasing, a practice common amongst units of government. The City is not responsible for any contract resulting from a cooperative purchase using this RFB as a basis; they are made solely between the bidders and third party unit of government.

1.24 Proposers Responsibility

Proposers shall examine this RFP and shall exercise their judgment as to the nature and scope of the work required. No plea of ignorance concerning conditions or difficulties that exist or may hereafter arise

in the execution of the work under the resulting contract, as a consequence of failure to make necessary examinations and investigations, shall be accepted as an excuse for any failure or omission on the part of the Proposers to fulfill the requirements of the resulting contract.

2 DESCRIPTION OF SERVICES/COMMODITIES

2.1 Background

The City of Madison has established a long-range plan for the evaluation and repair of their parking structures in an effort to protect, update, and repair the facilities before deterioration becomes severe. This long-range plan estimates the cost for future repairs, studies, and new parking garages and is updated on an annual basis. This information is incorporated into the City's Capital Improvement Program.

The City of Madison takes a proactive approach to maintaining and protecting their parking structures. This approach consists of annual repairs and upgrades, with major work rotated between the structures to avoid excessive parking loss in one area, although some of the older structures will require substantial repairs annually. Condition evaluation studies are completed on each structure the year prior to the restoration in an effort to have the most up-to-date information regarding repair needs when outlining work for the following year.

2.2 Project Description

Based on previous condition evaluations and long-range planning, the City of Madison currently has the following amounts budgeted for the given year as part of this RFP. There is other work in the 10-year budget identified which is not part of this RFP. This other work may be done as additional work on an hourly basis.

2024 - $819,110 budgeted. This budget amount includes restoration (concrete repair, sealant replacement, membrane replacement, traffic coating application, etc.), structural condition evaluations, plumbing upgrades, and Construction Administration. Electrical and window and door replacement design work for Overture Center Garage is also included. Restoration projects slated to be completed for the 2024 repair contract include:

- State Street Capitol Garage - $354,695 repair budget
- Capitol Square North Garage - $331,645 repair budget
- Wilson Street Garage-$92,270 repair budget
- South Livingston Street Garage – $5,500 repair budget
- Overture Center Garage Electrical Design - $25,000 budget
- Overture Center Garage Window and Door Replacement Design - $10,000 budget

Note that plans and specifications for repair work will be provided for 2024.

2025 - $1,834,020 budgeted. This budget amount consists of restoration (concrete repair, sealant replacement, traffic coating application, etc.), structural condition evaluations, A/E Design and Construction Administration and electrical and lighting work.
Restoration projects slated to be completed in 2025 include:

- State Street Capitol Garage - $320,299 repair budget includes stormwater system modifications to address flooding, and office remodel.
- State St. Campus (Frances) Garage - $15,000 repair budget
- Capitol Square North Garage - $211,575 repair budget
- Overture Center Garage - $1,236,905 budget, of this there is $200,000 to replace windows and doors and $1,000,000 to upgrade the electrical system and replace lights throughout with LED.
- Wilson Street Garage - $29,600 repair budget
- South Livingston Street Garage – $20,641 repair budget

2026 – $1,220,354 budgeted. This budget amount consists of restoration (concrete repair, sealant replacement, traffic coating application, etc.), structural condition evaluations A/E Design and Construction Administration.
Restoration projects slated to be completed in **2026** include:

- State Street Capitol Garage - $167,114 repair budget
- State St. Campus (Lake) Mixed Use Garage - $21,120 repair budget
- State Street Campus (Frances) Garage - $420,714 repair budget including upgrading lighting.
- Capitol Square North Garage - $471,254 repair budget including engineering inspection and design to address leaning retaining walls.
- Overture Center Garage - $88,000 repair budget including silane sealer.
- Wilson Street Garage - $30,780 repair budget
- South Livingston Street Garage – $21,373 repair budget

2027 – $841,372 budgeted. This budget amount consists of restoration (concrete repair, sealant replacement, traffic coating application, silane sealer application, etc.), structural condition evaluations A/E Design and Construction Administration. **Note that this Engineering Services Contract will only be responsible for providing plans and specifications for the repair work for this year if the first one-year extension is not exercised.**
Restoration projects slated to be completed in **2027** include:

- State Street Capitol Garage - $174,270 repair budget
- State St. Campus (Lake) Mixed Use Garage - $21,875 repair budget
- State Street Campus (Frances) Garage - $70,500 repair budget
- Capitol Square North Garage - $481,417 repair budget including engineering inspection and design to address leaning retaining walls.
- Overture Center Garage - $39,150 repair budget
- Wilson Street Garage - $32,019 repair budget
- South Livingston Street Garage – $22,141 repair budget

2028 – $802,140 budgeted. This budget amount consists of restoration (concrete repair, sealant replacement, traffic coating application, silane sealer application, etc.), structural condition evaluations, including Mechanical, Electrical and Plumbing primarily at older garages, A/E Design and Construction Administration. **Note that this Engineering Services Contract will only be responsible for providing plans and specifications for the repair work for this year if the second one-year extension is not exercised.**
Restoration projects slated to be completed in **2028** include:

- State Street Capitol Garage - $221,283 repair budget
- State St. Campus (Lake) Mixed Use Garage - $24,169 repair budget
- State Street Campus (Frances) Garage - $109,325 repair budget
- Capitol Square North Garage - $316,538 repair budget
- Overture Center Garage - $71,557 repair budget
- Wilson Street Garage - $34,820 repair budget
- South Livingston Street Garage – $24,448 repair budget

2029 – $1,101,410 budgeted. This budget amount consists of restoration (concrete repair, sealant replacement, traffic coating application, silane sealer application, etc.), structural condition evaluations A/E Design and Construction Administration. **Note that this Engineering Services Contract will only be responsible for providing plans and specifications for the repair work for this year if the second one-year extension is exercised. Inspection, Construction Administration etc. will not be part of this contract.**
Restoration projects slated to be completed in **2029** include:

- State Street Capitol Garage - $192,173 repair budget
- State St. Campus (Lake) Mixed Use Garage - $25,003 repair budget
- State Street Campus (Frances) Garage - $78,689 repair budget
- Capitol Square North Garage - $255,792 repair budget
- Overture Center Garage - $44,125 repair budget
- Wilson Street Garage - $225,076 repair budget including silane sealer.
- South Livingston Street Garage – $280,552 repair budget including silane sealer.

2.3 Term of Contract

The City of Madison will contract with a consulting engineering firm for a 3-year term to develop plans and specifications for the phased restoration projects, conduct condition evaluations at selected parking structures, and provide inspection and administration of repair projects. Two 1-year term extensions may be included assuming both the City of Madison and the consulting engineering firm agree to such extensions.

2.4 Scope of Services

Consultant services shall include the following for construction/restoration projects:

1. Prepare a 10-year Capital Budget Schedule
   This schedule shall be produced on an annual basis for study, repair, and restoration of Parking Division Structures. The 10-year Capital budget schedule shall be updated annually to reflect the most current condition and cost information available. This schedule will be used by the City of Madison Parking Division to determine its budget and facility maintenance priorities.

2. Provide Condition Evaluation Reviews
   This schedule shall include comprehensive Condition Evaluation reviews at City parking structures including review and recommendations of the structural, mechanical, electrical, and plumbing system (SMEP) conditions, estimated costs of maintenance, restoration, and repairs of city parking structures, and estimated costs and schedule for recommended work.

   The Condition Evaluation reviews shall include SMEP condition review that will look at the entire structure and will report on all the mechanical and electrical systems as well as the structural condition. Opinions of probable costs shall be provided for all recommended system repairs or replacements and all structural restorations. Proposed phasing for the recommendations shall also be provided. This may be based on life safety concerns, degree of deterioration or anticipated life of the existing mechanical and electrical systems.

3. Restoration Specifications
   Develop plans and details that reflect the repairs to be completed for the phase of restoration. Provide specifications in CSI format describing the materials and outlining the repairs to be completed. The City of Madison Public Works General Conditions will be included by reference. The outlined repairs shall be completed in an area or on a level(s) of the garage in a phased manner, meeting the established repair budget. A master copy of the plans and specifications, in electronic format, shall be provided to the City for production printing.

4. Develop a drawing(s) for the area reviewed. This may include the entire facility or an area of the garage or a level(s) of the structure for phased restoration review.

5. Provide a list of proposed tests, with their associated costs, deemed necessary to establish and define the existing condition of the parking facility.

6. Provide a written report outlining observed deficiencies, recommendations for repair and opinions of probable cost to implement the recommendations.

7. Meet with City of Madison Parking Division personnel to review the report.

8. The Engineer shall assist the City in reviewing the submitted bids for potential Contractor bidding omissions or unsolicited additions.

9. The Engineer shall provide an average of three (3) site visits to the restoration site weekly to review the quality and quantities of the work completed and conduct bi-weekly progress review meetings at the site. Restoration projects are to be completed during the summer months at a time of reduced parking demand. Those projects with construction budgets below $100,000 are typically completed within a 12-week time frame.

10. The Engineer will review contractor pay applications and verify quantities for unit price pay items. The Engineer shall track the restoration costs of the ongoing work to keep the project within the allotted budget. The Engineer will provide the City the ongoing restoration costs by facility for each pay application.

11. Provide closeout documents including new details, product information sheets and warranties as applicable.

12. Contract Performance Requirements
    - The Engineer shall be available, within 24 hours, to provide an on-site review of unforeseen issues that may develop during construction.
    - Consultant services shall also include other general engineering work as needed by the Parking Division. The consultant shall bill this work on a time and materials basis, and shall be available on- site within 24 hours. This may include unforeseen and emergency situations that require prompt attention such as damaged structures.

2.5 Information Furnished by the City

All documents, reports, drawings, information (written or verbal) and other data (collectively “Proprietary Information”) furnished to the Engineering Consultant by the City of Madison pursuant to this Agreement and the product of the Engineering Consultant’s performance of all services, shall be the sole property of the City of Madison, and shall not be sold, licensed, transferred, disclosed or otherwise made available to any person or firm without the prior written approval of the City. These documents include, without limitation, the original or master and copies of all plans, reports, surveys, survey notes, computations, maps, tracings, material and process specifications, designs unless (a) theretofore known to the Engineering Consultant as evidenced by its written records, or (b) theretofore published and made readily available to the general public otherwise than through violations of this Agreement. The Engineering Consultant will execute any license, certificate or other documents requested by the Authority to confirm the Authority’s exclusive ownership of and right to all proprietary Information.

The Engineering Consultant shall provide the City additional copies of all proprietary information forthwith upon the City’s request in the format requested at a reasonable reproduction fee. The Engineering Consultant shall be entitled to keep copies of any and all documentation.

Any reuse of the product information by the City on extensions of the project not intended or contemplated hereby or on another project without verification or adaptation by the Engineering

Consultant for the specific extension or other project shall be without liability to the Engineering Consultant for reuse on such extension or other projects.

Any adaptation will entitle the Engineering Consultant to further compensation at rates to be agreed upon by the City and the Engineering Consultant. Notwithstanding the foregoing, the Engineering Consultant shall not be relieved from liability for work done hereunder for this project in the event of work by others on an extension of this project.

All drawings and other documents prepared by the Engineering Consultant pursuant to this Agreement shall be the property of the City. Final payment is conditioned upon receipt by the City of such drawings and documents. Except for all uses known or reasonably contemplated by the parties, any unauthorized reuse of the drawings and other documents prepared by the Engineering Consultant by the City shall be without liability to the Engineering Consultant for such unauthorized reuse.

2.6 Project Schedule/Timeline

The deliverables must be completed to coincide with specific City schedules and processes as follows:

1. The 10 Year Capital Budget Planning Schedule must be completed by the end of the second week in May.

2. Condition Evaluations are conducted beginning in October of each year as a tool for developing plans and details for restoration specifications.

3. Restoration Plans and Specifications must be completed by the end of December for the next year’s restoration contract.

4. Additional work not yet determined shall be completed in a time frame agreed upon by the Consultant and the City.

3 REQUIRED INFORMATION AND CONTENT OF PROPOSALS

3.1 General

It is the responsibility of each Contractor, before submitting a Proposal, to (a) examine the RFP thoroughly, (b) if applicable, visit the Department's website, https://www.cityofmadison.com/parking as well as the department's location(s) to become familiar with local conditions that may affect cost, progress, performance or furnishing of the work, (c) consider federal, state and local laws and regulations that may affect cost, progress, performance or furnishing of the work, (d) study and carefully correlate Contractor's observations with the RFP, and (e) notify the Purchasing Office of all conflicts, errors or discrepancies in the RFP. Failure to do so will be at Contractor's own risk. A Contractor shall not be relieved of a requirement of this RFP on the plea of ignorance.

Any Contractor who is seeking clarification about the specifications of this RFP must do so in writing prior to the RFP question due date shown in the RFP Calendar and in accordance with the provisions outlined in this RFP.

3.2 Response Format

1. Proposals must be organized with headings and subheadings in the order provided below. Each heading and subheading should be separated by tabs or otherwise clearly marked. RFP Form B provides a checklist of all required submittals.

2. Technical and Cost proposals must be submitted in separate files.

3. Please include only the required submittals specified below. Do not submit a copy of this RFP with your proposal.

4. Please include a Table of Contents that outlines in sequential order the major sections of your proposal.

3.3 Section 1: Required RFP Forms

Include the following required forms (blank forms are included in the RFP):

Form A: Signature Affidavit

Form B: Receipt of Forms and Submittal Checklist

Form C: Vendor Profile

Form E: References

3.4 Section 2: Executive Summary [8%]

Responses must be in the same sequence and identified with the corresponding question number (Example: Question 1, Question 2, etc.). Please limit responses in this section to not more than three (3) pages. Resumes will not count towards the three (3) page limit. The percentage of the total score that each question is worth is listed as [x] in each question.

1. Briefly describe your business organization, experience and qualifications in relation to providing services required in this RFP. [3]

2. Provide a brief statement of project understanding and the distinguishing characteristics of your proposal. [5]

3.5 Section 3: Qualifications and Experience [40%]

Responses must be in the same sequence and identified with the corresponding question number (Example: Question 1, Question 2, etc.). Please limit responses in this section to not more than thirty (30) pages. Resumes will not count towards the thirty (30) page limit. The percentage of the total score that each question is worth is listed as [x] in each question.

1. Describe briefly your firm's background and history. State organization's size: local, regional, national and international, in relation to providing services requested in this RFP. State the location of the office from which this engagement will be serviced, and the range of activities performed at that office. [2%]

2. Provide a statement of the length of time you have been in business supplying the services referenced herein and experience in serving governmental entities. [2%]

3. Demonstrate your firm's capability and evidence of your experience providing services equal to or greater in scope than those requested in this RFP. [5%]

4. Describe the project team's relevant experience, especially in projects of similar size and scope. [7%]

5. Identify key staff (names and titles) and affiliates who would become directly responsible for the various aspects of the contract, if awarded. Identify who would be contract manager(s) from your company (cannot be from affiliate). [7%]

6. Resumes of all staff proposed to be involved in this project. This should include the proposed role and estimated amount of time to be spent on this project for each person identified. A principal or partner-level individual shall be the contact provided for all service and billing issues. Include a brief statement of the availability of key assigned personnel of the team. [5%]

7. List of affiliates, partners and sub-contractors who would be involved in the execution of the contract, if any. For each subcontractor, include name, address, phone number, contact person and evidence of appropriate registration or licensure. [4%]

8. Describe proposed organizational structure for the team involved in the execution of the contract, their role, reporting responsibilities, team interface with City project management and estimated time commitment (in hours) for each team member. Include a brief statement of the availability of key assigned personnel of the team. [3%]

9. Current and near future workload (ability to perform in a timely fashion). Submit current list of projects and percentage of completion and expected date for completion. [2%]

10. Disclosure of Conflict of Interest. Disclose any potential conflict of interest due to any other clients, contracts, or property interests. Include a notarized statement certifying that no member of your firm's ownership, management, or staff has vested interest in any firm, consultant or subconsultant involved in the project, or any aspect of the project, or with the Department of Planning and Community and Economic Development or the City of Madison. [2%]

11. Disclosure of Contract Failures, Litigations. Disclose any alleged significant prior or ongoing contract failures, contract breaches, any civil or criminal litigation or investigation pending within the last three (3) years which involves your firm and all subcontractors involved in the project. List any contracts in which your firm and any subcontractor have been found guilty or liable, or which may affect the performance of the services to be rendered herein. [1%]

3.6 Section 4: Project Approach [15%]

Responses must be in the same sequence and identified with the corresponding question number (Example: Question 1, Question 2, etc.). Please limit responses in this section to not more than twenty-five (25) pages. Resumes will not count towards the twenty-five (25) page limit. The percentage of the total score that each question is worth is listed as [x] in each question.

The City will evaluate the proposer's understanding of and ability to meet project requirements as defined in, "Scope of Services."

1. Submit a work plan for each of the 3 contract term periods that outlines the proposed steps and project timeline for completing each of the SMEP studies, review, and restoration components of the scope of services. Submit an estimation of total work hours broken down by individual tasks. [5%]

   Use Form F: Project Schedule Proposal to summarize this information. Important: Do not include cost information on Form F.

2. Provide a point by point response to each of the tasks and deliverables as outlined in Section 2, Scope of Work. Describe your understanding of the scope of work and include your proposed technical approach for executing the tasks and deliverables. Describe your strategy used for controlling quality, correcting mistakes, specific deliverables to achieve the project objectives and the scope of services, innovative ideas and any other relevant information concerning your firm's understanding of the project. Describe your cost containment practices for controlling direct and indirect costs and method for adhering to contract schedules. [5%]

3. Identify roadblocks and milestones found in similar programs and your firm's approach to managing them. Summarize the critical success factors and key challenges the City of Madison will face during this project. Recommend a high-level strategy or approach for the City of Madison to follow. [2%]

4. Describe why the firm's selected program approach fits this particular program. [2%]

5. Provide the following information regarding Scheduling, Estimating and Budgeting: [2%]
   - On your last 10 projects, how many were completed on schedule?
   - How many were completed within budget?
   - Describe the firm's ability to provide services as required within required timelines.
   - Address your firm's overall cost containment practices for controlling direct and indirect costs.

6. Indicate any information or data to be used or obtained from the City of Madison. Describe expected use of City resources including assistance from City Staff. [1%]

3.7 Section 5: Cost Proposal – Form D [30%]

Please submit Form D in a separate file than the technical proposal. The sealed dollar proposal must contain all pricing information relative to providing management services described in the RFP. The total all-inclusive maximum price proposed is to contain all direct and indirect costs including all out-of-pocket expenses.

All prices, costs, and conditions outlined in the proposal shall remain fixed and valid for acceptance for a minimum of 120 days starting on the due date for proposals.

Submit fee and reimbursable expense schedules necessary to accomplish the scope of services identified in Section 2. The fee submittal shall address the following items:

1. A not-to-exceed cost to provide Scope of Work for this study.

2. Form D Tab 1 – Cost Schedule:
   - An itemized cost breakdown for each task and deliverable.
   - Direct and indirect costs in itemized detail (include on a separate tabulation sheet)

3. Form D Tab 2 – Billing Rates Prime: Hourly rate schedule by personnel

4. Form D Tab 3 – Billing Rates for Subconsultants: Hourly rate schedule by subconsultant (if applicable). Additional tabs may be added to Form D as necessary to accommodate multiple subconsultants. Each subconsultant must have its own tab.

5. Costs proposed shall be inclusive of all costs related to completing the project, including but not limited to preparation, travel, transportation, communication, reproduction, labor, overhead, profit, etc.

6. The Consultant shall indicate any additional work outside the scope of work identified in this RFP, that it believes is needed and the cost of such work.

7. The City may contract for additional unforeseen work on a time and materials basis at the billing rates proposed herein. The Consultant shall submit a quote, subject to approval by the City.

8. Travel Guidelines. Contractor shall use rates that do not exceed the applicable federal per diem rate, applicable for Madison, WI as shown on the website: http://www.gsa.gov/portal/category/100120, as basis for preparing travel estimates.

3.8 Local Vendor Preference [5%]

Please reference Section 1.14 in this document.

Form A: Signature Affidavit

RFP #: 12026-0-2024-BP Engineering Cosulting for Madison Parking Division Structures

This form must be returned with your response.

In signing Proposals, we certify that we have not, either directly or indirectly, entered into any agreement or participated in any collusion or otherwise take any action in restraint of free competition; that no attempt has been made to induce any other person or firm to submit or not to submit Proposals, that Proposals have been independently arrived at, without collusion with any other Proposers, competitor or potential competitor; that Proposals have not been knowingly disclosed prior to the opening of Proposals to any other Proposers or competitor; that the above statement is accurate under penalty of perjury.

The undersigned, submitting this Proposals, hereby agrees with all the terms, conditions, and specifications required by the City in this Request for Proposals, declares that the attached Proposals and pricing are in conformity therewith, and attests to the truthfulness of all submissions in response to this solicitation.

Proposers shall provide the information requested below. Include the legal name of the Proposers and signature of the person(s) legally authorized to bind the Proposers to a contract.

_____

COMPANY NAME

_____ _____

SIGNATURE DATE

_____

PRINT NAME OF PERSON SIGNING

Form B: Receipt of Forms and Submittal Checklist

RFP #: 12026-0-2024-BP Engineering Cosulting for Madison Parking Division Structures

This form must be returned with your response.

Proposers hereby acknowledge the receipt and/or submittal of the following forms:

Forms	Initial to Acknowledge SUBMITTAL	Initial to Acknowledge RECEIPT
Description of Services/Commodities	N/A	
Form A: Signature Affidavit		
Form B: Receipt of Forms and Submittal Checklist		
Form C: Vendor Profile		
Form D: Cost Proposal		
Form E: References		
Form F: Project Schedule		
Appendix A: Standard Terms & Conditions	N/A	N/A
Appendix B: Contract for Purchase of Services	N/A	N/A
Appendix C: 2023 Condition Assessment Report	N/A	N/A
Addendum #	N/A	N/A
Addendum #	N/A	N/A
Addendum #	N/A	N/A

COMPANY NAME

Form C: Vendor Profile

RFP #: 12026-0-2024-BP Engineering Consulting for Madison Parking Division Structures

This form must be returned with your response.

COMPANY INFORMATION

COMPANY NAME (Make sure to use your complete, legal company name.)			
FEIN	(If FEIN is not applicable, SSN collected upon award)		
CONTACT NAME (Able to answer questions about proposal.)	TITLE		
TELEPHONE NUMBER	EMAIL		
ADDRESS	CITY	STATE	ZIP

AFFIRMATIVE ACTION CONTACT

If the selected contractor employs 15 or more employees and does aggregate annual business with the City of $50,000 or more, the contractor will be required to file an Affirmative Action Plan and comply with the City of Madison Affirmative Action Ordinance, Section 39.02(9)(e), within thirty (30) days contract signature. Vendors who believe they are exempt based on number of employees or annual aggregate business must file a request for exemption. Link to information and applicable forms: https://www.cityofmadison.com/civil-rights/contract-compliance/affirmative-action-plan/vendors-suppliers

CONTACT NAME	TITLE		
TELEPHONE NUMBER	EMAIL		
ADDRESS	CITY	STATE	ZIP

ORDERS/BILLING CONTACT

Address where City purchase orders/contracts are to be mailed and person the department contacts concerning orders and billing.

CONTACT NAME	TITLE		
TELEPHONE NUMBER	EMAIL		
ADDRESS	CITY	STATE	ZIP

LOCAL VENDOR STATUS

The City of Madison has adopted a local preference purchasing policy granting a scoring preference to local suppliers. Only suppliers registered as of the bid's due date will receive preference. Learn more and register at the City of Madison website. https://www.cityofmadison.com/finance/purchasing/local-businesses/register-business/

CHECK ONLY ONE:

☐ **Yes,** we are a local vendor ***and*** have registered on the City of Madison website under the following category:_____

☐ **No,** we are not a local vendor or have not registered.

Form E: References

RFP #: 12026-0-2024-BP Engineering Cosulting for Madison Parking Division Structures

This form must be returned with your response.

Please list three references that are **NOT** from the City of Madison. If you wish to highlight any additional work experience for the City of Madison, please list it on a separate page.

REFERENCE #1 – CLIENT INFORMATION	
ORGANIZATION/COMPANY NAME	PROJECT MANAGER
TELEPHONE NUMBER	EMAIL
PROJECT START DATE	PROJECT END DATE
PROJECT DESCRIPTION	

REFERENCE #2 – CLIENT INFORMATION	
ORGANIZATION/COMPANY NAME	PROJECT MANAGER
TELEPHONE NUMBER	EMAIL
PROJECT START DATE	PROJECT END DATE
PROJECT DESCRIPTION	

REFERENCE #3 – CLIENT INFORMATION	
ORGANIZATION/COMPANY NAME	PROJECT MANAGER
TELEPHONE NUMBER	EMAIL
PROJECT START DATE	PROJECT END DATE
PROJECT DESCRIPTION	

CITY OF MADISON

1. General. Throughout this document, "City of Madison," "City" and "Purchasing" shall be synonymous and mean the City of Madison. The words "bid" and "proposal" are synonymous, as are the words "bidder," "proposer" and "contractor." The phrases "request for proposal," "invitation for bids," "request," "invitation," and "solicitation" shall also be synonymous.
   As applied to the winning or selected bidder, the words "bid," "proposal," and "contract" are synonymous.

2. Entire Agreement, Order of Precedence. These standard terms and conditions shall apply to any Purchase Order issued as a result of this Request for Bid/Proposal, except where expressly stated otherwise in the RFP or in a written instrument covering this purchase signed by an authorized representative of the City and the Contractor, in a form approved by the City Attorney (a "Separate Contract"). If such a separate contract is executed it shall constitute the entire agreement and no other terms and conditions, whether oral or written, shall be effective or binding unless expressly agreed to in writing by the City.
   If a Separate Contract is not executed, these Standard Terms and Conditions, the City's request for proposals, the version of the vendor's bid that was accepted by the City, and the City's Purchase Order (if any) shall constitute a contract and will be the entire agreement.
   Order of Precedence: If there is a conflict between this Section A and any terms in the vendor's accepted bid or proposal, this Section A shall control unless the parties expressly agree to another order of precedence, in writing. If there is a conflict between this Section A and a Separate Contract, the terms and conditions of the Separate Contract shall control.

I. TERMS FOR SUBMISSION OF BIDS: The following section applies to the bid/selection process only.

3. This invitation for bids does not commit the City to award a contract, pay any costs incurred in preparation of bids, or to procure or contract for services or equipment. The City may require the bidder to participate in negotiation and to submit such additional price or technical or other revisions to his or her bids as may result from negotiation. The bidder shall be responsible for all costs incurred as part of his or her participation in the pre-award process.
   The City reserves the right to accept or reject any or all bids submitted, in whole or in part, and to waive any informalities or technicalities which at the City's discretion are determined to be in the best interests of the City. Further, the City makes no representations that a contract will be awarded to any offeror responding to this request. The City expressly reserves the right to reject any and all bids responding to this invitation without indicating any reasons for such rejections(s).
   The City reserves the right to postpone due dates and openings for its own convenience and to withdraw this solicitation at any time without prior notice.

4. Addenda. Changes affecting the specifications will be made by addenda. Changes may include, or result in, a postponement in the bid due date. Bidders are required to complete the Bidder Response Sheet, acknowledging receipt of all parts of the bid, including all addenda.

5. Price Proposal. All bidders are required to identify the proposed manufacturer and model, and to indicate the proposed delivery time on the attached Proposal Form. Failure to do so may cause the bid to be considered not responsive. If desired, the bidder may include product literature and specifications. The price quoted will remain firm throughout each contract period. Any price increase proposed shall be submitted sixty (60) calendar days prior to subsequent contract periods and shall be limited to fully documented cost increases to the bidder which are demonstrated to be industry-wide.

6. Price Inclusion. The price quoted in any bid shall include all items of labor, materials, tools, equipment, and other costs necessary to fully complete the furnishing and delivery of equipment or services pursuant to the specifications attached thereof. Any items omitted from the specifications which are clearly necessary for the completion of the project shall be considered a portion of the specifications although not directly specified or called for in these specifications.

7. Pricing and Discount.
   a. Unit prices shown on the bid/proposal or contract shall be the price per unit of sale (e.g., gal., cs., doz., ea., etc.) as stated on the bid/proposal or contract. For any given item, the quantity multiplied by the unit price shall establish the extended price. If an apparent mistake exists in the extended price, the unit price shall govern in the bid/proposal evaluation and contract administration.
   b. In determination of award, discounts for early payment will only be considered when all other conditions are equal. Early payment is defined as payment within fifteen (15) days providing the discount terms are deemed favorable. All payment terms must allow the option of Net 30.

8. F.O.B. Destination Freight Prepaid. Bid prices must include all handling, transportation and insurance charges. Failure to bid FOB Destination Freight Prepaid may disqualify your bid.

9. Award.
   a. The City will have sole discretion as to the methodology used in making the award. Where none is specified, the award will be made to the lowest responsible bidder in compliance with the specifications and requirements of this solicitation.
   b. The right is reserved to make a separate award of each item, group of items or all items, and to make an award in whole or in part, whichever is deemed in the best interest of the City.

10. Responsiveness and Responsibility. Award will be made to the responsible and responsive bidder whose bid is most advantageous to the City with price and other factors considered. For the purposes of this project, responsiveness is defined as the bidder's conformance to the requirements of the solicitation. Being not responsive includes the failure to furnish information requested.
    Responsibility is defined as the bidder's potential ability to perform successfully under the terms of the proposed contract. Briefly, a responsible bidder has adequate financial resources or the ability to obtain said resources; can comply with required delivery taking into

account other business commitments; has a satisfactory performance record; has a satisfactory record of integrity and business ethics; and has the necessary organization, experience and technical skills.

The City reserves the right to refuse to accept any bid from any person, firm or corporation that is in arrears or is in default to the City, or has failed to perform faithfully any previous contract with the City. If requested, the bidder must present within five (5) working days evidence satisfactory to the City of performance ability and possession of necessary facilities, financial resources, adequate insurance, and any other resources required to determine the bidder's ability to comply with the terms of this solicitation document.

11. Cancellation.
    a. The City reserves the right to cancel this bid, in whole or in part, at any time for any reason. The City may, in its sole discretion and without any reason, cancel or terminate any contract or purchase order awarded as a result of this bid, in whole or in part, without penalty, by providing ten (10) days written notice thereof to the contractor.
    a. In the event the Bidder shall default in any of the covenants, agreements, commitments, or conditions and any such default shall continue unremedied for a period of ten (10) days after written notice to the Bidder, the City may, at its option and in addition to all other rights and remedies which it may have, terminate the Agreement and all rights of the Bidder under the Agreement.
    b. Failure to maintain the required certificates of insurance, permits, licenses and bonds will be cause for contract termination. If the Bidder fails to maintain and keep in force the insurance, if required, the City shall have the right to cancel and terminate the contract without notice.

II. CONDITIONS OF PURCHASE: The following section applies to purchases/contracts after the award. See Paragraphs 1 & 2 for applicability and order of precedence.

12. Specifications.
    a. All bidders must be in compliance with all specifications and any drawings provided with this solicitation. Exceptions taken to these specifications must be noted on your bid.
    b. When specific manufacturer and model numbers are used, they are to establish a design, type, construction, quality, functional capability and/or performance level desired. When alternates are bid/proposed, they must be identified by manufacturer, stock number, and the bidder/proposer is responsible for providing sufficient information to establish equivalency. The City shall be the sole judge of equivalency. Bidders are cautioned to avoid bidding alternates which do not meet specifications, which may result in rejection of their bid/proposal.

13. Regulatory Compliance.
    a. Seller represents and warrants that the goods or services furnished hereunder, including all labels, packages, and container for said goods, comply with all applicable standards, rules and regulations in effect under the requirements of all Federal, State and local laws, rules and regulations as applicable, including the Occupational Safety and Health Act (OSHA), as amended, with respect to design, manufacture or use for their intended purpose of said goods or services. Seller shall furnish Material Safety Data Sheets (MSDS) whenever applicable.
    b. If it is determined by the City that such standards are not met, the seller agrees to bear all costs required to meet the minimum standards as stated above for the equipment/products furnished under this contract.

14. Warranty. Unless otherwise specifically stated by the bidder, products shall be warranted against defects by the bidder for ninety (90) days from the date of receipt. If bidder or manufacturer offers warranty that exceeds 90 days, such warranty shall prevail.

15. Ownership of Printing Materials. All artwork, camera-ready copy, negative, dies, photos and similar materials used to produce a printing job shall become the property of the City. Any furnished materials shall remain the property of the City. Failure to meet this requirement will disqualify your bid.

16. Item Return Policy. Bidder will be required to accept return of products ordered in error for up to twenty-one (21) calendar days from date of receipt, with the City paying only the return shipping costs. Indicate in detail on the Bidder Response Sheet, your return policy.

17. Payment Terms and Invoicing. The City will pay properly submitted vendor invoices within thirty (30) days of receipt, providing good and/or services have been delivered, installed (if required), and accepted as specified.
    a. Payment shall be considered timely if the payment is mailed, delivered, or transferred within thirty (30) days after receipt of a properly completed invoice, unless the vendor is notified in writing by the agency of a dispute before payment is due.
    b. Invoices presented for payment must be submitted in accordance with instructions contained on the purchase order, including reference to purchase order and submittal to the correct address for processing. Invoice payment processing address is shown on the upper middle section of the purchase order. Send invoices to Accounts Payable address on the purchase order. Do not send invoices to Purchasing or ship to address.
    c. Bidders, proposers shall include discounts for early payment as a percent reduction of invoice. Invoice discounts shall be determined where applicable, from the date of acceptance of goods and/or the receipt of invoice, whichever is later. Discounts for early payment terms stated on the bid/proposal must be shown plainly on the invoice; discounts for early payment not shown on the invoice will be taken.
    d. Invoices submitted not in accordance with these instructions will be removed from the payment process and returned within ten (10) days.

18. F.O.B. Destination Freight Prepaid. Unless otherwise agreed in writing, the vendor shall bear all handling, transportation and insurance charges. Title of goods shall pass upon acceptance of goods at the City's dock.

19. Tax Exemption. The City of Madison is exempt from the payment of Federal Excise Tax and State Sales Tax. **The City Tax Exempt number is ES 42916.** Any other sales tax, use tax, imposts, revenues, excise, or other taxes which are now, or which may hereafter be imposed by Congress, the State of Wisconsin, or any other political subdivision thereof and applicable to the sale of material delivered as a result of the bidder's bid and which, by terms of the tax law, may be passed directly to the City, will be paid by the City.

20. Affirmative Action.

A. The following language applies to all successful bidders employing fifteen (15) or more employees (MGO 39.02(9)(c):

The Contractor agrees that, within thirty (30) days after the effective date of this Contract, Contractor will provide to the City of Madison Department of Civil Rights (the "Department"), certain workforce utilization statistics, using a form provided by the City.

If the Contract is still in effect, or if the City enters into a new Agreement with the Contractor, within one year after the date on which the form was required to be provided, the Contractor will provide updated workforce information using a second form, also to be furnished by the City. The second form will be submitted to the Department no later than one year after the date on which the first form was required to be provided.

The Contractor further agrees that, for at least twelve (12) months after the effective date of this Contract, it will notify the Department of each of its job openings at facilities in Dane County for which applicants not already employees of the Contractor are to be considered. The notice will include a job description, classification, qualifications, and application procedures and deadlines, shall be provided to the City by the opening date of advertisement and with sufficient time for the City to notify candidates and make a timely referral. The Contractor agrees to interview and consider candidates referred by the Department, or an organization designated by the Department, if the candidate meets the minimum qualification standards established by the Contractor, and if the referral is timely. A referral is timely if it is received by the Contractor on or before the date stated in the notice.

The Department will determine if a contractor is exempt from the above requirements (Sec. 20.A.) at the time the Request for Exemption in 20.B.(2) is made.

B. Articles of Agreement, Request for Exemption, and Release of Payment:

The "ARTICLES OF AGREEMENT" beginning on the following page, apply to all contractors, unless determined to be exempt under the following table and procedures:

NUMBER OF EMPLOYEES	LESS THAN $50,000 Aggregate Annual Business with the City*	$50,000 OR MORE Aggregate Annual Business with the City*
14 or less	Exempt**	Exempt**
15 or more	Exempt**	Not Exempt

*As determined by the Finance Director **As determined by the Department of Civil Rights

(1) Exempt Status: In this section, "Exempt" means the Contractor is exempt from the Articles of Agreement in section 20.B.(5) of this Contract and from filing an Affirmative Action plan as required by Section IV of the Articles of Agreement. The Department of Civil Rights ("Department") makes the final determination as to whether a contractor is exempt. If the Contractor is not exempt, sec. 20.B.(5) shall apply and Contractor shall select option A. or B. under Article IV therein and file an Affirmative Action Plan.

(2) Request for Exemption – Fewer Than 15 Employees: (MGO 39.02(9)(a)2.) Contractors who believe they are exempt based on number of employees shall submit a Request for Exemption on a form provided by the Department within thirty (30) days of the effective date of this Contract.

(3) Exemption – Annual Aggregate Business: (MGO 39.02(9)(a)c.): The Department will determine, at the time this Contract is presented for signature, if the Contractor is exempt because it will have less than $50,000 in annual aggregate business with the City for the calendar year in which the contract is in effect. CONTRACTORS WITH 15 OR MORE EMPLOYEES WILL LOSE THIS EXEMPTION AND BECOME SUBJECT TO SEC. 20.B.(5) UPON REACHING $50,000 OR MORE ANNUAL AGGREGATE BUSINESS WITH THE CITY WITHIN THE CALENDAR YEAR, BEGINNING IN 2019.

(4) Release of Payment: (MGO 39.02(9)(e)1.b.) All non-exempt contractors must have an approved Affirmative Action plan meeting the requirements of Article IV below on file with the Department within thirty (30) days of the effective date of this Contract and prior to release of payment by the City. Contractors that are exempt based on number of employees agree to file a Request for Exemption with the Department within thirty (30) days of the effective date and prior to release of payment by the City.

(5) Articles of Agreement:

ARTICLE I

The Contractor shall take affirmative action in accordance with the provisions of this Contract to ensure that applicants are employed, and that employees are treated during employment without regard to race, religion, color, age, marital status, disability, sex, sexual orientation, gender identity or national origin and that the employer shall provide harassment-free work environment for the realization of the potential of each employee. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation and selection for training including apprenticeship insofar as it is within the control of the Contractor. The Contractor agrees to post in conspicuous places available to employees and applicants notices to be provided by the City setting out the provisions of the nondiscrimination clauses in this Contract.

ARTICLE II

The Contractor shall in all solicitations or advertisements for employees placed by or on behalf of the Contractors state that all qualified or qualifiable applicants will be employed without regard to race, religion, color, age, marital status, disability, sex, sexual orientation, gender identity or national origin.

ARTICLE III

The Contractor shall send to each labor union or representative of workers with which it has a collective bargaining Agreement or other Contract or understanding a notice to be provided by the City advising the labor union or workers representative of the Contractor's equal employment opportunity and affirmative action commitments. Such notices shall be posted in conspicuous places available to employees and applicants for employment.

ARTICLE IV

(This Article applies to non-public works contracts.)

The Contractor agrees that it will comply with all provisions of the Affirmative Action Ordinance of the City of Madison (MGO 39.02) including the Contract compliance requirements. The Contractor warrants and certifies that one of the following paragraphs is true (check one):

- ☐ A. Contractor has prepared and has on file an affirmative action plan that meets the format requirements of Federal Revised Order No, 4, 41 CFR part 60-2, as established by 43 FR 51400 November 3, 1978, including appendices required by City of Madison ordinances or it has prepared and has on file a model affirmative action plan approved by the Madison Common Council.
- ☐ B. Within thirty (30) days after the effective date of this Contract, Contractor will complete an affirmative action plan that meets the format requirements of Federal Revised Order No. 4, 41 CFR Part 60-2, as established by 43 FR 51400, November 3, 1978, including appendices required by City of Madison ordinance or within thirty (30) days after the effective date of this Contract, it will complete a model affirmative action plan approved by the Madison Common Council.
- ☐ C. Contractor believes it is exempt from filing an affirmative action plan because it has fewer than fifteen (15) employees and has filed, or will file within thirty (30) days after the effective date of this Contract, a form required by the City to confirm exempt status based on number of employees. If the City determines that Contractor is not exempt, the Articles of Agreement will apply.
- ☐ D. Contractor believes it is exempt from filing an affirmative action plan because its annual aggregate business with the City for the calendar year in which the contract is in effect is less than fifty thousand dollars ($50,000), or for another reason listed in MGO 39.02(9)(a)2. If the City determines that Contractor is not exempt, the Articles of Agreement will apply.

ARTICLE V
(This Article applies only to public works contracts.)

The Contractor agrees that it will comply with all provisions of the Affirmative Action Ordinance of the City of Madison, including the Contract compliance requirements. The Contractor agrees to submit the model affirmative action plan for public works Contractors in a form approved by the Director of Affirmative Action.

ARTICLE VI

The Contractor will maintain records as required by Section 39.02(9)(f) of the Madison General Ordinances and will provide the City's Department of Affirmative Action with access to such records and to persons who have relevant and necessary information, as provided in Section 39.02(9)(f). The City agrees to keep all such records confidential, except to the extent that public inspection is required by law.

ARTICLE VII

In the event of the Contractor's or subcontractor's failure to comply with the Equal Employment Opportunity and Affirmative Action provisions of this Contract or Sections 39.03 and 39.02 of the Madison General Ordinances, it is agreed that the City at its option may do any or all of the following:

A. Cancel, terminate or suspend this Contract in whole or in part.
B. Declare the Contractor ineligible for further City contracts until the Affirmative Action requirements are met.
C. Recover on behalf of the City from the prime Contractor 0.5 percent of the Contract award price for each week that such party fails or refuses to comply, in the nature of liquidated damages, but not to exceed a total of five percent (5%) of the Contract price, or ten thousand dollars ($10,000), whichever is less. Under public works contracts, if a subcontractor is in noncompliance, the City may recover liquidated damages from the prime Contractor in the manner described above. The preceding sentence shall not be construed to prohibit a prime Contractor from recovering the amount of such damage from the noncomplying subcontractor.

ARTICLE VIII
(This Article applies to public works contracts only.)

The Contractor shall include the above provisions of this Contract in every subcontract so that such provisions will be binding upon each subcontractor. The Contractor shall take such action with respect to any subcontractor as necessary to enforce such provisions, including sanctions provided for noncompliance.

ARTICLE IX

The Contractor shall allow the maximum feasible opportunity to small business enterprises to compete for any subcontracts entered into pursuant to this Contract. (In federally funded contracts the terms "DBE, MBE, and WBE" shall be substituted for the term "small business" in this Article.)

21. Nondiscrimination. During the term of this Contract, the Contractor agrees not to discriminate against any employee or applicant for employment because of race, religion, marital status, age, color, sex, handicap, national origin or ancestry, income level or source of income, arrest record or conviction record, less than honorable discharge, physical appearance, sexual orientation, gender identity, political beliefs

or student status. Contractor further agrees not to discriminate against any subcontractor or person who offers to subcontract on this Contract because of race, religion, color, age, disability, sex, sexual orientation, gender identity or national origin.

22. Prevailing Wage. Where applicable under federal law, the Contractor warrants that prevailing wages will be paid to all trades and occupations.

23. **Indemnification. The Contractor shall be liable to and hereby agrees to indemnify, defend and hold harmless the City of Madison, and its officers, officials, agents, and employees against all loss or expense (including liability costs and attorney's fees) by reason of any claim or suit, or of liability imposed by law upon the City or its officers, officials, agents or employees for damages because of bodily injury, including death at any time resulting therefrom, sustained by any person or persons or on account of damages to property, including loss of use thereof, arising from, in connection with, caused by or resulting from the acts or omissions of Contractor and any of Contractor's subcontractors in the performance of this agreement, whether caused by or contributed to by the negligence of the City or its officers, officials, agents or employees.**

24. Insurance.
The Contractor will insure, and will require each subcontractor to insure, as indicated, against the following risks to the extent stated below. The Contractor shall not commence work under this Contract, nor shall the Contractor allow any Subcontractor to commence work on its Subcontract, until the insurance required below has been obtained and corresponding certificate(s) of insurance have been approved by the City Risk Manager.
    a. Commercial General Liability - The Contractor shall procure and maintain during the life of this contract, Commercial General Liability insurance including, but not limited to, products and completed operations, bodily injury, property damage, personal injury, and products and completed operations (unless determined to be inapplicable by the Risk Manager) in an amount not less than $1,000,000 per occurrence. This policy shall also provide contractual liability in the same amount. Contractor's coverage shall be primary and list the City of Madison, its officers, officials, agents and employees as additional insureds. Contractor shall require all subcontractors under this Contract (if any) to procure and maintain insurance meeting the above criteria, applying on a primary basis and listing the City of Madison, its officers, officials, agents and employees as additional insureds.
    b. Automobile Liability - The Contractor shall procure and maintain during the life of this contract Business Automobile Liability insurance covering owned, non-owned and hired automobiles with limits of not less than $1,000,000 combined single limit per accident. Contractor shall require all subcontractors under this Contract (if any) to procure and maintain insurance covering each subcontractor and meeting the above criteria.
    c. Worker's Compensation - The Contractor shall procure and maintain during the life of this contract statutory Workers' Compensation insurance as required by the State of Wisconsin. The Contractor shall also carry Employers Liability limits of at least $100,000 Each Accident, $100,000 Disease – Each Employee, and $500,000 Disease – Policy Limit. Contractor shall require all subcontractors under this Contract (if any) to procure and maintain such insurance, covering each subcontractor.
    d. Professional Liability - The Contractor shall procure and maintain professional liability insurance with coverage of not less than $1,000,000. If such policy is a "claims made" policy, all renewals thereof during the life of the contract shall include "prior acts coverage" covering at all times all claims made with respect to Contractor's work performed under the contract. This Professional Liability coverage must be kept in force for a period of six (6) years after the services have been accepted by the City.
    e. Acceptability of Insurers - The above-required insurance is to be placed with insurers who have an A.M. Best rating of no less than A- (A minus) and a Financial Category rating of no less than VII.
    f. Proof of Insurance, Approval**.** The Contractor shall provide the City with certificate(s) of insurance showing the type, amount, effective dates, and expiration dates of required policies prior to commencing work under this Contract. Contractor shall provide the certificate(s) to the City's representative upon execution of the Contract, or sooner, for approval by the City Risk Manager. If any of the policies required above expire while this Contract is in effect, Contractor shall provide renewal certificate(s) to the City for approval. Certificate Holder language should be listed as follows:

        City of Madison
        ATTN: Risk Management, Room 406
        210 Martin Luther King, Jr. Blvd.
        Madison, WI 53703

    The Contractor shall provide copies of additional insured endorsements or insurance policies, if requested by the City Risk Manager. The Contractor and/or Insurer shall give the City thirty (30) days advance written notice of cancellation, non-renewal or material changes to any of the above-required policies during the term of this Contract.

25. Work Site Damages. Any damage, including damage to finished surfaces, resulting from the performance of this contract shall be repaired to the Owner's satisfaction at the Contractor's expense.

26. Compliance.
    a. Regulations. The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the performance of the work.
    b. Licensing and Permits. The Contractor selected under this bid shall be required to demonstrate valid **possession of appropriate required licenses and will** keep them in effect for the term of this contract. The Contractor shall also be required, when appropriate, to obtain the necessary building permits prior to performing work on City facilities.

27. Warranty of Materials and Workmanship.
    a. The Contractor warrants that, unless otherwise specified, all materials and equipment incorporated in the work under the Contract shall be new, first class, and in accordance with the Contract Documents. The Contractor further warrants that all workmanship shall be first class and in accordance with the Contract Documents and shall be performed by persons qualified in their respective trades.
    b. Work not conforming to these warranties shall be considered defective.

c. This warranty of materials and workmanship is separate and independent from and in addition to any other guarantees in this Contract.

28. Replacement of Defective Work or Materials. Any work or material found to be in any way defective or unsatisfactory shall be corrected or replaced by the Contractor at its own expense at the order of the City notwithstanding that it may have been previously overlooked or passed by an inspector. Inspection shall not relieve the Contractor of its obligations to furnish materials and workmanship in accordance with this contract and its specifications.

29. Reservation of the Right to Inspect Work. At any time during normal business hours and as often as the City may deem necessary, the Contractor shall permit the authorized representatives of the City to review and inspect all materials and workmanship at any time during the duration of this contract, provided, however, the City is under no duty to make such inspections, and any inspection so made shall not relieve the Contractor from any obligation to furnish materials and workmanship strictly in accordance with the instructions, contract requirements and specifications.

30. Sweatfree Procurement of Items of Apparel. If this bid results in the procurement of $15,000 or more in garments or items of clothing, any part of which is a textile, or any shoes/ footwear, then Sec. 4.25 of the Madison General Ordinances, "Procurement of Items of Apparel", is hereby incorporated by reference and made part of this contract. See Section 4.25(2) at www.municode.com for applicability specifics. The contractor shall follow labor practices consistent with international standards of human rights, meaning that, at a minimum, contractor shall adhere to the minimum employment standards found in Section 4.25 and shall require all subcontractors and third-party suppliers to do the same. For purposes of sec. 4.25, "Subcontractor" means a person, partnership, corporation or other entity that enters into a contract with the contractor for performance of some or all of the City-contracted work and includes all third-party suppliers or producers from whom the contractor or its contractors obtains or sources goods, parts or supplies for use on the city contract and is intended to include suppliers at all level of the supply chain. The standards in Sec. 4.25 shall apply in all aspects of the contractor's and subcontractor's operations, including but not limited to, manufacture, assembly, finishing, laundering or dry cleaning, (where applicable), warehouse distribution, and delivery. Contractor acknowledges that by entering into this contract, Contractor shall be subject to all of the requirements and sanctions of sec. 4.25 of the Madison General Ordinances.

    The sanctions for violating Sec. 4.25 under an existing contract are as follows:

    a. Withholding of payments under an existing contract.
    b. Liquidated damages. The contractor may be charged liquidated damages on an existing contract of two thousand dollars ($2,000) per violation, or an amount equaling twenty percent (20%) of the value of the apparel, garments or corresponding accessories, equipment, materials, or supplies that the City demonstrates were produced in violation of the contract and/or this ordinance per violation; whichever is greater.
    c. Termination, suspension or cancellation of a contract in whole or in part.
    d. Nonrenewal when a contract calls for optional renewals.
    e. Nonrenewal for lack of progress or impossible compliance. The City reserves the right to refuse to renew the contract that calls for optional renewals, when the contractor cannot comply with the minimum standard under (4)(b) and the noncompliance is taking place in a country where:
        (1) Progress toward implementation of the standards in this Ordinance is no longer being made; and
        (2) Compliance with the employment standards in the Ordinance is deemed impossible by the City and/or any independent monitoring agency acting on behalf of the City. Such determination shall be made in the sole opinion of the City and may be based upon examination of reports from governmental, human rights, labor and business organizations and after consultation with the relevant contractors and sub-contractors and any other evidence the City deems reliable.
    f. Disqualification of the contractor from bidding or submitting proposals on future City contracts, or from eligibility for future city procurements as defined in sub. (2), whether or not formal bidding or requests for proposals are used, for a period of one (1) year after the first violation is found and for a period of three (3) years after a second or subsequent violation is found. The disqualification shall apply to the contractor who committed the violation(s) whether that be under the same corporate name, or as an individual, or under the name of another corporation or business entity of which he or she is a member, partner, officer, or agent.

    The exercise by the City of any or all of the above remedies, or failure to so exercise, shall not be construed to limit other remedies available to the City under this Contract nor to any other remedies available at equity or at law.

31. Local Purchasing. The City of Madison has adopted a local preference purchasing policy granting a 5 percent request for proposal and 1 percent request for bid scoring preference to local vendors.

    To facilitate the identification of local suppliers, the City has provided an on-line website as an opportunity for suppliers to voluntarily identify themselves as local, and to assist City staff with their buying decisions. Proposers seeking to obtain local preference are required to register on the City of Madison online registration website. Only vendors registered as of the bid due date will receive preference. Additional information is available at: https://www.cityofmadison.com/finance/purchasing/local-businesses/register-business/.

32. Weapons Prohibition. Contractor shall prohibit, and shall require its subcontractors to prohibit, its employees from carrying weapons, including concealed weapons, in the course of performance of work under this Contract, other than while at the Contractor's or subcontractor's own business premises. This requirement shall apply to vehicles used at any City work site and vehicles used to perform any work under this Contract, except vehicles that are an employee's "own motor vehicle" pursuant to Wis. Stat. sec. 175.60(15m). This section does not apply to employees who are required to carry a weapon under the express terms of the Contract (such as armed security guard services, etc.).

33. Software & Technology Purchases.
    a. Software Licenses. All software license agreements shall include the City's mandatory legal terms and conditions as determined by the City Attorney. Please be advised that no City employee has the authority to bind the City by clicking on an End User License Agreement (EULA) or any other click-through terms and conditions without being specifically authorized by the City's Chief Information Officer through procedures approved by the City Attorney and Risk Manager. All legal documents associated with the purchase or download of software must be reviewed by the City Attorney and may only be signed by an individual authorized to do so.

b. Network Connection Policy. If this purchase includes software support, software maintenance, network services, and/or system development services and will require a Network Connection the City Network (as defined in the following link), the City's Network Connection Policy found at this link: www.cityofmadison.com/attorney/documents/posNetworkConnection.doc is hereby incorporated and made a part of the Contract and Contractor agrees to comply with all of its requirements.

34. Ban the Box - Arrest and Criminal Background Checks.

This provision applies to service contracts of more than $25,000 executed by the City on January 1, 2016 or later, unless exempt by Sec. 39.08 of the Madison General Ordinances (MGO).

a. Definitions. For purposes of this requirement, "Arrest and Conviction Record" includes, but is not limited to, information indicating that a person has been questioned, apprehended, taken into custody or detention, held for investigation, arrested, charged with, indicted or tried for any felony, misdemeanor or other offense pursuant to any law enforcement or military authority.

"Conviction record" includes, but is not limited to, information indicating that a person has been convicted of a felony, misdemeanor or other offense, placed on probation, fined, imprisoned or paroled pursuant to any law enforcement or military authority.

"Background Check" means the process of checking an applicant's arrest and conviction record, through any means.

b. Requirements. For the duration of any contract awarded under this RFP, the successful contractor shall:
   (1) Remove from all job application forms any questions, check boxes, or other inquiries regarding an applicant's arrest and conviction record, as defined herein.
   (2) Refrain from asking an applicant in any manner about their arrest or conviction record until after a conditional offer of employment is made to the applicant in question.
   (3) Refrain from conducting a formal or informal background check or making any other inquiry using any privately or publicly available means of obtaining the arrest or conviction record of an applicant until after a conditional offer of employment is made to the applicant in question.
   (4) Make information about this ordinance available to applicants and existing employees, and post notices in prominent locations at the workplace with information about the ordinance and complaint procedure, using language provided by the City.
   (5) Comply with all other provisions of Sec. 39.08, MGO.

c. Exemptions: This section does not apply when:
   (1) Hiring for a position where certain convictions or violations are a bar to employment in that position under applicable law, or
   (2) Hiring a position for which information about criminal or arrest record, or a background check is required by law to be performed at a time or in a manner that would otherwise be prohibited by this ordinance, including a licensed trade or profession where the licensing authority explicitly authorizes or requires the inquiry in question.

To be exempt under sec. C.1. or 2. above, contractor must demonstrate to the City that there is a law or regulation that requires the background check in question. If so, the contractor is exempt from this section for the position(s) in question.

City of Madison
CONTRACT FOR PURCHASE OF SERVICES
(Design Professionals)

1. **PARTIES.**
This is a Contract between the City of Madison, Wisconsin, hereafter referred to as the "City" and _____ hereafter referred to as "Contractor".

The Contractor is a: ☐ Corporation ☐ Limited Liability Company ☐ General Partnership ☐ LLP
(to be completed by contractor) ☐ Sole Proprietor ☐ Unincorporated Association ☐ Other:_____.

2. **PURPOSE.**
The purpose of this Contract is as set forth in Section 3.

3. **SCOPE OF SERVICES AND SCHEDULE OF PAYMENTS.**
Contractor will perform the following services and be paid according to the following schedule(s) or attachment(s):

Order of Precedence: In the event of a conflict between the terms of this Contract for Purchase of Services and the terms of any document attached or incorporated herein, the terms of this Contract for Purchase of Services shall control and supersede any such conflicting term.

4. **TERM AND EFFECTIVE DATE.**
This Contract shall become effective upon execution by the Mayor, (or the Purchasing Agent, if authorized) on behalf of the City of Madison, unless another effective date is specified in the Attachment(s) incorporated in Section 3, however in no case shall work commence before execution by the City of Madison. The term of this Contract shall be

5. **ENTIRE AGREEMENT.**
This Contract for Purchase of Services, including any and all attachments, exhibits and other documents referenced in Section 3 (hereafter, “Agreement” or “Contract”) is the entire Agreement of the parties and supersedes any and all oral contracts and negotiations between the parties. If any document referenced in Section 3 includes a statement that expressly or implicitly disclaims the applicability of this Contract for Purchase of Services, or a statement that such other document is the “entire agreement,” such statement shall be deemed rejected and shall not apply to this Contract.

6. **ASSIGNABILITY/SUBCONTRACTING.**
Contractor shall not assign or subcontract any interest or obligation under this Contract without the City's prior written approval. All of the services required hereunder will be performed by Contractor and employees of Contractor.

7. **DESIGNATED REPRESENTATIVE.**
Contractor designates _____ as Contract Agent with primary responsibility for the performance of this Contract. If the Contract Agent resigns, is replaced, or is no longer acting as Contract Agent for any reason, Contractor will notify the City in writing of the change, and propose a replacement Contract Agent within seven (7) calendar days. The City may accept another person as the Contract Agent or may terminate this Contract under Section 25, at its option.

8. **PROSECUTION AND PROGRESS.**
A. Services under this Agreement shall commence upon written order from the City to the Contractor. This order will constitute authorization to proceed.
B. The Contractor shall complete the services under this Agreement within the time for completion specified in the Scope of Services, including any amendments. The Contractor's services are completed when the City notifies the Contractor in writing that the services are complete and are acceptable. The time for completion shall not be extended because of any delay attributable to the Contractor, but it may be extended by the City in the event of a delay attributable to the City, or in the event of unavoidable delay caused by war, insurrection, natural disaster, or other unexpected event beyond the control of the Contractor. If at any time the Contractor believes that the time for completion of the work should be extended because of unavoidable delay caused by an unexpected event, or because of a delay attributable to the City, the Contractor shall notify the City as soon as possible, but not later than seven (7) calendar days after such an event. Such notice shall include any justification for an extension of time and shall identify the amount of time claimed to be necessary to complete the work.
C. Services by the Contractor shall proceed continuously and expeditiously through completion of each phase of the work.
D. Progress reports documenting the extent of completed services shall be prepared by the Contractor and submitted to the City with each invoice under Section 24 of this Agreement, and at such other times as the City may specify.
E. The Contractor shall notify the City in writing when the Contractor has determined that the services under this Agreement have been completed. When the City determines that the services are complete and are acceptable, the City will provide written notification to the Contractor, acknowledging formal acceptance of the completed services.

9. **AMENDMENT.**
This Contract shall be binding on the parties hereto, their respective heirs, devisees, and successors, and cannot be varied or waived by any oral representations or promise of any agent or other person of the parties hereto. Any other change in any provision of this Contract may only be made by a written amendment, signed by the duly authorized agent or agents who executed this Contract.

10. **EXTRA SERVICES.**
The City may require the Contractor to perform extra services or decreased services, according to the procedure set forth in Section 24. Extra services or decreased services means services which are not different in kind or nature from the services called for in the Scope of Services, Section 3, but which may increase or decrease the quantity and kind of labor or materials or expense of performing the services. Extra services may not increase the total Contract price, as set forth in Section 23, unless the Contract is amended as provided in Section 9 above.

11. **NO WAIVER.**
No failure to exercise, and no delay in exercising, any right, power or remedy hereunder on the part of the City or Contractor shall operate as a waiver thereof, nor shall any single or partial exercise of any right, power or remedy preclude any other or further exercise thereof or the exercise of any other right, power or remedy. No express waiver shall affect any event or default other than the event or default specified in such waiver, and any such waiver, to be effective, must be in writing and shall be operative only for the time and to the extent expressly provided by the City or Contractor therein. A waiver of any covenant, term or condition contained herein shall not be construed as a waiver of any subsequent breach of the same covenant, term or condition.

12. **NONDISCRIMINATION.**
During the term of this Contract, the Contractor agrees not to discriminate against any employee or applicant for employment because of race, religion, marital status, age, color, sex, handicap, national origin or ancestry, income level or source of income, arrest record or conviction record, less than honorable discharge, physical appearance, sexual orientation, gender identity, political beliefs or student status. Contractor further agrees not to discriminate against any subcontractor or person who offers to subcontract on this Contract because of race, religion, color, age, disability, sex, sexual orientation, gender identity or national origin.

13. **AFFIRMATIVE ACTION.**

A. The following language applies to all contractors employing fifteen (15) or more employees (MGO 39.02(9)(c):

The Contractor agrees that, within thirty (30) days after the effective date of this Contract, Contractor will provide to the City of Madison Department of Civil Rights (the "Department"), certain workforce utilization statistics, using a form provided by the City.

If the Contract is still in effect, or if the City enters into a new Agreement with the Contractor, within one year after the date on which the form was required to be provided, the Contractor will provide updated workforce information using a second form, also to be furnished by the City. The second form will be submitted to the Department no later than one year after the date on which the first form was required to be provided.

The Contractor further agrees that, for at least twelve (12) months after the effective date of this Contract, it will notify the Department of each of its job openings at facilities in Dane County for which applicants not already employees of the Contractor are to be considered. The notice will include a job description, classification, qualifications, and application procedures and deadlines, shall be provided to the City by the opening date of advertisement and with sufficient time for the City to notify candidates and make a timely referral. The Contractor agrees to interview and consider candidates referred by the Department, or an organization designated by the Department, if the candidate meets the minimum qualification standards established by the Contractor, and if the referral is timely. A referral is timely if it is received by the Contractor on or before the date stated in the notice.

The Department will determine if a contractor is exempt from the above requirements (Sec. 13.A.) at the time the Request for Exemption in 13.B.(2) is made.

B. Articles of Agreement, Request for Exemption, and Release of Payment:
The "ARTICLES OF AGREEMENT" beginning on the following page, apply to all contractors, unless determined to be exempt under the following table and procedures:

NUMBER OF EMPLOYEES	LESS THAN $50,000 Aggregate Annual Business with the City*	$50,000 OR MORE Aggregate Annual Business with the City*
14 or less	Exempt**	Exempt**
15 or more	Exempt**	Not Exempt

*As determined by the Finance Director **As determined by the Department of Civil Rights

(1) Exempt Status: In this section, "Exempt" means the Contractor is exempt from the Articles of Agreement in section 13.B.(5) of this Contract and from filing an Affirmative Action plan as required by Section IV of the Articles of Agreement. The Department of Civil Rights ("Department") makes the final determination as to whether a contractor is exempt. If the Contractor is not exempt, sec. 13.B.(5) shall apply and Contractor shall select option A. or B. under Article IV therein and file an Affirmative Action Plan.

(2) Request for Exemption – Fewer Than 15 Employees: (MGO 39.02(9)(a)2.) Contractors who believe they are exempt based on number of employees shall submit a Request for Exemption on a form provided by the Department within thirty (30) days of the effective date of this Contract.

(3) Exemption – Annual Aggregate Business: (MGO 39.02(9)(a)c.): The Department will determine, at the time this Contract is presented for signature, if the Contractor is exempt because it will have less than $50,000 in annual aggregate business with the City for the calendar year in which the contract is in effect. CONTRACTORS WITH 15 OR MORE EMPLOYEES WILL LOSE THIS EXEMPTION AND BECOME SUBJECT TO SEC. 13.B.(5) UPON REACHING $50,000 OR MORE ANNUAL AGGREGATE BUSINESS WITH THE CITY WITHIN THE CALENDAR YEAR, BEGINNING IN 2019.

(4) Release of Payment: (MGO 39.02(9)(e)1.b.) All non-exempt contractors must have an approved Affirmative Action plan meeting the requirements of Article IV below on file with the Department within thirty (30) days of the effective date of this Contract and prior to release of payment by the City. Contractors that are exempt based on number of employees agree to file a Request for Exemption with the Department within thirty (30) days of the effective date and prior to release of payment by the City.

(5) Articles of Agreement:

ARTICLE I

The Contractor shall take affirmative action in accordance with the provisions of this Contract to ensure that applicants are employed, and that employees are treated during employment without regard to race, religion, color, age, marital status, disability, sex, sexual orientation, gender identity or national origin and that the employer shall provide harassment-free work environment for the realization of the potential of each employee. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation and selection for training including apprenticeship insofar as it is within the control of the Contractor. The Contractor agrees to post in conspicuous places available to employees and applicants notices to be provided by the City setting out the provisions of the nondiscrimination clauses in this Contract.

ARTICLE II

The Contractor shall in all solicitations or advertisements for employees placed by or on behalf of the Contractors state that all qualified or qualifiable applicants will be employed without regard to race, religion, color, age, marital status, disability, sex, sexual orientation, gender identity or national origin.

ARTICLE III

The Contractor shall send to each labor union or representative of workers with which it has a collective bargaining Agreement or other Contract or understanding a notice to be provided by the City advising the labor union or workers representative of the Contractor's equal employment opportunity and affirmative action commitments. Such notices shall be posted in conspicuous places available to employees and applicants for employment.

ARTICLE IV

(This Article applies to non-public works contracts.)

The Contractor agrees that it will comply with all provisions of the Affirmative Action Ordinance of the City of Madison (MGO 39.02) including the Contract compliance requirements. The Contractor warrants and certifies that one of the following paragraphs is true **(check one):**

☐ A. Contractor has prepared and has on file an affirmative action plan that meets the format requirements of Federal Revised Order No, 4, 41 CFR part 60-2, as established by 43 FR 51400 November 3, 1978, including appendices required by City of Madison ordinances or it has prepared and has on file a model affirmative action plan approved by the Madison Common Council.

☐ B. Within thirty (30) days after the effective date of this Contract, Contractor will complete an affirmative action plan that meets the format requirements of Federal Revised Order No. 4, 41 CFR Part 60-2, as established by 43 FR 51400, November 3, 1978, including appendices required by City of Madison ordinance or within thirty (30) days after the effective date of this Contract, it will complete a model affirmative action plan approved by the Madison Common Council.

☐ C. Contractor believes it is exempt from filing an affirmative action plan because it has fewer than fifteen (15) employees and has filed, or will file within thirty (30) days after the effective date of this Contract, a form required by the City to confirm exempt status based on number of employees. If the City determines that Contractor is not exempt, the Articles of Agreement will apply.

☐ D. Contractor believes it is exempt from filing an affirmative action plan because its annual aggregate business with the City for the calendar year in which the contract is in effect is less than fifty thousand dollars ($50,000), or for another reason listed in MGO 39.02(9)(a)2. If the City determines that Contractor is not exempt, the Articles of Agreement will apply.

ARTICLE V

(This Article applies only to public works contracts.)

The Contractor agrees that it will comply with all provisions of the Affirmative Action Ordinance of the City of Madison, including the Contract compliance requirements. The Contractor agrees to submit the model affirmative action plan for public works Contractors in a form approved by the Director of Affirmative Action.

ARTICLE VI

The Contractor will maintain records as required by Section **39.02**(9)(f) of the Madison General Ordinances and will provide the City's Department of Affirmative Action with access to such records and to persons who have relevant and necessary information, as provided in Section **39.02**(9)(f). The City agrees to keep all such records confidential, except to the extent that public inspection is required by law.

ARTICLE VII

In the event of the Contractor's or subcontractor's failure to comply with the Equal Employment Opportunity and Affirmative Action provisions of this Contract or Sections 39.03 and **39.02** of the Madison General Ordinances, it is agreed that the City at its option may do any or all of the following:

A. Cancel, terminate or suspend this Contract in whole or in part.
B. Declare the Contractor ineligible for further City contracts until the Affirmative Action requirements are met.
C. Recover on behalf of the City from the prime Contractor 0.5 percent of the Contract award price for each week that such party fails or refuses to comply, in the nature of liquidated damages, but not to exceed a total of five percent (5%) of the Contract price, or ten thousand dollars ($10,000), whichever is less. Under public works contracts, if a subcontractor is in noncompliance, the City may recover liquidated damages from the prime Contractor in the manner described above. The preceding sentence shall not be construed to prohibit a prime Contractor from recovering the amount of such damage from the noncomplying subcontractor.

ARTICLE VIII

(This Article applies to public works contracts only.)

The Contractor shall include the above provisions of this Contract in every subcontract so that such provisions will be binding upon each subcontractor. The Contractor shall take such action with respect to any subcontractor as necessary to enforce such provisions, including sanctions provided for noncompliance.

ARTICLE IX

The Contractor shall allow the maximum feasible opportunity to small business enterprises to compete for any subcontracts entered into pursuant to this Contract. (In federally funded contracts the terms "DBE, MBE, and WBE" shall be substituted for the term "small business" in this Article.)

14. **SEVERABILITY.**
It is mutually agreed that in case any provision of this Contract is determined by any court of law to be unconstitutional, illegal or unenforceable, it is the intention of the parties that all other provisions of this Contract remain in full force and effect.

15. **NOTICES.**
All notices to be given under the terms of this Contract shall be in writing and signed by the person serving the notice and shall be sent registered or certified mail, return receipt requested, postage prepaid, or hand delivered to the addresses of the parties listed below:

FOR THE CITY:

(Department or Division Head)

FOR THE CONTRACTOR:

16. **INDEPENDENT CONTRACTOR AND TAX INFORMATION.**
It is agreed that Contractor is an independent contractor and not an employee of the City, and any persons who the Contractor utilizes or provides for services under this Contract not employees of the City of Madison.

Contractor shall provide its taxpayer identification number (or social security number) to the Finance Director, 210 Martin Luther King Jr. Blvd, Room 406, Madison, WI 53703, prior to payment. The Contractor is informed that as an independent contractor, Contractor may have a responsibility to make estimated tax returns, file tax returns, pay income taxes and make social security payments on the amounts received under this Contract. No amounts will be withheld by the City for these purposes and payment of taxes and making social security payments are solely the responsibility and obligation of the Contractor. The Contractor is further informed that they may be subject to civil and/or criminal penalties if they fail to properly report income and pay taxes and social security taxes on the amount received under this Contract.

17. **GOODWILL.**
Any and all goodwill arising out of this Contract inures solely to the benefit of the City; Contractor waives all claims to benefit of such goodwill.

18. **THIRD PARTY RIGHTS.**
This Contract is intended to be solely between the parties hereto. No part of this Contract shall be construed to add, supplement, amend, abridge or repeal existing rights, benefits or privileges of any third party or parties, including but not limited to employees of either of the parties.

19. **AUDIT AND RETAINING OF DOCUMENTS.**
The Contractor agrees to provide all reports requested by the City including, but not limited to, financial statements and reports, reports and accounting of services rendered, and any other reports or documents requested. Financial and service reports shall be provided according to a schedule (when applicable) to be included in this Contract. Any other reports or documents shall be provided within five (5) working days after the Contractor receives the City's written requests, unless the parties agree in writing on a longer period. Payroll records and any other documents relating to the performance of services under the terms of this Contract shall be retained by the Contractor for a period of three (3) years after completion of all work under this Contract, in order to be available for audit by the City or its designee.

20. **CHOICE OF LAW AND FORUM SELECTION.**
This Contract shall be governed by and construed, interpreted and enforced in accordance with the laws of the State of Wisconsin. The parties agree, for any claim or suit or other dispute relating to this Contract that cannot be mutually resolved, the venue shall be a court of competent jurisdiction within the State of Wisconsin and the parties agree to submit themselves to the jurisdiction of said court, to the exclusion of any other judicial district that may have jurisdiction over such a dispute according to any law..

21. **COMPLIANCE WITH APPLICABLE LAWS.**
The Contractor shall become familiar with, and shall at all times comply with and observe all federal, state, and local laws, ordinances, and regulations which in any manner affect the services or conduct of the Contractor and its agents and employees.

22. **CONFLICT OF INTEREST.**

A. The Contractor warrants that it and its agents and employees have no public or private interest, and will not acquire directly or indirectly any such interest, which would conflict in any manner with the performance of the services under this Agreement.

B. The Contractor shall not employ or Contract with any person currently employed by the City for any services included under the provisions of this Agreement.

23. **COMPENSATION.**

It is expressly understood and agreed that in no event will the total compensation under this Contract exceed $_____.

24. **BASIS FOR PAYMENT.**

A. GENERAL.

(1) The City will pay the Contractor for the completed and accepted services rendered under this Contract on the basis and at the Contract price set forth in Section 23 of this Contract. The City will pay the Contractor for completed and approved "extra services", if any, if such "extra services" are authorized according to the procedure established in this section. The rate of payment for "extra services" shall be the rate established in this Contract. Such payment shall be full compensation for services rendered and for all labor, material, supplies, equipment and incidentals necessary to complete the services.

(2) The Contractor shall submit invoices, on the form or format approved by the City and as may be further specified in Section 3 of this Contract. The City will pay the Contractor in accordance with the schedule, if any, set forth in Section 3. The final invoice, if applicable, shall be submitted to the City within three months of completion of services under this Agreement.

(3) Should this Agreement contain more than one service, a separate invoice and a separate final statement shall be submitted for each individual service.

(4) Payment shall not be construed as City acceptance of unsatisfactory or defective services or improper materials.

(5) Final payment of any balance due the Contractor will be made upon acceptance by the City of the services under the Agreement and upon receipt by the City of documents required to be returned or to be furnished by the Contractor under this Agreement.

(6) The City has the equitable right to set off against any sum due and payable to the Contractor under this Agreement, any amount the City determines the Contractor owes the City, whether arising under this Agreement or under any other Agreement or otherwise.

(7) Compensation in excess of the total Contract price will not be allowed unless authorized by an amendment under Section 9, AMENDMENT.

(8) The City will not compensate for unsatisfactory performance by the Contractor.

B. SERVICE ORDERS, EXTRA SERVICE, OR DECREASED SERVICE.

(1) Written orders regarding the services, including extra services or decreased services, will be given by the City, using the procedure set forth in Section 15, NOTICES.

(2) The City may, by written order, request extra services or decreased services, as defined in Section 10 of this Contract. Unless the Contractor believes the extra services entitle it to extra compensation or additional time, the Contractor shall proceed to furnish the necessary labor, materials, and professional services to complete the services within the time limits specified in the Scope of Services, Section 3 of this Agreement, including any amendments under Section 9 of this Agreement.

(3) If in the Contractor's opinion the order for extra service would entitle it to extra compensation or extra time, or both, the Contractor shall not proceed to carry out the extra service, but shall notify the City, pursuant to Section 15 of this Agreement. The notification shall include the justification for the claim for extra compensation or extra time, or both, and the amount of additional fee or time requested.

(4) The City shall review the Contractor's submittal and respond in writing, either authorizing the Contractor to perform the extra service, or refusing to authorize it . The Contractor shall not receive additional compensation or time unless the extra compensation is authorized by the City in writing.

25. **DEFAULT/TERMINATION.**

A. In the event Contractor shall default in any of the covenants, agreements, commitments, or conditions herein contained, and any such default shall continue unremedied for a period of ten (10) days after written notice thereof to Contractor, the City may, at its option and in addition to all other rights and remedies which it may have at law or in equity against Contractor, including expressly the specific enforcement hereof, forthwith have the cumulative right to immediately terminate this Contract and all rights of Contractor under this Contract.

B. Notwithstanding paragraph A., above, the City may in its sole discretion and without any reason terminate this Agreement at any time by furnishing the Contractor with ten (10) days' written notice of termination. In the event of termination under this subsection, the City will pay for all work completed by the Contractor and accepted by the City.

26. **INDEMNIFICATION.**

The Contractor shall be liable to and hereby agrees to indemnify, defend and hold harmless the City of Madison, and its officers, officials, agents, and employees against all loss or expense (including liability costs and attorney's fees) by reason of any claim or suit, or of liability imposed by law upon the City or its officers, officials, agents or employees for damages because of bodily injury, including death at any time resulting therefrom, sustained by any person or persons or on account of damages to property, including loss of use thereof, arising from, in connection with, caused by or resulting from the contractors and/or any subcontractor's negligent acts, errors or omissions, in the performance of this Agreement.

27. **INSURANCE.**

A. The Contractor will insure, and will require each subcontractor to insure, as indicated, against the following risks to the extent stated below. The Contractor shall not commence work under this Contract, nor shall the Contractor allow any Subcontractor to commence work on its Subcontract, until the insurance coverage required below has been obtained and approved by the City Risk Manager, under the procedures in Section 27.C., below.

Commercial General Liability

The Contractor shall procure and maintain during the life of this Contract, Commercial General Liability insurance including, but not limited to bodily injury, property damage, personal injury, and products and completed operations (unless determined to be inapplicable by the Risk Manager) in an amount not less than $1,000,000 per occurrence. This policy shall also provide contractual liability in the same amount. Contractor's coverage shall be primary and non-contributory and list the City of Madison, its officers, officials, agents and employees as additional insureds. Contractor shall require all subcontractors under this Contract (if any) to procure and maintain insurance meeting the above criteria, applying on a primary basis and listing the City of Madison, its officers, officials, agents and employees as additional insureds.

Automobile Liability

The Contractor shall procure and maintain during the life of this Contract Business Automobile Liability insurance covering owned, non-owned and hired automobiles with limits of not less than $1,000,000 combined single limit per accident. Contractor shall require all subcontractors under this Contract (if any) to procure and maintain insurance covering each subcontractor and meeting the above criteria.

Worker's Compensation

The Contractor shall procure and maintain during the life of this Contract statutory Workers' Compensation insurance as required by the State of Wisconsin. The Contractor shall also carry Employers Liability limits of at least $100,000 Each Accident, $100,000 Disease – Each Employee, and $500,000 Disease – Policy Limit. Contractor shall require all subcontractors under this Contract (if any) to procure and maintain such insurance, covering each subcontractor.

Professional Liability

The Contractor shall procure and maintain professional liability insurance with coverage of not less than $1,000,000. If such policy is a "claims made" policy, all renewals thereof during the life of the Contract shall include "prior acts coverage" covering at all times all claims made with respect to Contractor's work performed under the Contract. This Professional Liability coverage must be kept in force for a period of six (6) years after the services have been accepted by the City.

B. Acceptability of Insurers. The above-required insurance is to be placed with insurers who have an A.M. Best rating of no less than A- (A minus) and a Financial Category rating of no less than VII.

C. Proof of Insurance, Approval. The Contractor shall provide the City with certificate(s) of insurance showing the type, amount, effective dates, and expiration dates of required policies prior to commencing work under this Contract. Contractor shall provide the certificate(s) to the City's representative upon execution of the Contract, or sooner, for approval by the City Risk Manager. If any of the policies required above expire while this Contract is still in effect, Contractor shall provide renewal certificate(s) to the City for approval. Certificate Holder language should be listed as follows:

City of Madison
ATTN: Risk Management, Room 406
210 Martin Luther King, Jr. Blvd.
Madison, WI 53703

The Contractor shall provide copies of additional insured endorsements or insurance policies, if requested by the City Risk Manager.

D. Notice of Cancellation. The Contractor and/or Insurer shall give the City thirty (30) days advance written notice of cancellation, non-renewal or material changes to any of the above-required policies during the term of this Contract.

28. **OWNERSHIP OF CONTRACT PRODUCT.**

All of the work product, including, but not limited to, documents, materials, files, reports, data, including magnetic tapes, disks of computer-aided designs or other electronically stored data or information (the "Documents"), which the Contractor prepares pursuant to the terms and conditions of this Contract are the sole property of the City. The Contractor will not publish any such materials or use them for any research or publication, other than as expressly required or permitted by this Contract, without the prior written permission of the City. The grant or denial of such permission shall be at the City's sole discretion.

The Contractor intends that the copyright to the Documents shall be owned by City, whether as author (as a Work Made For Hire), or by assignment from Contractor to City. The parties expressly agree that the Documents shall be considered a Work Made For Hire as defined by Title 17, United States Code, Section 101(2).

As further consideration for the City entering into this Contract, the Contractor hereby assigns to City all of the Contractor's rights, title, interest and ownership in the Documents, including the right to procure the copyright therein and the right to secure any renewals, reissues and extensions of any such copyright in any foreign country. The City shall be entitled to the sole and exclusive benefit of the Documents, including the copyright thereto, and whenever required by the City, the Contractor shall at no additional compensation, execute all documents of assignment of the full and exclusive benefit and copyright thereof to the City. Any subcontractors and other independent contractors who prepare portions of the Documents shall be required by the Contractor to execute an assignment of ownership in favor of the City before commencing work.

29. **BAN THE BOX - ARREST AND CRIMINAL BACKGROUND CHECKS.** (Sec. 39.08, MGO. Applicable to contracts exceeding $25,000.)

A. DEFINITIONS.

For purposes of this section, "Arrest and Conviction Record" includes, but is not limited to, information indicating that a person has been questioned, apprehended, taken into custody or detention, held for investigation, arrested,

charged with, indicted or tried for any felony, misdemeanor or other offense pursuant to any law enforcement or military authority.

"Conviction record" includes, but is not limited to, information indicating that a person has been convicted of a felony, misdemeanor or other offense, placed on probation, fined, imprisoned or paroled pursuant to any law enforcement or military authority.

"Background Check" means the process of checking an applicant's arrest and conviction record, through any means.

B. REQUIREMENTS. For the duration of this Contract, the Contractor shall:

(1) Remove from all job application forms any questions, check boxes, or other inquiries regarding an applicant's arrest and conviction record, as defined herein.

(2) Refrain from asking an applicant in any manner about their arrest or conviction record until after conditional offer of employment is made to the applicant in question.

(3) Refrain from conducting a formal or informal background check or making any other inquiry using any privately or publicly available means of obtaining the arrest or conviction record of an applicant until after a conditional offer of employment is made to the applicant in question.

(4) Make information about this ordinance available to applicants and existing employees, and post notices in prominent locations at the workplace with information about the ordinance and complaint procedure using language provided by the City.

(5) Comply with all other provisions of Sec. 39.08, MGO.

C. EXEMPTIONS: This section does not apply when:

(1) Hiring for a position where certain convictions or violations are a bar to employment in that position under applicable law, or

(2) Hiring a position for which information about criminal or arrest record, or a background check is required by law to be performed at a time or in a manner that would otherwise be prohibited by this ordinance, including a licensed trade or profession where the licensing authority explicitly authorizes or requires the inquiry in question.

To be exempt under sec. C.(1) or (2) above, Contractor must demonstrate to the City that there is a law or regulation that requires the hiring practice in question. If so, the contractor is exempt from this section for the position(s) in question.

30. **WEAPONS PROHIBITION.**

Contractor shall prohibit, and shall require its subcontractors to prohibit, its employees from carrying weapons, including concealed weapons, in the course of performance of work under this Contract, other than while at the Contractor's or subcontractor's own business premises. This requirement shall apply to vehicles used at any City work site and vehicles used to perform any work under this Contract, except vehicles that are an employee's "own motor vehicle" pursuant to Wis. Stat. sec. 175.60(15m).

31. **AUTHORITY.**

Contractor represents that it has the authority to enter into this Contract. If the Contractor is not an individual, the person(s) signing on behalf of the Contractor represents and warrants that they have been duly authorized to bind the Contractor and sign this Contract on the Contractor's behalf.

32. **COUNTERPARTS, ELECTRONIC SIGNATURE AND DELIVERY.**

This Contract may be signed in counterparts, each of which shall be taken together as a whole to comprise a single document. Signatures on this Contract may be exchanged between the parties by facsimile, electronic scanned copy (.pdf) or similar technology and shall be as valid as original; and this Contract may be converted into electronic format and signed or given effect with one or more electronic signature(s) if the electronic signature(s) meets all requirements of Wis. Stat. ch. 137 or other applicable Wisconsin or Federal law. Executed copies or counterparts of this Contract may be delivered by facsimile or email and upon receipt will be deemed original and binding upon the parties hereto, whether or not a hard copy is also delivered. Copies of this Contract, fully executed, shall be as valid as an original.

IN WITNESS WHEREOF, the parties hereto have set their hands at Madison, Wisconsin.

CONTRACTOR:

_____
(Type or Print Name of Contracting Entity)

By: _____
(Signature)

_____
(Print Name and Title of Person Signing)

Date: _____

CITY OF MADISON, WISCONSIN
a municipal corporation:

By: _____
Satya Rhodes-Conway, Mayor

Date: _____

Approved:

_____
David P. Schmiedicke, Finance Director

Date: _____

By: _____
Maribeth Witzel-Behl, City Clerk

Date: _____

Approved as to Form:

_____
Eric T. Veum, Risk Manager

Date: _____

_____
Michael Haas, City Attorney

Date: _____

For City Use Only: SIGNATURE INSTRUCTIONS FOR CONTRACTS SIGNED BY MAYOR/CLERK:
Obtain contractor's signature first. Route this contract & all of its attachments for City signatures using the City Clerk's Contract Routing Database. Include 1 copy of authorizing resolution & 1 copy of the Certificate of Insurance.

NOTE: Certain service contracts may be executed by the designee of the Finance Director on behalf of the City of Madison:

By: _____
Mary Richards, Procurement Supervisor

Date: _____

MGO 4.26(3) and (5) authorize the Finance Director or designee to sign purchase of service contracts when all of the following apply:
(a) The funds are included in the approved City budget.
(b) An RFP or competitive process was used, or the Contract is exempt from competitive bidding under 4.26(4)(a).
(c) The City Attorney has approved the form of the Contract.
(d) The Contract complies with other laws, resolutions and ordinances.
(e) The Contract is for a period of 1 year or less, OR not more than 5 years AND the average cost is not more than $100,000 per year, AND was subject to competitive bidding. (If over $50,000 and exempt from bidding under 4.26(4)(a), regardless of duration of the Contract, the Common Council must authorize the Contract by resolution and the Mayor and City Clerk must sign, per 4.26(5)(b).)

Emergency Service contracts may also be signed by the designee of the Finance Director if the requirements of MGO 4.26(3)(c) are met.

For City Use Only: SIGNATURE INSTRUCTIONS FOR CONTRACT TO BE SIGNED BY FINANCE (PURCHASING):
Obtain contractor's signature first. Attach the contractor-signed contract with all attachments/exhibits and the certificate of insurance to the requisition in MUNIS.

Parking Ramp Condition Assessment Report – 2023

January 11, 2024

- State Street Campus – Lake Street
- State Street Campus – Frances Street
- Overture Center
- State Street Capitol
- Capitol Square North
- South Livingston Street
- Wilson Street

Prepared for:

City of Madison – Parking Utility

215 Martin Luther King Jr Blvd

Madison, WI 53703

Phone: (608) 266-4761

Prepared by:

GRAEF

1010 East Washington Avenue Suite 202

Madison, WI 53703

Phone: (608) 242-1550

GRAEF Project No.: 2023-5008.01

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STATE STREET CAMPUS – LAKE (SSL)

BACKGROUND

GRAEF performed a visual inspection of the structural, mechanical, electrical and plumbing/fire protection systems for the City of Madison's State Street Lake parking ramp; instances of hammer tapping and chain dragging occurred where required. This assessment was to determine the overall condition of the systems, identify locations for the 2024 repair season and update the digital record of the findings for use in future repairs and assessments.

Field observations were taken in October 2023 by Dan Windorski, Pete O'Neill, Giovanni Bianchi, and Jessica Culver with GRAEF. Field observations were taken using ArcGIS Field Maps and will be digitally maintained using GRAEF's InfiniteGIS system for future assessments and structural repairs. This report presents the findings of the 2023 assessments with recommendations for repairs and measures to extend the life of the structure.

The following documents were reviewed during this assessment:

- Law, Law, Potter & Nystrom Architects, 1964 As-Built Lake Street Parking Ramp Documents

STRUCTURAL CONDITION ASSESSMENT

STRUCTURAL SYSTEM DESCRIPTION

The State Street Campus – Lake parking structure was constructed in 1964. The parking structure is located on Lake Street in downtown Madison near the University Campus. It is a four-bay wide structure and consists of a slab-on-grade, on the lower level, and three elevated structural levels at the outer two bays. There is a fourth elevated level located within the center two bays. The concrete structural system is a mildly reinforced pan joist system with 8-inch wide by 26-inch deep joists at 38 inches on center and a 4-inch slab spanning between the joists. Girders above turn aisles and slab of the top level are post-tensioned. The structure is approximately 259 feet wide by 167 feet long and spans approximately 65 feet from center to center of the column and girder lines.

STRUCTURAL MODIFICATION HISTORY

The following is taken from the previously cited 2018 Condition Assessment Report supplied to the City of Madison Parking Utility by JSD:

"The State Street Campus - Lake ramp has had a long history of modifications and repairs beginning in the late 1970s with the addition of width to the columns, doweling into and adding on to the sides of the concrete columns in an effort to create a stiffer structure. A horizontal rebar was also placed adjacent to the joists near the ends of the parking bays and encapsulated in shotcrete.

Repairs in the 1980s included the introduction of expansion joints in the parking slabs to facilitate the thermal movement of the structure resulting from temperature change throughout the seasons. Creation of expansion joints included cutting vertically through the slab, across the width of the slab, at construction joint locations, and cutting rectangular block outs in the slab surface for placement of a flat polyurethane joint material. More recently, a modification to the structure was made when the stairs at the Northwest and Southwest corners of the ramp along Lake Street were replaced. Treads and risers within the stair towers were demolished leaving only the walls. New concrete stairs and steel handrails were placed. In the summer of 2010, underground storm piping from sump pump #2 to the vertical riser was replaced and grout was pumped below the slab-on-grade in the slab area near the replaced pipe to replace soils that had washed away."

STRUCTURAL REPAIR HISTORY

The following is taken from the previously cited 2018 Condition Assessment Report supplied to the City of Madison Parking Utility by JSD: "There has been ongoing restoration of the structure since the early evaluations were conducted: sealing cracks, restoring slabs, concrete beams, and joist stem spall repairs. In the 1990s a fully adhered elastomeric membrane was placed on the elevated structural slabs in phases. Following the initial membrane placements, repairs to the membrane had occurred in scattered applications placing a new full membrane system over the bare concrete and concrete slab repairs and added wear coat over heavily worn areas such as at corner transitions from the end bays to the drive aisles and at the entrance/exit lanes."

The 2012 restoration phase included scattered concrete repairs to concrete columns and parapets and the placement of new membrane wear coat/topcoat over the North and South parking bays on the 3rd level. Prior to the 2012 restoration phase, membrane had been placed in scattered patches in areas showing greatest wear. Wear areas developed adjacent to patches in time, making it difficult to determine the time of the recent applications. The application of the wear coat and topcoat to the entire parking bay provided a uniform appearance to the restored surface and provided a uniform protection over the entire parking bay being coated.

The 2013 restoration phase included the placement of new membrane wear coat/topcoat over the entire two center parking bays on Levels 3 and 4. Other work completed in 2013 at SSCL included rebuilding the top of the column at grids B-2 on Level 4 and the top of the concrete parapet along grid A, Level 4, near grid 4. New steel guardrails were placed along the fronts of parking stalls at the North and South sides of the Level 4 center bays, from grid B to H along grids 2 and 4.

The 2014 restoration phase included the installation of vehicular guardrails at the West end of

the ramp on the 2nd, 3rd, and 4th levels. The existing rails failed to comply with the International Building Code (IBC) for height, spacing between rails, and their assumed force resistance capabilities. Code requirement is to resist a 6,000-pound horizontal load at any point. The placement of a new membrane wear coat/topcoat at the North parking bay and West end of Level 2 was also part of the 2014 restoration phase.

The 2015 restoration phase followed the pattern of the other recent repair phases with membrane placement on the south bay of Level 1 and the South center and South bays of Level 2. It also included some small concrete repairs to vertical surfaces and sealant placement at newly routed cracks and replacement of existing sealant.

The 2016 restoration phase finalized the membrane placement phasing by applying membrane on the North, North center, and South center bays of Level 1 and the North center bay of Level 2. Multiple concrete meter posts were repaired on level 4, along with the reconstruction of the top of a column at level 4 grid 2. Additional concrete repairs on the underside of concrete beams and joist stems throughout Levels 2 and 1 occurred. The entrance island in the second bay was reconstructed based on its deteriorated conditions and the joint between the sidewalk and the ramp.

The 2017 repair phase consisted of recoating severely worn membrane on Level 3 (Aisles L and P), which was originally placed in 2012. Extensive joist stem repairs were made overhead on Levels L and 1. Concrete repairs to vertical surfaces of concrete near the South entrance were also part of the repair phase, and a replacement of unbonded traffic membrane at the entrance.

Restoration completed during the 2018 repair phase consisted of top of slab concrete repair in a limited area. It also included the epoxy injection of cracks at two columns at the first level at the West end of the ramp along Lake Street. Scheduled work to repair joist stems and place membrane at the West end of Level 4 was deferred to 2019. The bid item to thicken select columns was cancelled."

In 2019, full-system membrane was placed at the north entrance, easternmost bay between gridlines 2 and 4, and near the north stair tower of Level 1 and at the base of the ramp up drive lane of Level with wear/top coat application to Gridlines H2-A4 on L4, gridlines A2-B3 and H2-J4 on L3, and A2-J3 and G3-J4. Other repairs included overhead spall repair to joists, beams, girders slabs and stubbed L4 columns and repairs to expansion joint header material.

In 2020, full-system membrane was replaced at the south entry and exit lanes, a top and wear coat application was placed from B1 to H2, including local full-system repair where required, expansion joints from E.5 2-E.5 3 on L1, J from 2 to 3 and 3 to 4 on L2 were replaced, two unbonded column expansions were demolished, investigated and replaced, and the columns along Lake Street at grids 2

and 4 were cut free from the adjacent knee wall. Spall repair was performed on walls, joists and girders on the Lower Level and joists on Level 1. However, most concrete spall repair on Levels 1-4 was deferred to 2021.

In 2021, concrete repairs to walls, joists, slabs, and girders on all levels were performed along with several full-depth repairs near floor drains. In conjunction with topside and full-depth slab repairs, localized full-system membrane was installed to maintain the continuity of the waterproofing system. Additionally, wide cracks in the exterior bays of L3 and L4 were re-sealed along with sealant joints between columns and masonry walls on L3 and a joint between the top of foundation wall and the sidewalk along the full structure length at Lake Street. Expansion joints on Grid J between Grids 1 and 2 and 4 and 5 of L2 were replaced while those on Grid E.5 between Grids 3 and 4 of L3 and on Grid F between Grids 1 and 2 of L2 were replaced with new header material and a sealant joint due to the interior joint width.

In 2022, typical repairs to wall, joist, slab, and girder spalls on all levels were completed along with repairs to pipe hangers embedded in spalled concrete. Localized membrane repairs were completed in entrance/exit lanes and where topside concrete spall repairs occurred. The connection of the Level 1 south stair landing to a concrete header beam was retrofit with a bearing angle and tube and epoxied through-bolts. Overhead of the Lake Street sidewalk, a connection of the brick ledge angle to the structure was replaced.

As the result of an unfavorable bidding climate, no annual maintenance contract was executed for 2023.

STRUCTURAL SYSTEM ASSESSMENT

The State Street Campus - Lake parking structure's structural system is in overall fair condition. Most of the issues noted in this assessment are the product of continual typical wear and material behavior and should be addressed with regular maintenance of the structure. Minor concrete repairs on slabs and columns were noted.

RECOMMENDED STRUCTURAL SYSTEM REPAIRS

Immediate Repairs

1. **Concrete Spalls**
    a. Slabs – Slab spalls typically occurred at or near column grid lines, with most concentrated within the interior bays. Many spalls were relatively small and occurring near the bay-to-bay transitions. Additionally noted were overhead slab spalls between concrete joists.

b. Joists – Beam joist spalls were observed to be typically on and between concrete joists in interior bays. Most joist spalls were recorded on the west side of the Lower Level.

2. **Concrete Slab Membrane** – Level 2 of the structure showed one location, between column grids, where tires wore down the waterproofing membrane of the slab. The membrane on the roof showed signs of membrane wear at locations vehicles corner and multiple instances of locale damage from car "burnouts". The waterproofing membrane should be repaired to prevent salt and water from being exposed to structural concrete, causing cracking, spalling, and leakage to the floors below.
3. **Wooden Barriers** – Several wooden barriers were damaged or missing on Levels 4 and L. Barriers should be replaced at the City's convenience to limit vehicle/structure damage and allow for signage posting.

Long Term Repairs

1. **Exposed Rebar** – Exposed rebar overhead on the concrete slab between concrete joists occurs commonly throughout the structure with the most prevalent occurring overhead of Level 2. Exposed rebar frequently runs along the length of the bay with bars in both the north-south and east-west directions. Smaller sections of exposed rebar were noted at all levels and occurred mostly at the bottom of concrete joists and underside of girders. Exposed bars at Lake Street occur due to limited concrete cover and minor corrosion of the reinforcing steel or significant and well-documented cracking of the structure. Exposed bars may be cleaned and painted to prevent further corrosion and future spalling or may be repaired more comprehensively by traditional spall repair methods.

MECHANICAL CONDITION ASSESSMENT

MECHANICAL SYSTEM DESCRIPTION

The mechanical system is comprised of exhaust fans on Level L to serve garage exhaust, window air conditioning units in the attendant stations, and gas fired unit heaters heating offices and the attendant stations. There are fans and heaters serving storage and restroom areas.

MECHANICAL SYSTEM ASSESSMENT

The mechanical systems all appear to be in adequate condition. Window air conditioners appear to be nearing the end of their useful life and replacement should be considered within the next 1-2

years. The Gas fired unit heaters are beyond their useful life and should be replaced. The fans and heaters serving storage and restrooms are beyond their useful life and should be replaced. Manufacturer recommended maintenance schedules should be followed for all HVAC systems.

RECOMMENDED MECHANICAL SYSTEM REPAIRS

Immediate Repairs

1. **Regular Maintenance** – The mechanical systems should have regular maintenance completed each year or as recommended by the manufacturer.
2. **Window Air Conditioners –** The window air conditioners are beyond their useful life and should be replaced in the next 1-2 years.
3. **Gas Fired Unit Heaters** – The Gas fired unit heaters serving the offices and attendant stations are beyond their useful life and should be replaced.
4. **Fans & Heaters** – Fans and heaters serving storage and restrooms should be replaced.

Long Term Repairs

1. **Equipment** – Major HVAC equipment should be replaced at the end of its useful life. Several of the window air conditioners and exhaust fans should be considered for replacement within 2-3 years.

ELECTRICAL CONDITION ASSESSMENT

ELECTRICAL SYSTEM DESCRIPTION

The electrical distribution is composed of Square D and Eaton panelboards. The lighting is controlled by a lighting control panel located in the main electrical room. There is no emergency lighting system. In 2009 of the parking ramp lights were replaced with fluorescent light fixtures.

ELECTRICAL SYSTEM ASSESSMENT

The State Street Campus Lake Parking Ramp's electrical system is new and is in good working condition. All the electrical distribution panels have been replaced and updated. All the pole light fixtures were retrofitted in 2016 with LED. An emergency lighting system is stipulated by code requirement but is not present at the State Street Campus Lake Parking Ramp.

The issues noted in the condition report are the product of typical wear and material behavior and should be addressed with regular maintenance of the electrical systems. Minor conduit repairs in parking ramp, storage rooms and in stair towers.

RECOMMENDED ELECTRICAL SYSTEM REPAIRS

Immediate Repairs

1. **Emergency Lighting System** –An emergency lighting system should be installed to allow pedestrians to exit the parking ramp safely during an emergency.
2. **Conduits** – Replace corroded, disconnected, or cracked conduits. Replace missing or broken conduit clips. Reseal and reconnect any conduits that have come apart.

Long Term Repairs

1. **Light Fixtures** – Continue preventative maintenance including cleaning and re-lamping light fixtures. Replace all light fixtures in five to ten years.
2. **Electrical Distribution Panels** – Continue preventative maintenance including cleaning and testing breakers regularly.

PLUMBING CONDITION ASSESSMENT

PLUMBING SYSTEM DESCRIPTION

The plumbing system is composed of storm piping and non-potable washdown system. The plumbing systems appear to be in adequate condition, with a few areas of concern.

PLUMBING SYSTEM ASSESSMENT

The non-potable water system appeared to be in good condition. Paint is peeling and showing some wear and the piping may need to be repainted, but the piping appeared to be in good condition. The storm water piping appeared degraded and should be replaced with PVC at the end of its useful life, or approximately 40-50 years after installation. Some storm piping has begun to be replaced with PVC. There are some gutters located on the second level of the garage by the stairwell that are corroded and should be replaced.

RECOMMENDED PLUMBING SYSTEM REPAIRS

Immediate Repairs

1. **Regular Maintenance** – The plumbing systems should have regular maintenance completed each year to clear debris from the system.
2. **Gutters** – Gutters are corroded and broken and should be replaced.

Long Term Repairs

1. **Piping** – Piping should be replaced at the end of its useful life, which is expected within the next 1-2 years.

FIRE PROTECTION CONDITION ASSESSMENT

FIRE PROTECTION SYSTEM DESCRIPTION

There is currently no fire protection system installed at State Street Campus garages.

STATE STREET CAMPUS – FRANCES (SSF)

BACKGROUND

GRAEF performed a visual inspection of the structural, mechanical, electrical and plumbing/fire protection systems for the City of Madison's State Street Frances parking ramp; instances of hammer tapping occurred where required. This assessment was to determine the overall condition of the systems, identify locations for the 2024 repair season, and update the digital record of the findings for use in future repairs and assessments.

Field observations were taken in October 2023 by Dan Windorski, Pete O'Neill, Giovanni Bianchi, and Jessica Culver with GRAEF. Field observations were recorded using ArcGIS Field Maps and will be digitally maintained using GRAEF's InfiniteGIS system for future assessments and structural repairs. This report presents the findings of the 2023 assessments with recommendations for repairs and measures to extend the life of the structure.

The following documents were reviewed during this assessment:

- Arnold & O'Sheridan Consulting Engineers, 1981 As-Built Francis Street Parking Ramp Documents
- Arnold & O'Sheridan Consulting Engineers, 1987 As-Built Francis Street Parking Ramp Addition Documents

STRUCTURAL CONDITION ASSESSMENT

STRUCTURAL SYSTEM DESCRIPTION

The State Street Campus – Frances parking structure was constructed in the early 1980's. It is located between Hawthorne Court and Frances Street and is immediately east of the existing Lake Street ramp. These two parking ramps are connected via eight concrete bridges spanning across Hawthorne Court. Initially, the structure was comprised of three levels with a footprint of approximately 155 feet long by 240 feet wide totaling 110,000 square feet. The lower level consists of a slab on grade and two elevated post-tensioned slabs spanning between beams, spaced at 18 feet on center. In 1987, a vertical expansion utilizing precast concrete construction added 90,000 square feet to the original structure. This addition added two levels to the outer two bays and three levels to the center two bays. Precast levels consist of 9-foot-wide double tees spanning from precast spandrels and walls, at the outer perimeter, to precast columns and inverted tee beams along interior column lines.

Structural levels have a typical bay width of 60'-0" from column-to-column, the post tensioned slab is 5 1/2" thick. Expansion joints were designed to separate the structure down its length, in turn

lanes and intermediate crossovers, and near midpoints across its width.

STRUCTURAL MODIFICATION HISTORY

The following is taken from the previously cited 2018 Condition Assessment Report supplied to the City of Madison Parking Utility by JSD:

"A vertical expansion of precast concrete construction in 1987 added 2½ levels of parking to the original construction. The addition added two levels to the outer two bays and three levels to the center two bays… The Frances Street ramp was constructed east of the existing Lake Street ramp between Hawthorne Court and Frances Street. Concrete bridges at two levels span across Hawthorne Court to connect the two structures… With the construction of the Frances Street ramp, bridges spanning over Hawthorne Court were constructed to connect Lake and Frances at each of the four bays at what had been the top level of the Frances Street ramp. Following the vertical expansion of the Frances Street ramp, an additional four bridges were built."

In 2020, an existing double tee-to-shear wall connection overhead of Level 3 near the west end of Aisle K was noted as mostly failed. As a result, in 2021, the existing remaining connections to both sides of the shear wall at this location were removed and replaced with stainless steel bent plates and post-installed anchors.

STRUCTURAL REPAIR HISTORY

The following is taken from the previously cited 2018 Condition Assessment Report supplied to the City of Madison Parking Utility by JSD:

"[Repairs] to the Frances Street ramp have been minor and have primarily consisted of brick replacement on the East side of the structure facing Frances Street. Some sealant replacement between adjacent double tees has been done as well as the periodic application of a Silane Sealer to the elevated structural slabs, both post-tensioned and precast.

During the 2016 and 2017 repair phases, repairs to cracked stair treads at all the stairwells were completed. The cracked treads have been caused by the corrosion of the embedded steel stair rail posts. Problems with ice buildup due to inadequate drainage at the sidewalk north of the ramp were occurring, and during the 2017 phase, the area was regraded and new drain and stormwater pipe added, along with a new concrete sidewalk. The top of a column on Level 5 was also repaired. A guardrail railing was reattached due to falling after being hit by a vehicle, which led to concerns with the strength of the railing attachments". Guardrails were reinforced, as a result of the vehicle hit, and observation by the engineer.

In 2019, membranes at precast levels around expansion joints were replaced along with several lengths of sealant joints, mostly at the northwest stair tower, repair of minor concrete spalls and cracks and the painting of all steel rails.

In 2020, broken shear connectors between precast double tee flanges were repaired by welding, cracks in both precast double tees and post-tensioned slabs were routed and sealed, minor concrete spall repairs were performed to slabs, double tees, walls and stairs and silane sealer was applied to all elevated structural slabs (precast and post-tensioned cast-in-place).

In 2021, 115 precast shear connectors between double tee flanges at the precast levels were made, including the removal and replacement of associated sealant joints and cleaning and painting of exposed connections and a retrofit of a failing double tee-to-shear wall connection was installed with stainless steel bent plates and bolts. Additionally, minor crack routing and sealing, tuckpointing of brick on the northwest stair tower, concrete repairs to slabs, stairs, double tees, and walls were performed.

In 2022, typical minor repairs of spalled concrete on slabs, stairs, double tees, and walls were completed in addition to the repair of 106 precast shear connections, removal and replacement of sealant joints, and cleaning and painting of connections contained therein. Cracks in post-tensioned slabs were routed and sealed and localized replacement of brick mortar on the west-facing façade of the Level 5 crash wall was completed.

As the result of an unfavorable bidding climate, no annual maintenance contract was executed for 2023.

STRUCTURAL SYSTEM ASSESSMENT

The State Street Campus - Frances parking structure's structural system is in overall good condition. Most of the issues noted in this assessment are the product of typical wear, corrosion, and material behavior and should be addressed with regular maintenance of the structure. Minor deterioration of the slabs, precast double tees, precast inverted tees, walls, and columns was observed throughout the structure. Most observations included spalling and cracking of the concrete structural members. At the levels of the vertical precast expansion, the caulk joints between double tees were inspected and found to be in generally fair condition. Areas of concern such as locations with suspected shear connector damage were noted.

RECOMMENDED STRUCTURAL SYSTEM REPAIRS

Immediate Repairs

1. **Concrete Spalls**
    a. Tees – Most of the spalls noted occurred at the bottom portion of the web on the precast double tees or at the flange portion of the precast double tees and inverted tees

due to corrosion or insufficient cover of the steel rebar. Spalls were also observed at the edge of double tee flanges and at the web of inverted tees where water tends to collect and leak through failed sealant joints over time. At some locations, rebar has been exposed due to spalling.

b. Columns – Most of the spalls are minor and occur at the top of the precast corbel due to corrosion of the steel bearing plate. Other spalls found at the precast corbel occurred due to corrosion or insufficient cover of the steel rebar.

c. Walls – Spalling was observed at a portion of the concrete wall on Level L (Aisle J) with signs of active leaking and some corrosion.

d. Slab – Spalling was visible at the underside of the Level 1 concrete slab leaving exposed steel wire mesh with signs of corrosion. At Level 5 a portion of the slab is spalled on the topside due to failure of the sealant used at a nearby previously sealed crack.

2. **Concrete Cracks** – Most of the cracks in the structure have previously been sealed. Some cracks were noted on a concrete beam from Level L (Aisle K) which exhibited signs of active leaking and corrosion of the interior steel rebar and should be routed and sealed. Other cracks were noted on precast concrete walls, inverted tees, and double tees with no signs of leaking. Furthermore, several minor cracks in the topping concrete of the tees were noted on Level 4.
3. **Damaged Shear Connectors –** Several shear connectors between the precast double-tee are suspected to be deteriorated, heavily corroded, or broken and should be repaired. At locations where it is believed connectors are damaged, the full length of sealant along the joint should be removed to inspect all shear connectors directly; broken connections should be re-welded, and all connections cleaned and protected.

Long Term Repairs

1. **Expansion Joints –** Expansion joints throughout the structure were in generally good condition. The condition of traffic plates, joint material, and gutters below should continue to be monitored. In general, no changes were noted in the condition of the expansion joints throughout the structure in 2023.
2. **East-West Precast Lateral System** – The east-west lateral system of the vertical precast expansion is not apparent nor explicit in the design drawings and as-built condition. While shear walls are provided in the north-south direction, these elements would typically be considered too flexible in the east-west direction to provide adequate lateral stiffness. As one possible system, precast columns may cantilever above the cast-in-place columns and act in parallel.

However, no detailed connections in the original design drawings are apparent, thus the force transfer among the double tees, inverted tee beams, spandrel beams, and columns would occur through a combination of the cast-in-place concrete washes and pour strips (friction) and direct bearing. While the history of failed double tee connectors and spalling at lateral connections to shear walls may not be a direct symptom of an underperforming east-west lateral system, further investigation is recommended.

MECHANICAL CONDITION ASSESSMENT

MECHANICAL SYSTEM DESCRIPTION

The mechanical system is composed of exhaust fans for the lower level of the garage, and louvers in the stairwells for ventilation. There are a few split systems which served the attendant areas. There are Reznor heating units serving offices and attendant stations. The systems seemed in adequate condition, though a few of the systems may require replacement within 1-2 years.

MECHANICAL SYSTEM ASSESSMENT

The mechanical systems all appear to be in good condition. The exhaust fans electrical conduit has been recently replaced indicating regular maintenance of fans is being completed. A few of the split systems serving various areas of the garage appear to be nearing the end of their useful life and replacement should be considered in the next 1-2 years. The Gas fired unit heaters are beyond their useful life and should be replaced. Manufacturer recommended maintenance schedules should be followed for all HVAC systems.

RECOMMENDED MECHANICAL SYSTEM REPAIRS

Immediate Repairs

1. **Regular Maintenance** – The mechanical systems should have regular maintenance completed each year or as recommended by the manufacturer.
2. **Gas Fired Unit Heaters** – The Gas fired unit heaters serving the offices and attendant stations are beyond their useful life and should be replaced within the next year.

Long Term Repairs

1. **Equipment** – Major HVAC Equipment should be replaced at the end of its useful life. Several of the split systems should be considered for replacement within 5 years.

ELECTRICAL CONDITION ASSESSMENT

ELECTRICAL SYSTEM DESCRIPTION

The electrical distribution is composed of Square D and Eaton panelboards. The lighting is controlled by a Square D Powerlink lighting control panel located in the main electrical room and a generator located in the alleyway for the emergency lighting system.

ELECTRICAL SYSTEM ASSESSMENT

The State Street Campus Frances Parking Ramp's electrical system is new and is in good working condition. All the electrical distribution panels have been replaced and updated recently. However, water is leaking onto panel C on the third floor and will cause the panel to prematurely fail. The emergency generator system at the State Street Campus Frances Parking Ramp should continue to have preventative maintenance. LED light fixtures were installed in 2018, but not all lighting was replaced; a few storage, office, and electrical/mechanical rooms yet have fluorescent lighting. We also understand the City is also considering upgrading the lighting of this garage by adding additional fixtures.

The issues noted in the condition report are the product of typical wear and material behavior and should be addressed with regular maintenance of the electrical systems. Minor conduit repairs in parking ramp, storage rooms and in stair towers.

RECOMMENDED ELECTRICAL SYSTEM REPAIRS

Immediate Repairs

1. **Conduits** – Replace corroded, disconnected, or cracked conduits. Replace missing or broken conduit clips. Reseal and reconnect any conduits that have come apart.
2. **Electrical Distribution Panel** – Replace panelboard C located on the third floor. Panelboard C has corrosion due to water intrusion.

Long Term Repairs

1. **Light Fixtures** – Continue preventative maintenance including cleaning and re-lamping light fixtures.
2. **Electrical Distribution Panels** – Continue preventative maintenance including cleaning and testing breakers regularly.
3. **Emergency Generator System** – Continue preventative maintenance including cleaning and testing generator regularly.

PLUMBING CONDITION ASSESSMENT

PLUMBING SYSTEM DESCRIPTION

The plumbing system is composed of storm piping, a lower-level sump pump, and non-potable washdown systems. Plumbing systems are in good condition, with a few areas of concern.

PLUMBING SYSTEM ASSESSMENT

The storm and non-potable water systems are in fair condition. The lower-level sump pump piping has been recently replaced with PVC, indicating regular maintenance of the system. Regular maintenance of the storm piping system has been completed to ensure the deck drains are cleared of debris to prevent clogging of the system. The storm piping is in good condition, though some areas show signs of degradation. Piping should be replaced with PVC at the end of its useful life, or approximately 40-50 years after install. This replacement is expected to be required within 1-2 years, though there are some areas that have already begun to be replaced.

RECOMMENDED PLUMBING SYSTEM REPAIRS

Immediate Repairs

1. **Regular Maintenance** – The plumbing systems should have regular maintenance completed each year to clear debris from the system.
2. **Hose Bibb** – There is a hose bibb on the first level and the fourth level where the cover does not close, it should be repaired or replaced.
3. **Pipe Supports & Insulation** – There are several areas where pipe supports are broken, and insulation is corroded. The insulation and supports should be replaced.
4. **Piping** – Piping should be replaced at the end of its useful life, which is expected within the next 1-2 years.

Long Term Repairs

1. **Piping** – Piping should be replaced at the end of its useful life, which is expected within the next 1-2 years.

FIRE PROTECTION CONDITION ASSESSMENT

FIRE PROTECTION SYSTEM DESCRIPTION

There is currently no fire protection system installed at State Street Campus garages.

OVERTURE CENTER (OC)

BACKGROUND

GRAEF performed a visual inspection of the structural, mechanical, electrical, and plumbing/fire protection systems for the City of Madison's Overture Center parking ramp; instances of hammer tapping and chain dragging occurred where required. This assessment was to determine the overall condition of the systems, identify locations for the 2024 repair season and update the digital record of the findings for use in future repairs and assessments.

Field observations were taken in October 2023 by Aaron Gerhards, Maria Renier, Giovanni Bianchi, and Jessica Culver with GRAEF. Field observations were taken using ArcGIS Field Maps and will be digitally maintained using GRAEF's InfiniteGIS system for future assessments and structural repairs. This report presents the findings of the 2023 assessments with recommendations for repairs and measures to extend the life of the structure.

The following documents were reviewed during this assessment:

- ELS Design Group Capitol Centre Parking Ramp Record Drawings (1982)

STRUCTURAL CONDITION ASSESSMENT

STRUCTURAL SYSTEM DESCRIPTION

The Overture Center Parking Ramp is a double-helix structure constructed in the early 1980's which services numerous government and commercial buildings in the area with a total area of approximately 196,000 square-feet. The structure is accessed at the X1 and Y1 levels via W Dayton Street and W Mifflin Street, respectively.

The structure is founded on spread footings with its lowest levels of parking, X1/Y1, supported by a 5" slab on grade reinforced with welded-wire fabric. The successive elevated levels, X2/Y2 through X7/Y7, are supported by one-way 5 ½" post-tensioned slabs framed by 16x36" post-tensioned beams. Structural levels have a typical bay width of 63'-0" from column-to-column and beam spacing varied from 16'-3" to 22'-9" with 18'-0" typical at interior bays. Expansion joints were designed to separate the structure down its length with joints in the drive lanes at the ends and intermediate crossovers and near midpoints across its width.

STRUCTURAL MODIFICATION HISTORY

The encased wide-flange steel beam located over on the X6 level is believed to transfer the additional load from the brick masonry walls and mechanicals within to adjacent post-tensioned beams as the original slab was not designed for the significantly larger dead load at this location. No significant

structural modifications have been made to the structure beyond this and the future additions installed per the original design (elevator shaft).

STRUCTURAL REPAIR HISTORY

The following is taken from the previously cited 2018 Condition Assessment Report supplied to the City of Madison Parking Utility by JSD:

"There have been some minor repairs made to the OC parking garage over the years, including expansion joint replacement, re-caulking, and minor concrete spalls and brick replacement on the exterior façade. A Silane Sealer was placed over the surface of the parking slabs in 2010. The 2012 restoration phase included expansion joint replacement as well as minor concrete repairs to the underside of the slabs and to columns and beams throughout the ramp. The expansion joints were replaced in 2012 at the following locations; the mid-span of bays at 2X, 3X, 4X, and 6Y; the crossover joint on Levels 3 and 5; and at the end bays of Levels Y1/Y2, X1/X2, X2/X3, X3/X4, X4/X5, and X5/X6. Missing expansion joint header material was also replaced at the crossover joint on Level 7 in 2012.

In 2015, expansion joints were replaced at the mid-span of bays 2Y, 3Y, and 4Y; the crossover joints at X2/Y2 and X4/Y4; and at the end bay of Y2/Y3. Restoration also included concrete repairs and sealant replacement and some masonry replacement and repairs.

In 2016, new expansion joints were installed at the mid-span of bays Y5, X5, and X6; crossover joint X7/Y7. Restoration also included concrete repairs and the application of a Silane Sealer throughout the entire ramp.

No repairs were completed as part of the 2017 restoration phase.

The 2018 repairs included some minor concrete repairs at column bases, underside slab repairs at the block out area for a future elevator, and at concrete treads. A concrete block wall and expansion joint were replaced at the West wall, Level X1, following damage from a vehicle impact."

In 2019, damage to the plaster of an encased steel beam was repaired outside the southeast elevator on Level X6, membrane was replaced around the X1/X2, Y1/Y2 expansion joints and miscellaneous repair was done to expansion joints.

In 2020, minor concrete repairs were performed on slab cracks, slab, stair, and column spalls, expansion joints between X3 and Y3, X7 and Y7, and mid-bay on levels X4 and Y5 were widened to accommodate a new pre-compressed modular foam joint style, and miscellaneous repair to concrete masonry mortar joints.

In 2021, minor concrete repairs to concrete walls, slabs, stair treads, and cracks were performed

along with a significant repair to the stair landing at the X2 level on the Dayton Street side. Additionally, expansion joints between X4 and Y4 and mid-bay on levels Y3 and X6 were widened to accommodate a new pre-compressed modular foam joint style, mortar joints in brick at the X7/Y7 Level were replaced, and several curbs beneath the window of elevator lobbies were repaired.

In 2022, minor concrete spalls were repaired as in most previous years, as well as several masonry mortar joints, and locations of failed sealant. On the north end of each structural floor, the locations designed for a future elevator was sealed and a traffic membrane applied to mitigate future deterioration of the concrete and steel angles below. Throughout the ramp, localized deterioration of barrier cable sheathing was repaired by removing broken sheathing and corrosion, panting exposed steel, and covering with a protective wrap that is sealed at its ends.

As the result of an unfavorable bidding climate, no annual maintenance contract was executed for 2023.

STRUCTURAL SYSTEM ASSESSMENT

The Overture Center parking structure's structural system is in overall good condition. Most of the issues noted in this assessment are the product of typical wear and material behavior and should be addressed with regular maintenance of the structure. Minor concrete repairs on slabs, columns and in stair towers were noted throughout the structure along with corrosion of handrails in stair towers and cracked concrete masonry walls.

RECOMMENDED STRUCTURAL SYSTEM REPAIRS

Immediate Repairs

1. **Concrete Spalls**
    a. Slabs – Most slab spalls occur in the stair towers around embedded handrail posts and at joints between the landings and the stair. Typical spall repair is recommended at these locations with additional steel cleaning/painting included of embedded handrail posts. Minor concrete popouts due to minimal cover or corroded bar chairs are present throughout the structure; these locations do not present fall risks and a generally minimally susceptible to further deterioration.
    b. Columns – Typical spalling of columns occurs at column corners near the slab surface where vehicle runoff from cars and minor stress concentrations from the concrete frame movement are most prevalent.

2. **Concrete Slab Cracks** – Some cracks were noted in the 2023 assessment. Some cracks originate at expansion joints while others occur at existing repairs. All cracks should be routed and sealed.
3. **Failed/Missing Sealant Joints** – Cracked, failed, and missing sealant joints were documented in this assessment at expansion joints, joints between brick masonry, at concrete barrier walls, and at the bases of roof-level light posts. All noted sealant joints should be replaced or installed.
4. **Corroded Interior Barrier Cables** – In 2022, localized repairs of damaged sheathing and corroded post-tensioning steel of interior barrier cables were performed on the levels beneath X6, Y6, and X7/Y7 where cables were in relatively good condition. On Levels X6, Y6, and X7/Y7 the majority of post-tensioning cable sheathing has been removed and replaced with segmented, plastic split-tubing leaving gaps between broken lengths, at splice locations, and at column faces allowing water to freely corrode the exposed steel. All existing tubing at these levels should be removed, the steel strands cleaned free of corrosion, painted, and sealed in a similar manner to repairs performed in 2022.

Long Term Repairs

1. **Masonry Unit/Joint/Mortar Cracks** – Concrete masonry unit and associated mortar joint cracks noted in isolated areas are generally superficial in nature and do not require immediate repair. Fully fractured and loose blocks should be replaced/re-mortared. Cracks in masonry joints should be repointed.
2. **Silane Sealer Treatment Schedule** – As part of a revolving schedule, this ramp was scheduled for a Silane Sealer treatment in 2024. However, due to the unsuccessful 2023 Annual Maintenance Contract, silane sealer treatment for State Street Capitol is recommended for the 2024 contract and Overture Center in 2025.

MECHANICAL CONDITION ASSESSMENT

MECHANICAL SYSTEM DESCRIPTION

The mechanical system is composed of unit heaters in the elevator lobbies and gas fired unit heaters for attendant stations.

MECHANICAL SYSTEM ASSESSMENT

The Overture Center mechanical systems are in good condition. It was noted that the elevator equipment room was warm during the site visit, and functionality of the split system should be confirmed. Manufacturer recommended maintenance schedules should be followed for all HVAC

systems. The HVAC units serving the attendant stations should be replaced at the end of their useful life, which is approximately 20 years. Unit heaters are easily replaceable and should be replaced upon failure.

RECOMMENDED MECHANICAL SYSTEM REPAIRS

Immediate Repairs

1. **Regular Maintenance** – The mechanical systems should have regular maintenance completed each year or as recommended by the manufacturer.
2. **Gas Fired Unit Heaters** – The Gas fired unit heaters serving the offices and attendant stations are beyond their useful life and should be replaced within the next 1-2 years. Equivalent replacements for existing units are available from the manufacturer.
3. **Elevator Equipment Room Split System –** Confirm functionality of elevator equipment room HVAC system. Repair or replace as necessary.

Long Term Repairs

1. **Equipment** – Major HVAC Equipment should be replaced at the end of its useful life. Unit heaters are easily replaceable and should be replaced upon failure.

ELECTRICAL CONDITION ASSESSMENT

ELECTRICAL SYSTEM DESCRIPTION

The electrical distribution is composed of Square D and General Electric panelboards. The lighting is controlled by a Tork lighting control panel located in a closet on the Y1 level. There is no emergency lighting system. Currently the parking ramp lights are mainly high-pressure sodium with a few LED light fixtures. A new telecommunication connection was recently added to the Overture Center Parking Ramp and the elevator equipment and room were recently updated.

ELECTRICAL SYSTEM ASSESSMENT

The Overture Center Parking Ramp's electrical system is at the end of its life expectancy and not up to current code. All the electrical distribution panels except for the new telecommunication panel need to be replaced. The typical life expectancy of electrical distribution panels is 30 years. High-pressure sodium light fixtures should be replaced due to their life expectancy of 20 years. An emergency lighting system is stipulated by current code as a requirement but is not present at the Overture Center Parking Ramp. The emergency lighting system will need to be added at the time of the electrical lighting and or distribution panel replacement.

The issues noted in the condition report are the product of typical wear and material behavior and should be addressed with regular maintenance of the electrical systems. Minor conduit repairs in parking ramp, storage rooms and in stair towers.

RECOMMENDED ELECTRICAL SYSTEM REPAIRS

Immediate Repairs

1. **Electrical Distribution panels** – All the electrical distribution panels need to be replaced due to age. The overcurrent devices can fail to open resulting in destructive failure of component or equipment burndown. Failure is possible due to dirt intrusion or age of components.
2. **Light Fixtures and Emergency Lighting System** – All the light fixtures need to be replaced due to age. The light fixture ballast can fail and cause the entire lighting circuit to turn off. The failure would happen at the end of the life expectancy due to age and/or corrosion. An emergency lighting system should be installed to allow pedestrians to exit the parking ramp safely during an emergency.

Long Term Repairs

1. **Conduits** – Replace corroded or cracked conduits. Replace missing or broken conduit clips. Reseal and reconnect any conduits that have come apart.
2. **Light Fixtures** – Continue preventative maintenance including cleaning and re-lamping light fixtures.
3. **Electrical Distribution Panels** – Continue preventative maintenance including cleaning and testing breakers regularly.

PLUMBING CONDITION ASSESSMENT

PLUMBING SYSTEM DESCRIPTION

The plumbing system is composed of storm piping and non-potable wash-down systems and appears to be in good condition.

PLUMBING SYSTEM ASSESSMENT

The Overture Center storm and non-potable water systems all appear to be in very good condition. Regular maintenance of the storm piping system should be completed to ensure the deck drains get cleaned of debris to prevent clogging of the system. Piping should be replaced at the end of its useful life, or approximately 40-50 years after installation, but is not expected to need major replacement within the next 10 years.

RECOMMENDED PLUMBING SYSTEM REPAIRS

Immediate Repairs

1. **Regular Maintenance** – The plumbing systems should have regular maintenance completed each year to clear debris from the system.

Long Term Repairs

1. **Piping** – Piping should be replaced at the end of its useful life, which is expected in the next 10-15 years.

FIRE PROTECTION CONDITION ASSESSMENT

FIRE PROTECTION SYSTEM DESCRIPTION

The fire protection system is composed of standpipes in the stairwells of the garage. The piping is in good condition.

FIRE PROTECTION SYSTEM ASSESSMENT

The fire protection piping, and fittings are in good condition and not expected to require replacement within the next 10 years. Regular maintenance of the system should be completed, and failed valves replaced, as necessary. Piping should be replaced at the end of its useful life, which is approximately 40-50 years after installation.

RECOMMENDED FIRE PROTECTION SYSTEM REPAIRS

Immediate Repairs

1. **Regular Maintenance** – The piping systems should have regular maintenance completed each year.

Long Term Repair

1. **Piping** – Piping should be replaced at the end of its useful life, which is expected in the next 10-15 years.

STATE STREET CAPITOL (SSCo)

BACKGROUND

GRAEF performed a visual inspection of the structural, mechanical, electrical and plumbing/fire protection systems for the City of Madison's State Street Capitol parking ramp; instances of hammer tapping and chain dragging occurred where required. This assessment was to determine the overall condition of the systems, identify locations for the 2024 repair season and update the digital record of the findings for use in future repairs and assessments.

Field observations were taken in October 2023 by Aaron Gerhards, Maria Renier, Pete O'Neill, Giovanni Bianchi, and Jessica Culver with GRAEF. Field observations were taken using ArcGIS Field Maps and will be digitally maintained using GRAEF's InfiniteGIS system for future assessments and structural repairs. This report presents the findings of the 2023 assessments with recommendations for repairs and measures to extend the life of the structure.

The following documents were reviewed during this assessment:

- John J. Flad & Associates Original Construction Drawings (1962)
- John J. Flad & Associates Addition #1 Construction Drawings (1966)
- Carl Walker, Inc. Addition #2 Construction Drawings (1996)

STRUCTURAL CONDITION ASSESSMENT

STRUCTURAL SYSTEM DESCRIPTION

The State Street - Capitol Parking Ramp is a seven-story cast-in-place concrete structure with a total area of approximately 360,000 square-feet. The structure was originally constructed in the early 1960's with an addition performed in the late 1960's and a vertical expansion performed in the late 1990's. The ramp services numerous government and commercial buildings in the Capitol Square area and is accessed at Level 1 via an entrance on West Johnson Street, West Dayton Street and two entrances on North Carroll Street.

The original structure is founded on spread footings, and the vertical expansion on piles and pile caps. The lowest level of parking, Level L, is supported by a 6" slab-on-grade reinforced with welded-wire fabric. The structural systems for the elevated levels constructed in the 1960's, Level 1 through Level 3, are 11" thick mildly reinforced two-way flat slabs with typical 12'-0" x 12'-0" x 5" thick drop panels. The structural systems for the elevated levels constructed as part of the vertical expansion, Level 4 through Level 6, are one-way 6" post-tensioned slabs framed by 16x32" post-tensioned beams

typically spaced at 18’-0” on center. The structure consists of four parking bays, two exterior and two interiors. The typical exterior bay width is 60’-0” and the typical interior bay width is 65’-9”. Expansion joints separate the structure between the two interior bays at all levels. Expansion joints also exist across the width of the garage at Levels 1 to Level 3. At the vertical expansion levels, pour strips were utilized across the garage width to accommodate thermal and shrinkage motion.

STRUCTURAL MODIFICATION HISTORY

The following is taken from the previously cited 2018 Condition Assessment Report supplied to the City of Madison Parking Utility by JSD:

“The State Street Capitol (SSCo) parking structure was originally constructed in 1963 with a corner infill addition to complete the rectangular shape in 1966. The original name of the parking structure was the Dayton Street Parking Ramp. The rectangular shaped four bays wide parking garage is approximately 264 feet long by 199 feet wide. The parking structure, bordered by Dayton Street, Johnson Street, and Carroll Street, consists of a concrete slab-on-grade at the lowest level and three plus levels of elevated mild reinforced structural slabs.

In 1996, a vertical expansion was constructed which created three additional post-tensioned structural parking levels above the original structure. This new construction included the placement of new columns and footings. This included cutting holes in the original slabs to extend the new columns from the new foundations to the three levels above the original structure.

The parking bays are inclined with the outer North and South parking bays sloping opposite the center two bays. The SSCo ramp has four stair towers located at the Northeast and Southeast corners and near the Northwest and Southwest corners of the ramp. Cashier booths were placed at two entrances on Carroll Street which replaced the parking meters; the original means of revenue collection. The SSCo also has entrances off of Dayton and Johnson Streets for short-term and permit parking.

In the late 1970s, steel supports were placed below the expansion joints, perpendicular to the joint. The expansion joints extend across the width of the parking slabs near the mid-length of the parking bays. These tube steel members, which are bolted to the slab on one side of the joint and cantilever below the joint to support the slab on the opposite side, are spaced approximately 6’-0” on center. They were designed to replace the failed concrete haunches. The concrete haunches, part of the original slab design, were cast as part of the slab edge at one side of the expansion joint to support the slab edge from the opposite side of the joint.

The 1963/1966 Dayton Street Parking Ramp was constructed as a mild reinforced two-way flat plate concrete structure with tapered circular concrete columns and rectangular column capitals.

The columns are located approximately 14 feet inward from the edge of the parking slabs. The column locations result in a long-cantilevered slab from the column centerline to the outside face of the slab at the parapets located at the front of the parking stalls. This design results in the need for reinforcing top bars to span over the column centerline and extend to the edges of the slab. Top steel, reinforcing placed near the top surface of the slab for the negative bending produced in the slab, is especially vulnerable to corrosion due to its proximity to the corrosive de-icing salt placed on the slabs or the road salt tracked into the structure by automobiles.

In addition to the original round concrete columns there are square columns, about 2 feet by 2 feet that were constructed at the end of the parking bays. As mentioned earlier in this report, these columns pass through the original parking level slabs and extend up to support the added levels constructed in 1996. The added columns add no support for the original parking levels. Details for the addition show isolation material placed around the new columns as they pass through the original slabs in an effort to limit vertical loading to the new columns to that of the vertical expansion."

In 2021, a new concrete pad for a pay-on-foot station was installed at the south Carroll Street entrance. Also, an original weep drain from the area well beneath the Johnson Street sidewalk that had been blocked by the installation of the vertical expansion pile cap was remediated by a single core through the pile cap and coupling of PVC to the existing weep pipe that discharges to the slab on grade floor drain.

STRUCTURAL REPAIR HISTORY

The following is taken from the previously cited 2018 Condition Assessment Report supplied to the City of Madison Parking Utility by JSD:

"Extensive phased repairs of the mild reinforced parking slabs began in the early 2000s. Recent documented repairs in 2009 included concrete repair on the underside of the subbasement structural slab, control joint sealant on the slab-on-grade, and concrete repairs in the stairwell along Dayton Street closer to State Street.

The 2010 restoration phase consisted of extensive topside concrete repairs for delaminated concrete on Level 1, and Aisle F of Level 2. Joint sealant and crack repairs occurred in the post-tension structural slabs above. Concrete spalls were also repaired on the underside of Levels 1 through 3, focused in the areas of the expansion joints.

A continuation of the 2010 concrete repair to the mild reinforced concrete slabs occurred in 2011. Level 2 had concrete repairs at the topside on Aisles D, B, and A; as well as throughout Level 3. Levels 1 and 6 had a lot of caulking and joint sealant replacement. An epoxy ejection occurred on Level 5

overhead on the beam at grid A-4.

The 2012 restoration phase included extensive repair work on all four stair towers. Along with concrete repairs at the steps and the landings, repainting of the walls and the railing inside all the stair towers was completed.

The topside of the South and North structural slabs at Level 1, along Dayton and Johnson Streets, were repaired during the 2013 and 2014 restoration phases, respectively. An adhered elastomeric membrane was placed on the restored slabs in these bays. Additionally, a surface applied penetrating corrosion inhibitor was placed on the North Bay prior to placing the membrane.

In 2015, the underside of the two center bays of Level 2 were repainted, sealant was replaced at selected locations at the top side of the slabs, and the badly rusted steel haunches below the slabs were grit blasted and repainted. In 2016, similar items to 2015 were done in addition to joint replacement and a new open storm grate installation. The 2016 repair also included extensive sealant replacement throughout the ramp.

The 2017 restoration phase was limited due to the electrical modifications and upgrades completed.

The 2018 restoration phase included top of slab repairs at Levels 1 and 2 and overhead repairs below Levels 1 and 2. An expansion joint was replaced on Level 3 at the East end bay, grid 2."

In 2019, full-system membrane was installed at C[0] - A2.4 on the Lower Level and G6.6 – F[9] and an 8-foot swathe centered between gridlines 7 and 8 from F to the expansion joint between D and C.5 on Level 1. Concrete repairs were done to overhead slabs and beams, vertical surfaces and original tapered columns and expansion joints were replaced in the following locations:

- Level 3: Aisles F, D, B, and A, and end lanes on grid 4.4
- Level 2: Aisle B and grid F to G on along 4.4
- Level 1: Grid F to G on along 4.4

In 2020, significant repairs were performed on the original lower levels of overhead concrete slabs, primarily concentrated about expansion joints and modified slabs around vertical expansion columns along with topside slab and column spall repairs, re-sloping of concrete around the expansion joint above the facility office on Level 2 between grids A/B 4.4 and A/B 4.6, replacement of select sealant joints, crack routing and sealing, replacement of grout at precast spandrel bearing locations on Level 6 and temporary repair of the trench drain on L1 near the Johnson Street entrance.

In 2021, concrete spall repair was performed at overhead locations, vertical expansion columns, and some topside slab locations; most topside slab spall repairs were deferred for future epoxy

injections while some were injected with epoxy. Also performed was re-sloping of the concrete, in conjunction with epoxy filling and slab grinding, to correct damming exacerbated by adjacent to re-sloping performed in 2020 above the facility office, replacement of sealant joints at the base of interior crash walls, many joints between precast and expansion columns on Level 3, Level 4, and Level 5, replacement of grout beneath precast spandrel bearings on Level 5, a large slab on grade replacement at the Lower Level between the Dayton and Johnson Street entrances with the addition of reinforcing steel and subgrade re-compaction, and replacement of expansion joints in the following locations:

- Level 6: Between grids G/F 4.4
- Level 3: Between grids G/F 2.4 and 6.6
- Level 2: Between grids D.75 0/2.4
- Level 1: Between grids D.75 0/2.4 and C.75 6.6/6.75

In 2022, typical concrete spalls were performed on slabs, both overhead and topside (where spall damage was visible at the surface) and at the bases of concrete crash walls. Cracks in mild-reinforced concrete slabs were routed and sealed in Aisles “A” and “F” and sealant was replaced between the facility wall and the existing building. Epoxy injection of topping slabs was also completed for the second year.

As the result of an unfavorable bidding climate, no annual maintenance contract was executed for 2023. During the 2023 assessment period, a new generator room with an interior grade generator was under construction in the southwest corner of Level L.

STRUCTURAL SYSTEM ASSESSMENT

The State Street – Capitol parking structure’s structural system is in overall fair condition at the lower levels and good condition at the vertical post-tensioned expansion. Most issues were concentrated on the older, conventionally reinforced lower levels, while the newer post-tensioned upper levels had only minor repairs noted. Most of the issues noted in this assessment are the product of typical wear and material behavior and should be addressed with regular maintenance of the structure. Concrete repairs to slabs and columns were observed throughout the structure also with cracked concrete masonry units and mortar joints, cracked brick masonry units and mortar joints, poor connections on some expansion joints, and leaking in a stair tower.

RECOMMENDED STRUCTURAL SYSTEM REPAIRS

Immediate Repairs

1. **Concrete Spalls**
    a. Slabs – Many of the slab spalls occur at the older, mildly reinforced levels of the parking structure. The post-tensioned slabs were generally in good condition. Overhead spalls on concrete slabs typically occur around vertical expansion columns and internal expansion joints.
        i. Epoxy Injection of Delaminated Topping Slabs – Due to the tendency of topside spall repairs on the original structural levels to grow to several times their original size during demolition/repair, in 2021 and 2022 a new repair approach was implemented. A series of ports were drilled into the structural slab and epoxy-injected to re-bond a variable thickness topping slab back to the original structural slab. In general, the success of this approach has varied from rejection of the epoxy to complete re-bonding of the slabs. For locations where the injection was mostly successful, no additional debonding or failure was noted in 2023.
    b. Walls – Minor spalling was noted at walls in the 2023 assessment due to corrosion or insufficient cover of the embedded steel rebar.
2. **Concrete Cracks**
    a. Vertical Expansion Elements – A small quantity of cracks in the post-tensioned slabs were quantified in this condition assessment and are primarily the result of initial stressing of post-tensioning tendons during construction. Cracks in concrete slabs will allow for water to penetrate the slab and corrode the embedded reinforcement, leading to future deterioration more easily. It is recommended that all unsealed cracks be routed and sealed. Multiple cracks were observed at some interior columns and beams in the upper levels, similarly because of the initial stressing of post tensioning tendons. Some cracks show signs of moisture being trapped inside them and should be monitored for future signs of corrosion.
    b. Concrete Slabs – In general, the original structural slabs of the State Street Capitol parking facility have a significant number of cracks due to the type of structural system and age. These cracks are generally not structural in nature but may be routed and sealed to prevent future spalling and debonding and extend the service life of the slabs.

3. **Silane Sealer Treatment Schedule** – Parking structures without extensive traffic membrane are part of a revolving ten-year schedule for Silane Sealer application; the State Street Capitol Ramp, previously scheduled for 2023, is now recommended for treatment in 2024.
4. **Debonded Re-Sloping Concrete –** In 2020, local re-sloping of the concrete was done about the expansion joint above the facility office. In the 2021 assessment, it was noted that a large section of this re-sloped area is debonded. Upon review of construction progress photos, though chipping of concrete at the area perimeter was performed, it is suspected that the original concrete surface was not intentionally roughened by scarifying machine. As such, material shrinkage and/or movement of the structure can cause the re-sloping material to become easily debonded. Presently, the repair appears in good condition and is otherwise performing as intended, however, as much of the area is debonded, the long-term durability of the repair is compromised. This should be remediated by complete removal and replacement or epoxy injection to bond the slab and fill the void.
5. **Expansion Joints** – Several lengths of expansion joints have been replaced in recent years and of those that remain, a small quantity of pinhole leaks occur at the upper levels. Several expansion joints throughout the lower levels have damaged headers or flanges and active leaks that should be replaced.
6. **Precast Connections** – Precast panels on the exterior façade are supported by a vertical steel plate that rests in a slot cast into the panels' underside where its gravity and wind load bear on the connection. Two instances of failing concrete around these connections were noted in the 2023 assessment. At one location, an existing repair around the slot has partially failed, while at the other, a crack and suspected spall have developed through the slot at the bottom corner of the panel, most likely from of a connection point on either side of an internal slab expansion joint. In both conditions, a new, post-installed connection should be made to replace the failing one and located on the same side of an expansion joint as its companion connections.

Long Term Repairs

1. **Masonry Unit/Joint/Mortar Cracks** – Concrete masonry unit and associated mortar joint cracks noted in isolated areas are generally superficial in nature and do not require immediate repair. Fully fractured and loose blocks should be replaced/re-mortared. Cracks in masonry joints should be repointed.
2. **Brick Masonry Unit/Joint/Mortar Cracks** – Brick masonry unit and associated mortar joint cracks noted in isolated areas are generally superficial in nature and do not require immediate

repair. Fully fractured and loose blocks should be replaced/re-mortared. Cracks in masonry joints should be repointed. In addition, minor efflorescence was noted in the exterior façade.

3. **Post-Tensioned Slab Staining** – Multiple stains on the underside of the post-tensioned concrete slab were noted and a suspected result of leaking of the grease from encapsulated post-tensioning cables in the slabs. These locations should continue to be monitored for signs of corrosion potentially affecting post-tensioning strands.
4. **Expansion Joint Slab Supports –** Corrosion was commonly observed at the steel tube supports that bridge the expansion joints at the mildly reinforced lower levels. Corrosion limited to the surface of the steel should be removed and the members cleaned and repainted. At one location, the grout between the slab and the steel tube and shims has deteriorated. As this is a bearing condition for the slab, it is recommended to provide temporary shoring of the slab, remove the grout, and pressure inject new non-shrink grout.
5. **Corrosion of Door Frames and Handrails –** In the stair towers, particularly between Level L and Level 2, the bases of several door frames in additional to several handrail components were corroded to the point of full section loss. In lieu of full replacement of these components, any sections of full section loss should be cut and covered/capped to prevent risk of injury on jagged or sharp surfaces.
6. **Vertical Expansion Column Settlement –** Per the recommendation of the 2020 condition assessment report, 90-degree crack monitors were installed on six vertical expansion column faces on L2 in late Fall of 2020 with construction adhesive. Measurements taken during the 2023 assessment are summarized below: +/- Absolute (+/- Relative to 2022).

Column Location	X-Direction Movement (Horizontal) (mm)	Y-Direction Movement (Vertical) (mm)	Comments
8.5/D.5	**N/A**	**N/A**	**Monitor damaged/detached**
8.5/D	**- 1.0 (No Change)**	**- 0.25 (No Change)**	**(X-Dir = +E/-W)**
8.5/B	**+ 1.0 (No Change)**	**- 2.25 (No Change)**	**(X-Dir = +N/-S)**
0.5/E	**+ 1.0 (No Change)**	**+ 0.25 (+ 0.25)**	**(X-Dir = -E/+W)**
0.5/D	**+ 0.25 (No Change)**	**- 1.0 (No Change)**	**(X-Dir = -E/+W)**
0.5/C	**+0.50 (+ 0.75)**	**No Change**	**(X-Dir = -E/+W)**

Similar to the results recorded in 2022, most measurements of the expansion columns' movement relative to the original structural slab are either unchanged or not significantly different.

MECHANICAL CONDITION ASSESSMENT

MECHANICAL SYSTEM DESCRIPTION

The mechanical system is comprised of roof mounted exhaust fans at the stairs, Reznor HVAC units serving mechanical rooms, offices, and the attendant stations and exhaust fans on the Lower Level for garage exhaust.

MECHANICAL SYSTEM ASSESSMENT

The roof mounted exhaust fans serving the stairs appeared to be in good condition. Both exhaust fans on Level L have been replaced. The exhaust fan serving the shop room is in fair condition. The HVAC units are almost all beyond their useful life and should be replaced within 1-2 years. It was noted that the summer ventilation fans were operational during winter operation.

RECOMMENDED MECHANICAL SYSTEM REPAIRS

Immediate Repairs

1. **Regular Maintenance** – The mechanical systems should have regular maintenance completed each year or as recommended by the manufacturer.
2. **Summer Ventilation Fans** – Operation should be reviewed to ensure summer ventilation fans are not operational during winter
3. **Gas Fired Unit Heaters** – The Gas fired unit heaters are all beyond their useful life and should be replaced within year.

Long Term Repairs

1. **Equipment** – Major HVAC equipment should be replaced at the end of its useful life.

ELECTRICAL CONDITION ASSESSMENT

ELECTRICAL SYSTEM DESCRIPTION

The electrical distribution is composed of Square D and Eaton panelboards. The lighting is controlled by a Square D Powerlink lighting control panel located in the main electrical room. There is a generator for emergency lighting system. In 2017 most of the parking ramp lights were replaced with LED. A few fluorescent light fixtures were not replaced in the storage, mechanical, and electrical rooms.

ELECTRICAL REPAIR HISTORY

The following is taken from the previously cited 2018 Condition Assessment Report supplied to the City of Madison Parking Utility by JSD:

"The 2017 restoration phase … included the replacement of panel boards and wiring and the installation of LED luminaires. The limited repair included a redesign and replacement of the trench drain and expansion joint area of the structure on Level 3."

ELECTRICAL SYSTEM ASSESSMENT

The State Street Capitol Parking Ramp's electrical system is new and in good condition. All the electrical distribution panels have been replaced and updated recently. The emergency generator system at the State Street Capitol Parking Ramp did not pass inspection and does not meet code. It is currently being updated with a new generator to meet code. LED light fixtures were recently installed, though a few storage, electrical, and mechanical rooms have fluorescent lighting.

The issues noted in the condition report are the product of typical wear and material behavior and should be addressed with regular maintenance of the electrical systems. Minor conduit repairs in parking ramp, storage rooms and in stair towers.

RECOMMENDED ELECTRICAL SYSTEM REPAIRS

Immediate Repairs

1. **Emergency Generator System** –The emergency generator system did not pass building inspection because it does not meet code. The generator needs to be in a 2-hour rated room with proper ventilation. The new generator and room are currently under construction.
2. **Conduits** – Replace corroded, disconnected, or cracked conduits. Replace missing or broken conduit clips. Reseal and reconnect any conduits that have come apart.

Long Term Repairs

1. **Light Fixtures** – Continue preventative maintenance including cleaning and re-lamping light fixtures.
2. **Electrical Distribution Panels** – Continue preventative maintenance including cleaning and testing breakers regularly.
3. **Emergency Generator System** – Continue preventative maintenance including cleaning and testing generator regularly.

PLUMBING CONDITION ASSESSMENT

PLUMBING SYSTEM DESCRIPTION

The plumbing system is composed of storm piping and deck drains to drain the garage deck, a garage washdown system, and a holding tank for retention of stormwater.

PLUMBING REPAIR HISTORY

The following is taken from the previously cited 2018 Condition Assessment Report supplied to the City of Madison Parking Utility by JSD:

"During the 2014 restoration phase, a new stormwater settling tank was installed in the Northwest corner of the ground level. The settling tank was designed as a sand interceptor."

PLUMBING SYSTEM ASSESSMENT

According to maintenance personnel, the lower level of the garage floods during rain events. Drains route to a sump pump that discharges to storm, however, the holding tank gets overwhelmed and water backs up to the first level, which drains back down to the lower level. This may indicate a need for a larger holding tank or a bypass to the city's storm system. The storm piping for the garage is showing significant signs of corrosion, and a complete replacement with new PVC piping should be considered within the next 4 years. The washdown piping is in good condition. To resolve drainage issues per previous reports, a weep hole was installed for the area drain on the lower level.

RECOMMENDED PLUMBING SYSTEM REPAIRS

Immediate Repairs

1. **Regular Maintenance** – The plumbing systems should have regular maintenance completed each year to clear debris from the system.
2. **Piping** – There are several areas where piping is corroded and should be replaced.
3. **Flooding** – The lower level flooding should be addressed. This may be an issue with the settling tank size or how the system is piped.

Long Term Repairs

1. **Piping** – The storm piping for the garage should be replaced with PVC at the end of its expected useful life within the next 2-3 years.

FIRE PROTECTION CONDITION ASSESSMENT

FIRE PROTECTION SYSTEM DESCRIPTION

The fire protection system for this garage consists of standpipes in the stairwells.

FIRE PROTECTION SYSTEM ASSESSMENT

The standpipe piping within the stairwells appears in good condition though piping on the

exterior of the stairs is corroded and should be replaced. Painting or coating appears to have been completed on the system and is in good condition.

RECOMMENDED FIRE PROTECTION SYSTEM REPAIRS

Immediate Repairs

1. **Regular Maintenance** – Regular maintenance is required for standpipe systems and should be completed annually at a minimum.
2. **Piping** – There are several areas, especially outside the stairwells where piping is corroded and should be replaced.

Long Term Repairs

None.

CAPITOL SQUARE NORTH (CSN)

BACKGROUND

GRAEF performed a visual inspection of the structural, mechanical, electrical and plumbing/fire protection systems for the City of Madison's Capitol Square North parking ramp; instances of hammer tapping and chain draining occurred where required. This assessment was to determine the overall condition of the systems, identify locations for the 2024 repair season and update the digital record of the findings for use in future repairs and assessments.

Field observations were taken in October 2023 by Aaron Gerhards, Maria Renier, Giovanni Bianchi, and Jessica Culver with GRAEF. Field observations were taken using ArcGIS Field Maps and will be digitally maintained using GRAEF's InfiniteGIS system for future assessments and structural repairs. This report presents the findings of the 2023 assessments with recommendations for repairs and measures to extend the life of the structure.

The following documents were reviewed during this assessment:

- Lawrence McCormick Parking Ramp Drawings (1970)

STRUCTURAL CONDITION ASSESSMENT

STRUCTURAL SYSTEM DESCRIPTION

The Capitol Square North parking garage, with entrances located on Butler, Mifflin, and Webster Streets, is a four-bay wide structure and essentially square in shape at 226'-6" long by 257'-8" wide. The number of levels varies from North to South with the sloping site. There are three (3) supported structural levels and a slab-on-grade level at the South side of the ramp and four (4) structural levels and slab-on-grade level at the North side.

The parking garage, constructed in the early 1970s, is a one-way post-tensioned structure. With the construction of this type of structure, the slab is designed to span in one direction between evenly spaced beams which span across the width of the ramp. The parking decks consist of 6½-inch thick slabs at the end bays and 5½-inch thick slabs at the interior bays. The concrete beams are located 18'-0" on center and span the 63'-0" wide parking bays. The slab is thickened at the pour strips which are located near the center of the longitudinal structure length. The slab thickens to 10 inches as it cantilevers 4'-6" out from the beams at either side of the 9-foot wide, 5-inch thick pour strip. The pour strip sits on a 4-inch wide by 5-inch deep ledge or haunch at the ends of the thickened cantilevered concrete slab.

Per the 2018 JSD assessment report: "The post-tension tendons consist of greased wire strands within a

paper wrap. The paper wrap allows the concrete to bond to the paper while the tendon slides within the paper wrap when stressed. The button-head tendons, an older style post-tension system used in the Capitol Square North ramp, were stressed by pulling two plates apart at the stressing end of the slab and inserting a third set of plates between and perpendicular to the other two plates." GRAEF has not been able to confirm the type of post tensioning tendons.

The post-tensioned tendons provide the main reinforcement for the slabs. The tendons, which extend the length and width of the slab, have a fixed end at one end of the slab and a stressing end at the other. Tendons are draped such that they are high near the top of the slab over beams and low at the mid-span between beams in this one-way span design. This provides the post tensioning compressive force at the location of the tension in the slab.

Temperature tendons were placed to span across the width of the slab to control shrinkage and the seasonal thermal movement of expansion and contraction. When the tendons are stressed, they compress the slab and create internal forces that act in opposite to the applied forces.

STRUCTURAL MODIFICATION HISTORY

The following is taken from the previously cited 2018 Condition Assessment Report supplied to the City of Madison Parking Utility by JSD:

"There have been many changes made to the Capitol Square North parking garage over the years. The most significant changes are those that were made to the pour strips. In the mid-1980s, the 9-foot wide post-tensioned pour strips, which were located near mid-length of the structure, were removed and replaced with mild-reinforced slabs. The mild-reinforced pour strips are supported by the same concrete haunches that provided the bearing support for the original post-tensioned reinforced pour strips.

Details for the original pour strip show that a steel channel had been cast into the bearing edge of the post-tension pour strip slab along the length on both sides. The channel cast into the edge of the pour strip slab sat on a downturned angle on a haunch along each side of the slab. A second angle cast into the edge of the parking deck slab at the top of the slab formed the joint between the downturned leg of the slab angle and the channel cast into the edge of the pour strip slab.

A mild reinforced concrete slab replaced the post-tension pour strip slab. The upper side of the new sloping pour strip slab was fixed to the adjacent original post-tension ramp slab as headed studs were welded to the original downturned slab angle and cast into the concrete of the replaced pour strip. The mild reinforced slab continues to bear on the original angle on the haunch of the cantilevered post-

tension slab. The lower side of the mild-reinforced pour strip was kept free for thermal movement with the introduction of an expansion joint. As part of the modification of the original structure for the pour strip replacement, a short sloping concrete overlay was placed at the lower, expansion joint side of the pour strip. This concrete overlay was placed the width of the ramp over the angle that had been cast into the top of the parking deck slab in the original construction. This narrow width overlay was blended into the concrete of the post-tension parking deck slab. A block out was formed in the overlay and the new pour strip slab and a preformed urethane expansion joint material was placed in the block out.

In the 1990s, a snow chute was added to the North end of the ramp at the Butler Street entrance. The concrete tower abutting the structure facilitates snow removal from the top level of the parking garage.

The sloping tops of the stair towers, which exhibited extensive leaking at the sloped glass, were revised replacing the area of sloping glass at the top of the tower with a squared off structure. In the summer of 2010, the glazing and mullions for the outer two glass sides of the stairs were replaced.

Studies conducted on the parking garage in the 1980s found minimal concrete cover over the post-tension tendons at the tendon high points over the beams and at the tendon ends at the East and West ends of the ramp and at both sides of the pour strips at the fixed ends of the tendons. A fully adhered latex membrane with an epoxy wear coat was initially placed on the end bays and pour strip areas at the tendon ends to protect these vital areas from corrosion. Shortly after the initial membrane placement, the remainder of the concrete surfaces between the end bays also received a membrane protection coat.

The full membrane system that was placed on the Capitol Square North ramp is a multi-layer system. The initial coating applied to the concrete slab was an epoxy primer. This was followed by a 25 dry mil thick liquid applied latex membrane. The membrane base coat forms the waterproofing barrier for the reinforced concrete slab. The latex membrane base coat is topped with a liquid applied epoxy wear coat layer. Silica sand or a fractured manufactured epoxy is broadcast into the epoxy material to the point of saturation. This provides the durability and wear protection for the latex base layer. Excess aggregate not bound in the epoxy material is swept off the wear coat and a thin coat of the epoxy is applied to the wear coat to lock in any sand that may be loosely bound in the wear coat."

STRUCTURAL REPAIR HISTORY

The following is taken from the previously cited 2018 Condition Assessment Report supplied to the City of Madison Parking Utility by JSD:

"Repairs have been made at concrete spalls on the underside of the ramp, adjacent to both

sides of the pour strips, and small miscellaneous areas of the top of slabs and beam bottoms. Repairs have also been made to the perimeter precast concrete spandrel panels. Areas of brick have been replaced at the East, Butler Street end of the ramp. The [rowlock] brick course which had originally been placed on the top of parapets has been replaced with a metal cap flashing and precast concrete coping.

During the 2011 restoration phase, a crack was discovered at the underside of a concrete haunch supporting the mild reinforced concrete pour strip. The crack ran parallel to the expansion joint. The crack was determined to be a shear crack that had formed at the backside, vertical face of the support haunch. The concrete haunch and bearing angle for an approximately 18-foot length of the haunch was removed exposing the reinforcing steel.

It was found that the reinforcing for the haunch had not been properly placed when the structure was built. The reinforcement for the haunch did not extend from the slab into the support edge of the haunch as indicated in details on the original drawings. Therefore, there was no steel across the shear plane at the point where the slab reduced in cross section to form the support ledge for the pour strip. Restoration included additional reinforcing being placed for the haunch and a new galvanized steel angle provided at the outer top corner of the bearing ledge. The haunch section was recast below the mild reinforced pour strip. A continuation of the haunch replacement made in 2011 below level one between grids A and B was completed in 2015. This extended the replacement from the initial 18-foot of replacement to the end of the slab, an additional 44 feet.

The placement of membrane wear coat/top coat on entire parking bays has been the primary focus during the 2012, 2013, 2014, 2015, and 2016 restoration phases. The placement began at the top level and has progressed down the ramp the last few years of restoration. There has also been some miscellaneous restoration including concrete repairs at the underside of the haunches, routing and sealing new cracks, replacement of sealant in existing cracks and along slab edges, and the replacement of lengths of compression seals at end bays. The phased placement of membrane wear coat/top coat to the previous membrane installation was complete on all levels with the 2016 restoration phase. However, there is new wear showing on the top level of the Capitol Square North ramp, and it is anticipated that a new round of wear coat/top coat placement will begin again in 2017.

Other repairs in 2016 were made to the mechanical room located near the Mifflin Street ramp entrance. This modified the slab slope in a limited area to create a water flow away from the block wall of the room. It also included replacement of some badly worn block units, placement of a membrane over the newly placed concrete taper and the placement of sealant and tuck-pointing block joints.

A study was completed by Giles Engineering in 2016 which utilized concrete penetrating radar to

evaluate the presence and location of reinforcement within the concrete haunches. This was done in response to the earlier discovery that the reinforcing for the haunches was not properly placed in the original construction. The haunches are located at each side of the mild reinforced pour strips.

A continuation of membrane placement was completed on the top level of the parking garage in 2017. This membrane placement added a new wear coat over the worn membrane that had been applied at the top level in 2012. Based on the concrete penetrating radar test, two (2) locations were determined to need full haunch replacement. These were overhead on Level 1, Aisles U and R. Painting of rusted angles also occurred, completing painting all the angles in the last few years. Miscellaneous concrete repairs also were addressed. Work completed in 2018 primarily consisted of the placement of membrane wear coat and top coat on Aisle T of Level 3 and Aisle U of Level 4. Replacement of expansion joint header material and of sealant was deferred to 2019.

In 2019, full-system membrane (Kelmar) was installed at the East Mifflin Street entrance on Level 2 with miscellaneous spot repair in bay C-D on Level 1 with top/wear coat application in bay C-D and D13-E12 on Level 1 and D-G on Level 2. Sealant joint replacement was done at stair tower exterior and minor concrete spalls and cracks were repaired.

In 2020, the pour strip on the Mifflin Street side of Level 4 was replaced and the high side of the ramp re-sloped to allow proper drainage over the new pour strip to the existing floor drain on the low side. Additionally performed were: concrete spall repairs (primarily at column bases), localized spot repair of failed Kelmar membrane and addition of membrane to stair landings on Level 3 and Level 4, including above the electrical room, sealing of tops of stubbed Level 4 columns, sealing of brick exterior and brick replacement at Level of the northwest stair, installation of stainless steel flashing over structure gap between grids B/C from 12 to 13 and installation of steel channels to the exterior of the Butler Street columns as a temporary restraint for the brick façade on top of a rotating retaining wall."

In 2021, the north-side pour strip at Level 4 was replaced and the adjacent deck modified for proper drainage sloping. During this process, several post-tensioning cables were exposed, the sheathing damaged, and repaired. In addition, minor concrete spalls, mostly at column bases, were repaired along with the replacement of expansion (sealant) joints on Level 2 and Level 3 between grids E 1/2, installation of reinforcing steel required to replace unbonded segment of column concrete at the top of a stubbed Level 4 column, and replacement of damaged and exterior sealing of all brick on the northeast stair tower.

In 2022, the pour strips on Level 1 and 2 in Aisle "T" were removed and replaced, on Level 1, the supporting haunch on the west side of the opening was removed, modified and replaced. Additionally,

due to the poor condition of the existing embedded angle, this angle was removed, and dowels were installed directly into the concrete edge instead of welded to the existing angle. These modifications to the repair detail at this level were performed in conjunction with a GPR scan of the slab edge to locate and avoid post-tensioning tendons. Stainless steel plates were installed to anchor the sections of unbonded concrete at the tops of perimeter columns on the north and south sides of Level 4. Additionally, a guardrail at Level L was repaired and repainted, brick was locally repaired at the southwest stair tower and the entirety of the exterior sealed, minor concrete spall repairs at column bases were completed, and an expansion joint at Level 1 on Grid B was replaced.

As the result of an unfavorable bidding climate, no annual maintenance contract was executed for 2023.

STRUCTURAL SYSTEM ASSESSMENT

The Capitol Square North parking structure's structural system appears to be in overall good condition. Most of the issues noted in this assessment are the product of typical wear and material behavior and should be addressed with regular maintenance of the structure. Minor concrete repairs on slabs, columns, walls, and beams were noted throughout the structure.

Most locations of spalling and cracking were noted near columns/column lines. Retaining wall conditions, not accounted for in the original design of the structure, are resulting in the rotation of concrete walls and progressive loss of bearing of brick masonry façade and infills. Several pour strips have been replaced in previous years; however, most are still in relatively poor condition with minor concrete deterioration, corroded, embedded steel, and leaking joints.

RECOMMENDED STRUCTURAL SYSTEM REPAIRS

Immediate Repairs

1. **Damaged Brick –** The northwest, northeast, and southwest stair towers had brick repair/replacement performed at Level 4 and the exteriors of the towers were sealed in previous repair contracts. It is recommended to provide the same treatment to the remaining stair tower.
2. **Concrete Spalls**
    a. Slabs – Slab spalls noted in the 2023 assessment commonly occurred at joints between slab on grade panels. While not structurally significant, some of these spalls may develop into future tripping hazards and should be repaired.
    b. Columns – Spalls typically occur at locations of previous repairs and near the floor slab, comprising most of the concrete repair work.

3. **Damaged Roof Steel** – Two locations of the perimeter steel at the roof were damaged by impact and anchorages pried out of the concrete slab. The posts supporting wide flange sections should be reset and re-anchored if in good condition.
4. **Damaged Exterior Brick Planter** – In general, the exterior planters of the facility are in poor condition likely due to a combination of inadequately designed foundations and spalling of the brick from water penetration. In addition to the typical poor condition of the planters, the planter nearest the corner of Mifflin Street and Webster Street was damaged from a vehicle impact during snow clearing operations and should be repaired.
5. **Traffic-Bearing Membrane –** The condition of the membrane at Capitol Square North varies throughout the structure's elevated levels. Below the exposed Level 3 and Level 4 floors, the membrane appears to be in generally good condition with only localized areas of heavy wear or failure. On the exposed Level 3 and Level 4 floors, the membrane is in generally poor condition with the interior bays exhibiting large areas of complete system failure. In conjunction with the performance on the exposed replacement pour strips, the Kelmar membrane material used at this garage appears to become very brittle making it highly susceptible to premature wear and failure from typical traffic and snow removal operations as well as having poor crack-bridging capability. It is recommended that the interior two bays of the Level 3 membrane be replaced, and all future membrane replacements be performed using a traditional polyurethane membrane system.
6. **Concrete Cracks –** Several cracks in elevated structural slabs were observed in the 2023 assessment that should be routed and sealed. At two of these locations, the cracks appear full depth for a partial length and show signs of what is believed to be post-tensioning cable grease leaking from failed cable sheathing. In addition to the routing and sealing of the crack, these locations should continue to be monitored for further development and signs of continued leaking or corrosion staining.
7. **Concrete Masonry Joints –** Along the north side of the building, there is an infill CMU wall between concrete curb and spandrel that provides screening to the adjacent residences. The reinforcing and out-of-plane bracing designs for the stack-bond wall are not included in the original construction documents and are currently unknown. At one location, a visible gap/loss of mortar between masonry columns was reported by the City and confirmed by GRAEF. In addition, the grouted head joint between the top of the masonry infill and the underside of the spandrel beam is mostly deteriorated at all levels. GRAEF recommends the removal,

investigation of construction, and replacement of the block where the visible separation occurs, and replacement of the mortar head joint at all locations.

8. **Roof Steel Corrosion** – Painted steel along the east and west perimeter of the garage at roof (Level 3 or Level 4) is corroding and its paint progressively failing. To prolong the life of the steel, these members should be cleaned and repainted.

Long Term Repairs

1. **Expansion Joints at Pour Strips –**
    a. Leaking pour strips have been historically replaced based on a risk and condition assessment in 2020 (1), 2021 (1), and 2022 (2). In the 2023 assessment, the condition of unreplaced pour strips remains generally unchanged with most stalls beneath closed due to overhead leaks.
    b. Replacements completed in 2020 (Level 4), 2021 (Level 4), and 2022 (Levels 1 and 2) were reviewed in the 2023 assessment. Minor leaks due to curb detailing full-depth shrinkage cracks that were not routed and sealed prior to the application of membrane were noted on the Level 4 replacements. Minor, repeated corrosion of the embedded steel angles on the underside of the pour strips is ongoing due to their continuous exposure to elements.
2. **Rotating Retaining Walls** – Sections of exterior walls appear to be designed without an appropriate footing or reinforcing to adequately retain soil. In one instance along the western face of the facility at Level 1, a double-wythe brick wall is retaining a soil load from the exterior for which it is not designed. At this location, the inner wythe of brick has displaced from the concrete curb below 3/8” to 7/8”.

    Similarly, several cantilevered concrete walls show signs of rotation (visible displacement from brick above, highly and variably compressed compressible filler between face of wall and faux pilaster) with up to ½” of measurable displacement. The design of these walls does not appear to have considered the varying wall conditions due to grade changes on all sides of the structure.

    Planters located on the east and west exteriors of the structure have similarly inadequate consideration for retaining soil which is likely contributing to the visibly poor and failing condition of the brick. Comprehensive repair and maintenance of these planters will likely be cost-intensive. Demolition of the planters and a landscape redesign of the affected areas may be considered as a more cost-effective option. In general, a comprehensive evaluation of the

brick façade, all the buildings retaining walls, and the exterior planters, it is recommended to develop effective strategies to maintain the brick and retaining walls for the expected remaining service life of the structure.

3. **Expansion Joints** – In general, the expansion joints between bays of the garage are in fair to good condition.

MECHANICAL CONDITION ASSESSMENT

MECHANICAL SYSTEM DESCRIPTION

The mechanical system is composed of exhaust fans at the top of the stairwells, exhaust fans on the Lower Level for enclosed garage exhaust and several HVAC units on the Lower Level serving various areas.

MECHANICAL SYSTEM ASSESSMENT

The mechanical system on the Lower Level needs repairs or upgrades. Exhaust fans serving the garage are showing significant signs of corrosion and should be replaced within 1-2 years. The Reznor HVAC units serving attendant areas are beyond their useful life and should also be replaced. The exhaust fans serving the stairwells are in good condition.

RECOMMENDED MECHANICAL SYSTEM REPAIRS

Immediate Repairs

1. **Regular Maintenance** – The mechanical systems should have regular maintenance completed each year or as recommended by the manufacturer.
2. **Exhaust Fans** – All garage exhaust fans on the Lower Level should be replaced due to age. If these fans fail, there is a potential for CO2 buildup within the garage, which is considered a life-safety issue.
3. **HVAC Units** – The Gas fired unit heaters are all beyond their useful life and should be replaced within 1-2 years.

Long Term Repairs

1. **Equipment** – Major HVAC equipment should be replaced at the end of its useful life.

ELECTRICAL CONDITION ASSESSMENT

ELECTRICAL SYSTEM DESCRIPTION

The electrical distribution is composed of Square D and Eaton panelboards, lighting controlled

by a Square D Powerlink lighting control panel located in the main electrical room, and a lighting inverter for emergency lighting system. In 2016 most of the parking ramp lights were replaced with LED. A few fluorescent light fixtures were not replaced in the office, storage, and electrical rooms.

ELECTRICAL SYSTEM ASSESSMENT

The Capitol Square North Parking Ramp's electrical system is new and in good working condition. All the electrical distribution panels have been replaced and updated recently. However, water is leaking onto one of the electrical distribution panels and will cause the panel to prematurely fail. The leak has been fixed and panels appear to be in good working condition. Batteries for the emergency lighting system at the Capitol Square North Parking Ramp were replaced in 2021 and have a typical life expectancy of 10-20 years. LED light fixtures were installed in 2016, but not all lighting was replaced; a few storage, office, and electrical/mechanical rooms yet have fluorescent lighting.

The issues noted in the condition report are the product of typical wear, construction practices and material behavior and should be addressed with regular maintenance of the electrical systems. Minor conduit repairs in parking ramp, storage rooms and in stair towers were noted throughout the parking ramp.

RECOMMENDED ELECTRICAL SYSTEM REPAIRS

Immediate Repairs

1. **Conduits** – Replace corroded or cracked conduits. Replace missing or broken conduit clips. Reseal and reconnect any conduits that have come apart.

Long Term Repairs

1. **Light Fixtures** – Continue preventative maintenance including cleaning and re-lamping light fixtures.
2. **Electrical Distribution Panels** – Continue preventative maintenance including cleaning and testing breakers regularly.
3. **Emergency Lighting System** – Continue preventative maintenance including cleaning and testing batteries regularly.

PLUMBING CONDITION ASSESSMENT

PLUMBING SYSTEM DESCRIPTION

The plumbing system is composed of storm piping and deck drains serving the garage and gutters for the overhangs by the stair towers. The plumbing systems are in good condition, with a few

areas of concern. No domestic water hose bibb washdown system is present at this garage.

PLUMBING SYSTEM ASSESSMENT

The storm piping is in generally good condition, though, there are a few areas where piping is corroded and should be replaced with PVC. There are also several areas where the paint is peeling on the piping and could use repainting. The gutters are corroded and should be replaced.

RECOMMENDED PLUMBING SYSTEM REPAIRS

Immediate Repairs

1. **Regular Maintenance** – The plumbing systems should have regular maintenance completed each year to clear debris from the system.
2. **Piping** – There are several areas where piping is corroded and should be replaced.
3. **Gutters** – The gutters on the Lower Level and Level 1 are corroded and should be replaced.

Long Term Repairs

1. **Piping** – The storm piping for the garage should be replaced with PVC at the end of its useful life. This is expected within the next 5-7 years.

FIRE PROTECTION CONDITION ASSESSMENT

FIRE PROTECTION SYSTEM DESCRIPTION

The fire protection system, composed of standpipes in the stairwells of the garage, is in good condition.

FIRE PROTECTION SYSTEM ASSESSMENT

The fire protection piping, and fittings are in good condition and are not expected to require replacement within the next 10 years. Regular maintenance of the system should be completed, and valves replaced as necessary upon failure. Piping should be replaced at the end of its useful life, which is approximately 40-50 years after installation.

RECOMMENDED FIRE PROTECTION SYSTEM REPAIRS

Immediate Repairs

1. **Regular Maintenance** – The piping systems should have regular maintenance completed each year.

Long Term Repair

1. **Piping** – Piping should be replaced at the end of its useful life, which is expected in the next 10-15 years.

SOUTH LIVINGSTON STREET (SLS)

BACKGROUND

GRAEF performed a visual inspection of the structural, mechanical, electrical and plumbing/fire protection systems for the City of Madison's South Livingston Street parking ramp; instances of hammer tapping and chain draining occurred where required. This assessment was to determine the overall condition of the systems, identify locations for the 2024 repair season and establish a digital record of the findings for use in future repairs and assessments.

Field observations were taken in October 2023 by Aaron Gerhards, Giovanni Bianchi, and Jessica Culver with GRAEF. Field observations were taken using ArcGIS Field Maps and will be digitally maintained using GRAEF's InfiniteGIS system for future assessments and structural repairs. This report presents the findings of the 2023 assessments with recommendations for repairs and measures to extend the life of the structure.

The following documents were reviewed during this assessment:

- BWBR (Architectural) Capitol East Parking Garage Record Documents (2019)
- GRAEF (Structural) Capitol East parking Garage Record Documents (2019)

STRUCTURAL CONDITION ASSESSMENT

STRUCTURAL SYSTEM DESCRIPTION

The South Livingston Street parking garage, with entrances located on East Main and South Livingston Streets, is a three-bay wide structure measuring 268'-0" long by 186'-0" wide. The parking garage, constructed in 2018, is five at or above-grade levels providing approximately 250,000 square-feet of parking with an attached commercial space on the north end of the parking structure.

Level 1 is a structural, two-way fiber-reinforced slab on grade spanning between aggregate piers as a result of limited capability to modify the existing soil conditions for improved bearing conditions due to existing soil contamination. Levels 2 through 5 are 6" one-way post-tensioned slabs on post-tensioned beams and girders. Bays are typically 62'-0" by 23'-6" with longer bays occurring between grids 3 and 4 and grids 11-13. For the South Livingston Street parking garage, a crystalline waterproofing admixture was included in the concrete mixes for slabs and beams intended to resist water penetration and remediate most hairline cracking in the concrete. Below Level 1 exists a tunnel running between the northwest to southeast corners that houses a large concrete-encased duct bank beneath clear stone for the American Transmission Company. The 18'-6"-wide tunnel is supported by vertical and battered piles

and spanned above by eight-inch precast hollow-core plank. Additionally, a 1,450 square-foot water storage tank exists beneath the Level 1 to Level 2 ramp. The tank is constructed of a 10-inch mat slab on piles and spanned above by the typical post-tensioned slab.

STRUCTURAL MODIFICATION HISTORY

Several locations of traffic-bearing membrane installations occur within the garage – most notably across the top third of the Level 1 to Level 2 ramp and a 4-stall width on Level 2 immediately south of the west stair; these membrane locations occur over occupied spaces of the garage. Two smaller instances of membrane also occur at columns on the easternmost column line on the ramp from Level 3 to Level 4 where spall repair/re-sloping of the concrete was performed during original construction.

During construction, two embedded plates for connections to the precast wall panels on the southeast side of the structure were misaligned at Level 2, a supplementary plate connection was installed between the last pair of panels and an angle connection from the last panel to the cast-in-place column to provide the necessary lateral restraint.

Presently, the South Livingston Street garage primarily services events at The Sylvee music venue. Traffic is typically rerouted to two exit lanes to accommodate the peak volume. In 2019, where the Level 1 to Level 2 ramp meets Level 1 at grid 12, the structural slab on grade was re-sloped to accommodate the modified traffic pattern.

STRUCTURAL REPAIR HISTORY

In 2021, approximately 45 feet of cracking through the Level 2 concrete slab was repaired using Xypex Patch ‘N’ Plug. A dovetail slot was cut into the slab and patched with the cementitious compound with a crystalline waterproofing component compatible with the existing structural concrete with the intent of preserving the integrity of the concrete admixture. In addition, a cover plate and sealant over the expansion joint between the parking and commercial space structures was removed and reinstalled to investigate the recurring leak through the joints and anchorage for a pipe guard on Level 2 that was broken out of its concrete embedment due to impact from a sweeper was replaced.

In 2022, the damaged snow chute deflector liner was removed, the precast connections pockets grouted, and a new liner was installed, localized re-sloping by several layers of a sand-epoxy mixture was removed and replaced by traditional spall repair methods, and all expansion joints between the parking and commercial facilities were replaced with appropriately sized compression joints. A Colorseal joint of 8-inch width was needed.

As the result of an unfavorable bidding climate, no annual maintenance contract was executed for 2023.

STRUCTURAL SYSTEM ASSESSMENT

The South Livingston Street parking structure's structural system appears to be in overall excellent condition. Most issues noted by this assessment are those common to the early stages of a structure's in-service life or the result of construction practices and should be addressed as typical maintenance.

RECOMMENDED STRUCTURAL SYSTEM REPAIRS

Immediate Repairs

1. **Missing Sealant at Light Post Bases** – At the base of light posts on the roof level, no sealant or flashing was provided allowing water to collect beneath the base enclosure and corrode exposed anchor bolts. At some columns, chipped concrete around the light post anchor bolts further allows water to pond against the exposed steel. The bases of these posts should be sealed to prevent future damage to the anchors.
2. **Concrete Slab Cracks** – In general, cracks in the post-tensioned slabs were found to be minimal due to the presence of post-tensioning in both directions and the use of crystalline waterproofing admixture in the structural concrete. As noted in the Repair History, several cracks were repaired using a Xypex repair mortar (Patch 'n' Plug) placed into a cut slot following the path of the cracks. Some deterioration and brittleness of the top layer of the repair material has been observed since its installation. However, despite the deterioration, no active leaks have been recorded at these locations. Throughout the garage evidence of crack development appears overhead, however, these cracks are generally not full-depth/visible from the top surface and have not been reported to be actively leaking. Where cracks are full-depth, GRAEF recommends a traditional rout and seal repair.
3. **Misaligned/Missing Precast Wall Panel Connections** – As noted in the Structural Modification History, misaligned embedded plates for lateral connections of the precast wall panels on Level 2 were retrofitted with a plate connection to the corner column. The same embedded plates on the Level 1 slab overhead were also misaligned, however, no supplementary plate connection is present. Additionally, the connection at the base of the precast panel to an embedded plate on the knee wall below was not installed, also because of a misplaced embedded plate on the top of the knee wall.

4. **Leaking of Interface Expansion Joint(s)** – In spite of several repairs to and replacements of compression seal joints between the parking garage and commercial space stair/elevator lobby, persistent leaking to levels below has been recorded with heavy rain and washdown events. Due to the detailing of the architectural precast panel and joint configuration, the full length of the expansion joint is not readily accessible for maintenance or replacement. As a result, it is believed that leaks, either from separated edges or incomplete joint splices, occur beyond the accessible length of the joint such that any water incident on the joint material migrates to the point of failure, percolating through to the levels below. A small project to install flashing at Level 5, mitigating the incidence of water directly on the joint is in process at the time of this report.

Long Term Repairs

1. **Corrosion of Precast Connections** – Lateral connections are provided at each floor for the precast wall panels on the east side of the structure's south face. Embedded plates and the welded connections have begun to mildly corrode. It is recommended that the developing corrosion be removed from the connections/welds and painted within the next two to three years.
2. **Concrete Spalls** – Spalled concrete was noted exclusively where anchorages for plumbing brackets were post-installed with anchors too near a free edge of a concrete member. These several locations are minor and would not ordinarily extend to the depth of the reinforcement within the concrete typically required for a comprehensive spall repair.
3. **Ponding Water** – Several smaller areas, typically near drains, were noted to have standing water and a build-up of salt deposits from vehicles. These areas should be monitored for cracking or general deterioration in future assessments. Localized re-sloping of the concrete may be considered to correct drainage issues. No additional deterioration was observed at these locations in 2023.
4. **Fading Striping** – As a result of the altered traffic pattern for events at The Sylvee, striping of the interior row of parking stalls on the level-to-level ramps is wearing prematurely. An accelerated schedule for restriping or more resilient striping product should be considered for these locations.
5. **Debonded Re-Sloping at Level 1 to Level 2 ramp Transition** – The local re-sloping performed in 2019 between the Level 1 floor and Level 2 ramp has partially debonded approximately 1-foot radially from the column. As no distress of the area was visible at the time of the assessment, it

is recommended to monitor this location for future distress and perform concrete repair as needed.

6. **ATC Tunnel** – In addition to the typically assessment of the parking garage superstructure, GRAEF performed a confined-space inspection of the tunnel below Level 1 that houses the ATC duct bank on March 28, 2022. No items of significance were observed during this inspection; refer to 2022 Condition Assessment report for general observations. GRAEF recommends this inspection be performed at five-year intervals (2027).
7. **Water Storage Tank –** Similarly, GRAEF performed a confined-space inspection of the water storage tank below the Level 1 to Level 2 ramp. No items of significance were observed during this inspection; refer to 2022 Condition Assessment report for general observations. GRAEF recommends this inspection be performed at five-year intervals (2027).
8. **Silane Sealer –** Silane sealer was included in the original construction of the parking facility and should be repeated with the same 10-year revolving schedule as the City's other facilities; this reapplication should occur in 2028.

MECHANICAL CONDITION ASSESSMENT

MECHANICAL SYSTEM DESCRIPTION

The mechanical system is comprised of unit heaters serving shop, electrical, and generator room, as well as furnaces to heat and cool the elevator lobbies. There are split systems serving the elevator equipment room, office, and IT room.

MECHANICAL SYSTEM ASSESSMENT

The mechanical systems for the garage are all in good condition. Equipment should be maintained on an annual basis and replaced at the end of its useful life. It was noted on site that the split system serving the data closet has an error code that should be investigated. The condensing unit for the lobby units is also non-functional and is being repaired.

RECOMMENDED MECHANICAL SYSTEM REPAIRS

Immediate Repairs

1. **Regular Maintenance** – The mechanical systems should have regular maintenance completed each year or as recommended by the manufacturer.
2. **Error Code Resolution** – Determine the source of the error code for the split system. Repair or replace the unit as necessary.

Long Term Repairs

1. **Equipment** – Major HVAC equipment should be replaced at the end of its useful life.

ELECTRICAL CONDITION ASSESSMENT

ELECTRICAL SYSTEM DESCRIPTION

The electrical distribution is composed of Square D switchboard and panelboards. The lighting is controlled by a Square D Powerlink lighting control panel located in the main electrical room. All the lighting is LED and there is an emergency generator for emergency lighting system.

ELECTRICAL SYSTEM ASSESSMENT

The South Livingston Street Parking Ramp's electrical power distribution system is new and in good working condition. All the lighting in the parking ramp is new and in good working condition. There have been no issues with any of the electrical systems. There were no issues noted in the condition report.

RECOMMENDED ELECTRICAL SYSTEM REPAIRS

Immediate Repairs

1. **None**

Long Term Repairs

1. **Light Fixtures** – Continue preventative maintenance by cleaning light fixtures.
2. **Electrical Distribution Panels** – Continue preventative maintenance including cleaning and testing of the breakers regularly.
3. **Emergency Generator System** – Continue preventative maintenance, including cleaning and testing of the generator regularly.

PLUMBING CONDITION ASSESSMENT

PLUMBING SYSTEM DESCRIPTION

The plumbing system is composed of storm piping and deck drains serving the garage, water service for hose bibbs, janitor closets, and restrooms, and sanitary systems for the restrooms and janitor closets.

PLUMBING SYSTEM ASSESSMENT

The plumbing systems within the garage are in good condition. Storm piping is PVC and should not need replacement within the next 10 years.

RECOMMENDED PLUMBING SYSTEM REPAIRS

Immediate Repairs

1. **Regular Maintenance** – The plumbing systems should have regular maintenance completed each year to clear debris from the system.

Long Term Repairs

1. **Piping** – The storm piping for the garage should be replaced with PVC at the end of its useful life. This is not expected within the next 10 years.

FIRE PROTECTION CONDITION ASSESSMENT

FIRE PROTECTION SYSTEM DESCRIPTION

The fire protection system, composed of standpipes in the stairwells of the garage and at intermittent columns throughout the garage, is in good condition.

FIRE PROTECTION SYSTEM ASSESSMENT

The fire protection piping, and fittings are in good condition and are not expected to require replacement within the next 10 years. Regular maintenance of the system should be completed, and valves replaced as necessary upon failure. Piping should be replaced at the end of its useful life, which is approximately 40-50 years after installation.

RECOMMENDED FIRE PROTECTION SYSTEM REPAIRS

Immediate Repairs

1. **Regular Maintenance** – The piping systems should have regular maintenance completed each year.

Long Term Repair

1. **Piping** – Piping should be replaced at the end of its useful life, which is not expected in the next 10 years.

WILSON STREET GARAGE (WSG)

BACKGROUND

GRAEF performed a visual inspection of the structural, mechanical, electrical and plumbing/fire protection systems for the City of Madison's Wilson Street parking ramp; instances of hammer tapping and chain draining occurred where required. This assessment was to determine the overall condition of the systems, identify locations for the 2024 repair season and establish a digital record of the findings for use in future repairs and assessments.

Field observations were taken in October 2023 by Aaron Gerhards, Giovanni Bianchi, and Jessica Culver with GRAEF. Field observations were taken using ArcGIS Field Maps and will be digitally maintained using GRAEF's InfiniteGIS system for future assessments and structural repairs. This report presents the findings of the 2023 assessments with recommendations for repairs and measures to extend the life of the structure.

The following documents were reviewed during this assessment:

- Halvorson and Partners Judge Doyle Square Bid Documents (2018)

STRUCTURAL CONDITION ASSESSMENT

STRUCTURAL SYSTEM DESCRIPTION

The Wilson Street Garage, with entrances located at ground level on East Wilson Street and Doty Street, is a three-bay wide structure measuring 261'-0" long by 182'-0" wide. The parking garage, constructed in 2020, is five below-grade levels providing approximately 230,000 square-feet of parking. At Level 1, there is a bicycle repair center and interior bicycle parking. Above Level 1, there is privately-owned parking, servicing the residential levels above.

Lower Level 4 is a 6" slab on grade while Lower Level 3 through Level 1 are typical cast-in-place, 8"-thick, mild-reinforced two-way concrete slabs spanning between columns with 6"-deep drop panels. Post-tensioned interior beams support a column transfer at LL0. Bays are typically 62'-0" by 23'-6" with longer bays occurring between grids 3 and 4 and grids 11-13. All reinforcing used in the parking structure is epoxy-coated.

STRUCTURAL MODIFICATION HISTORY

In 2020, traffic membrane was added to the pedestrian entrances from both Doty and East Wilson Streets along with the bicycle parking area to bridge existing cracks in the finished concrete and provide increased slip resistance.

Between the 2020 and 2021 repair seasons, water from a faulty fire suppression line, on Lower

Level 1, flowed unchecked into the north elevator lobby. Water overcame the threshold at the elevator door, flooded the elevator pit below and froze causing significant damage to the equipment within. To prevent future flooding, a series of one inch diameter holes were drilled through the curbs, below the interior-facing masonry walls of each below-grade elevator lobby, as close as possible to the existing top of slab to allow drainage from the lobbies to the parking deck.

STRUCTURAL REPAIR HISTORY

In 2021, Approximately 1032 feet of actively leaking cracks in the structural slab were identified by City staff during the 2021 repair season. Per a change order, these cracks were routed and sealed with flexible sealant. Additional locations of slab cracking were previously routed and sealed in 2020 under warranty from original construction by JP Cullen.

In 2022, 753 feet of actively leaking cracks located within parking stalls on the upper levels (L1, LL0, and LL1) were routed and sealed using a modified crack routing and sealing detail to include a minimum rectangular slot width and bond breaker tape.

As the result of an unfavorable bidding climate, no annual maintenance contract was executed for 2023.

STRUCTURAL SYSTEM ASSESSMENT

The Wilson Street Garage parking structure's structural system appears to be in overall good condition. Most issues noted by this assessment are those common to the early stages of a structure's in-service life or the result of construction practices and should be addressed as typical maintenance. Full-depth cracking of the structure's mild structural slabs is the most prominent issue observed throughout the facility.

RECOMMENDED STRUCTURAL SYSTEM REPAIRS

Immediate Repairs

1. **Concrete Slab Cracks** – As noted in the previous year's report, the frequency of cracking and premature failure of crack routing and sealing operations is a likely combination of typical shrinkage, flexure, and cyclical stresses resultant of thermal expansion and contraction of the restrained slab. In 2022, a select number of stalls in the upper levels of the facility were routed to a square slot with bond-breaking tape placed at the bottom of the slot. This approach should better accommodate the dynamic nature of the cracks by preventing bonding to the bottom surface of the crack and allowing the sealant to expansion and contract in a single dimension

only. Of the 753 feet of cracks repaired using this method in 2022, approximately 18 feet was noted as leaking during the annual washdown by Parking Utility staff. Upon investigation by GRAEF, this crack has a visible installation defect (visible bond breaker tape on the vertical face of the slot). From the notable improvement in efficacy of this style of repair over the previously noted failure rate of typical routing and sealing methods, GRAEF recommends that all slab cracks at this facility be repaired using this method.

2. **Added Floor Drains** – Several instances of standing water throughout the garage, in drive lanes or within/adjacent to electrical rooms were reported by the City. GRAEF recommends installation of floor drains, tied into the existing sanitary system, accompanied by localized re-sloping for drainage, and waterproofing membranes at these locations to prevent deterioration of wall bases and electrical equipment. An additional floor drain in an LL0 storage room is also recommended to prevent damage to City property from potential flooding due to issues from the residential system above the garage.
3. **Sealant at Column Bases –** Columns on the floor-to-floor ramps typically have an elevated wash at their bases, however, the columns along the interior wall do not. As this is a common drainage path, it is recommended to provide sealant around the bases of each of these columns to prevent future deterioration at the joint.

Long Term Repairs

1. **Concrete Masonry Damage** – Several masonry wall cracks were noted mostly at the interior walls of the structure but are generally minor in nature. Masonry (exterior face of Emergency Electrical Room) near the Doty Street entrance gates has notable efflorescence from the mortar joints and face shells, however, there were no visible signs of excessive moisture within the room. The amount of efflorescence on these masonry walls should be monitored in future assessments; a masonry coating may be considered to prevent long term deterioration of the block wall.
2. **Concrete Spalls** – Several spalls occur the tops or bases of Lower Levels 3 and 4 columns. Spalls occurring at column bases are typically incident to slab cracks, likely a result of local stresses developed by thermal movement and shrinkage of the slabs while spalls at the tops of columns are due to beam post-tensioning. These spalls are generally minor and superficial in nature.
3. **Active Leaks in Foundation Walls** – At several locations throughout the Lower Levels of the garage, generally near the base of walls, cracks in foundation walls were observed to be actively

leaking. These leaks are typically minor but may be sealed using an injection of polyurethane foam, acrylate resin, or combination of both.

4. **Silane Sealer** – Silane sealer was included in the original construction of the parking facility and should be repeated with the same 10-year revolving schedule as the City's other facilities; this reapplication should occur in 2029.
5. **Traffic-Bearing Membrane –** Wilson Street Garage has traffic-bearing membrane located at the Wilson Street vehicle and pedestrian entrances, the Doty Street pedestrian entrance, above interior rooms, and at the base of concrete curbs below elevator lobby CMU walls. In general, membrane is in good condition throughout the facility.

MECHANICAL CONDITION ASSESSMENT

MECHANICAL SYSTEM DESCRIPTION

The mechanical system for the garage includes air circulation fans throughout the garage levels, intake and exhaust fans serving the garage, cabinet heaters in elevator lobbies, split systems serving electrical rooms and elevator equipment rooms, and gas fired unit heaters for generator room. Stair lobbies are not heated or ventilated. There is a fan coil unit serving the workshop area and vehicle storage.

MECHANICAL SYSTEM ASSESSMENT

The mechanical systems are in good condition throughout the garage. Regular maintenance should be completed annually or as recommended by the manufacturer. Major equipment should be replaced at the end of its useful life. It was noted that a supply fan was out of service at the time of the site visit, and should be repaired or replaced as soon as possible.

RECOMMENDED MECHANICAL SYSTEM REPAIRS

Immediate Repairs

1. **Regular Maintenance** – The mechanical systems should have regular maintenance completed each year or as recommended by the manufacturer.
2. **Supply fan –** The non-functional supply fan should be repaired or replaced as soon as possible.

Long Term Repairs

1. **Equipment** – Major HVAC equipment should be replaced at the end of its useful life.

ELECTRICAL CONDITION ASSESSMENT

ELECTRICAL SYSTEM DESCRIPTION

The electrical distribution is composed of Square D switchboard and panelboards. The lighting had no controls and was on at 100% lighting levels all the time. All the lighting in the parking garage is LED and there is an emergency generator for the emergency lighting system.

ELECTRICAL SYSTEM ASSESSMENT

The Wilson Street Garage's electrical power distribution system is new and in good working condition. All the lighting is new and in good working condition. There have been no issues with any of the electrical systems. There were no issues noted in the condition report.

RECOMMENDED ELECTRICAL SYSTEM REPAIRS

Immediate Repairs

1. **None**

Long Term Repairs

1. **Light Fixtures** – Continue preventative maintenance by cleaning light fixtures.
2. **Electrical Distribution Panels** – Continue preventative maintenance including cleaning and testing breakers regularly.
3. **Emergency Generator System** – Continue preventative maintenance including cleaning and testing generator regularly.

PLUMBING CONDITION ASSESSMENT

PLUMBING SYSTEM DESCRIPTION

The plumbing systems serving the garage include a non-potable garage washdown system, sanitary system serving deck drains throughout the garage and restrooms, sump pumps in level LL5, and domestic water serving restrooms.

PLUMBING SYSTEM ASSESSMENT

The plumbing systems within the garage are in good condition. Storm piping is PVC and should not need replacement within the next 10 years.

RECOMMENDED PLUMBING SYSTEM REPAIRS

Immediate Repairs

1. **Regular Maintenance** – The plumbing systems should have regular maintenance completed each year to clear debris from the system.

Long Term Repairs

1. **Piping** – The storm piping for the garage should be replaced with PVC at the end of its useful life. This is not expected within the next 10 years.

FIRE PROTECTION CONDITION ASSESSMENT

FIRE PROTECTION SYSTEM DESCRIPTION

The fire protection system for the garage consists of upright sprinkler heads in lobby areas, and a standpipe system in garage stairwells. Dry systems throughout the garage have a nitrogen generation system. There is a fire pump serving the garage in the pump room.

FIRE PROTECTION SYSTEM ASSESSMENT

The fire protection piping, and fittings are in good condition and are not expected to require replacement within the next 10 years. Regular maintenance of the system should be completed, and valves replaced as necessary upon failure. Piping should be replaced at the end of its useful life, which is approximately 40-50 years after installation.

RECOMMENDED FIRE PROTECTION SYSTEM REPAIRS

Immediate Repairs

1. **Regular Maintenance** – The piping systems should have regular maintenance completed each year.

Long Term Repair

1. **Piping** – Piping should be replaced at the end of its useful life, which is not expected in the next 10 years.

APPENDIX 1: TYPICAL PHOTOS

SSL 1: Corroded Exposed Bars in Slab Crack (Overhead)

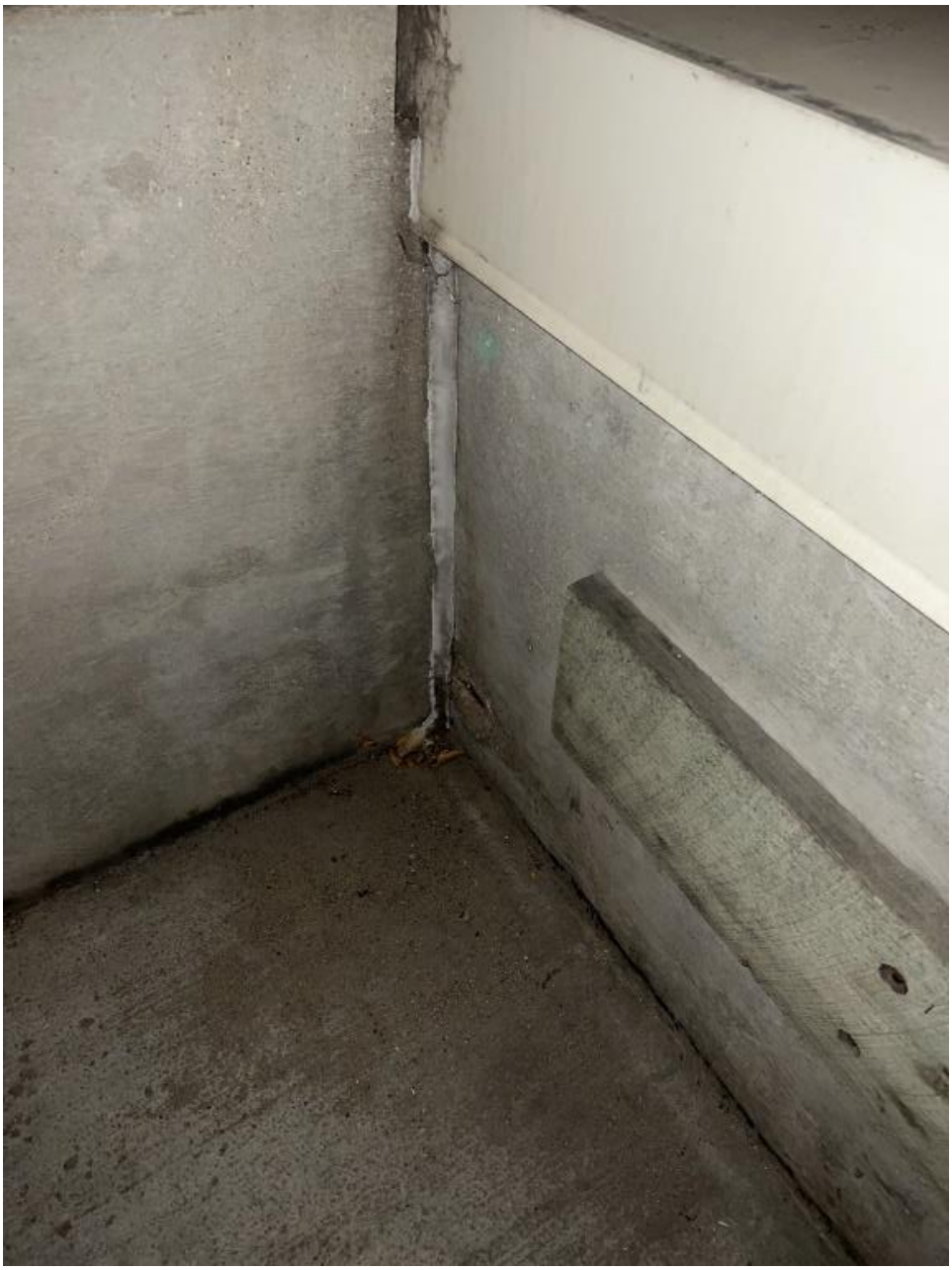
SSL 2: Joist Spall at Existing Repair with Embedded Pipe Hangers

SSF 1: Exposed Corroded Bar on Double Tee Stem

SSF 2: Corroded Precast Double Tee Shear Connector (Overhead)

OC 1: Failed Sealant Joint

OC 2: Spalled Column



OC 3: Spalled Wall

OC 4: Spalled Slab

SSCo 1: Spalled Slab

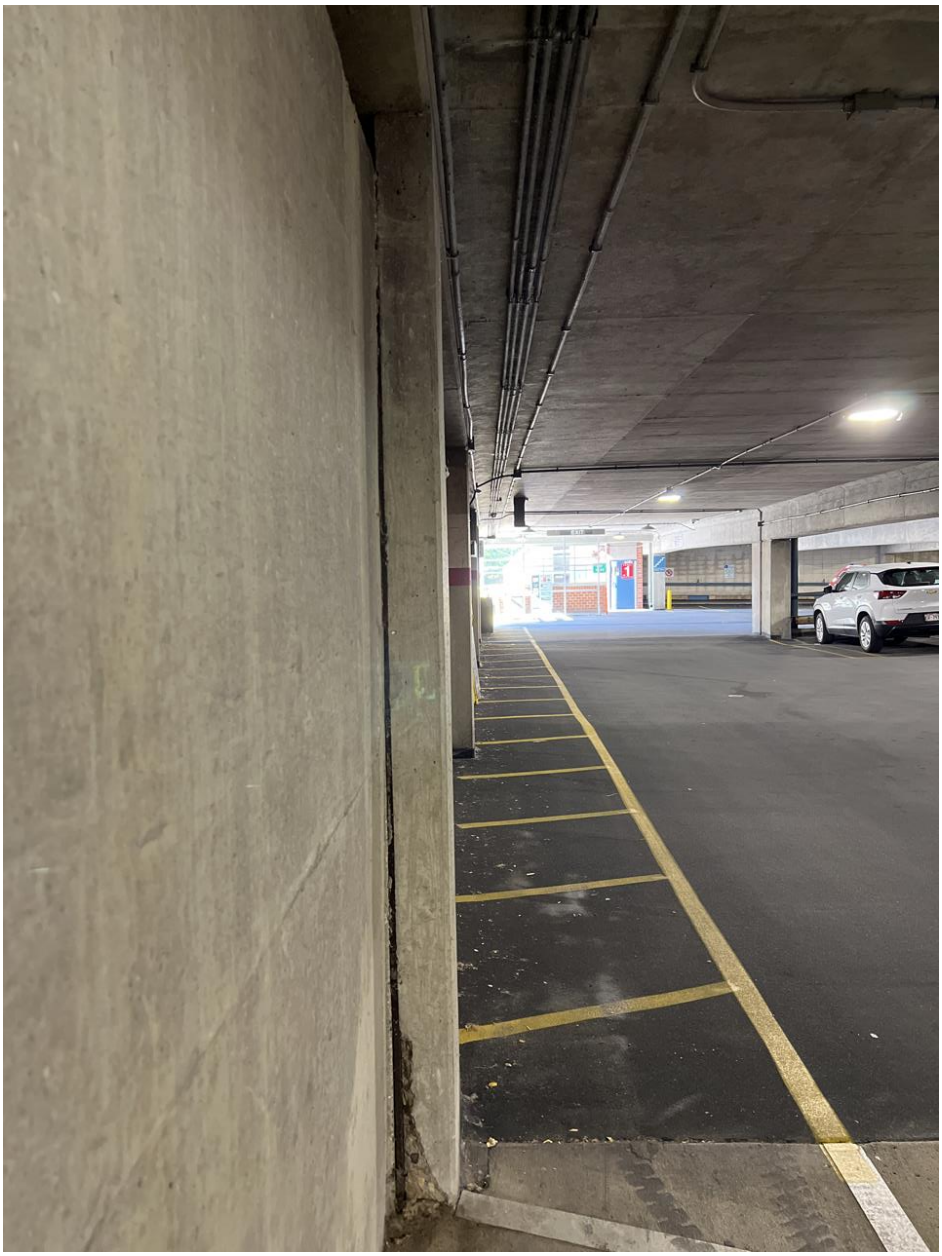
SSCo 2: Spalled Wall

SSCo 3: Spalled Column

SSCo 4: Spalled Beam

SSCo 5: Failed Sealant Joint

CSN 1: Failed CMU Vertical and Head Joints



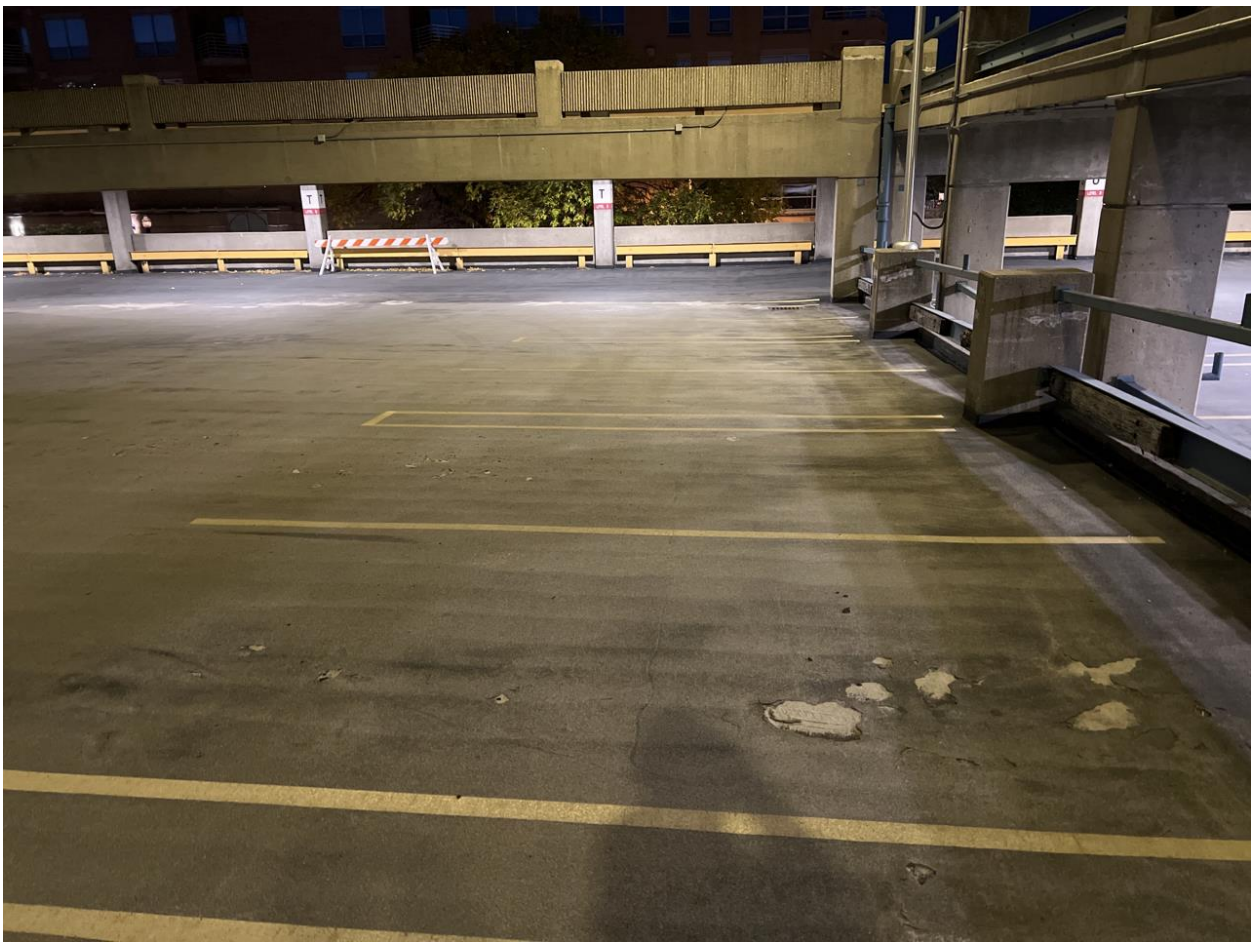
CSN 2: Fully Compressed Compressible Filler from Rotated Retaining Wall (Level 1)

CSN 3: Spalling at Slab on Grade Joints

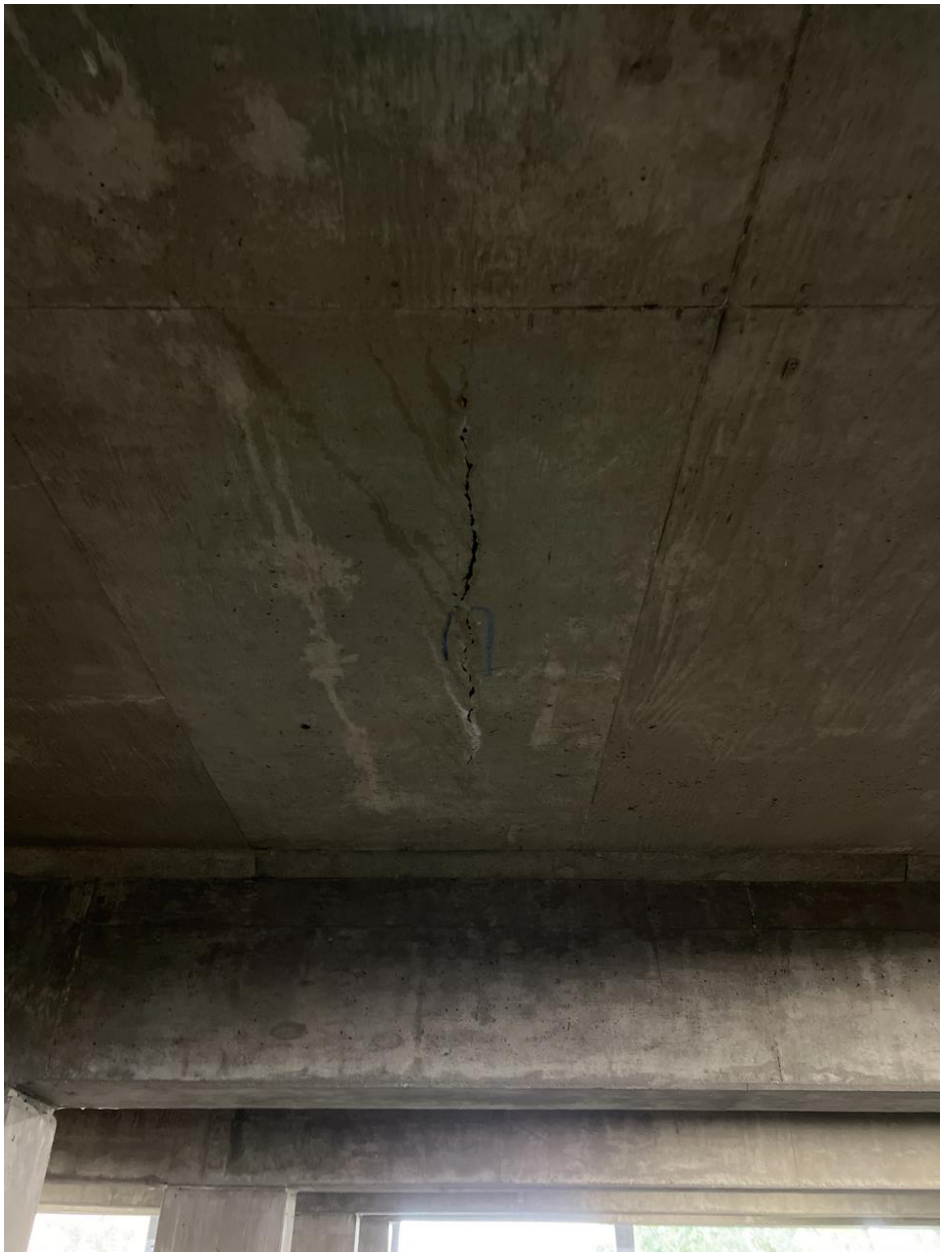
CSN 4: Damaged Planters

CSN 5: Spalled Brick

CSN 6: Damaged Roof Barrier Steel



CSN 7: Poor/Failed Membrane Condition at Roof

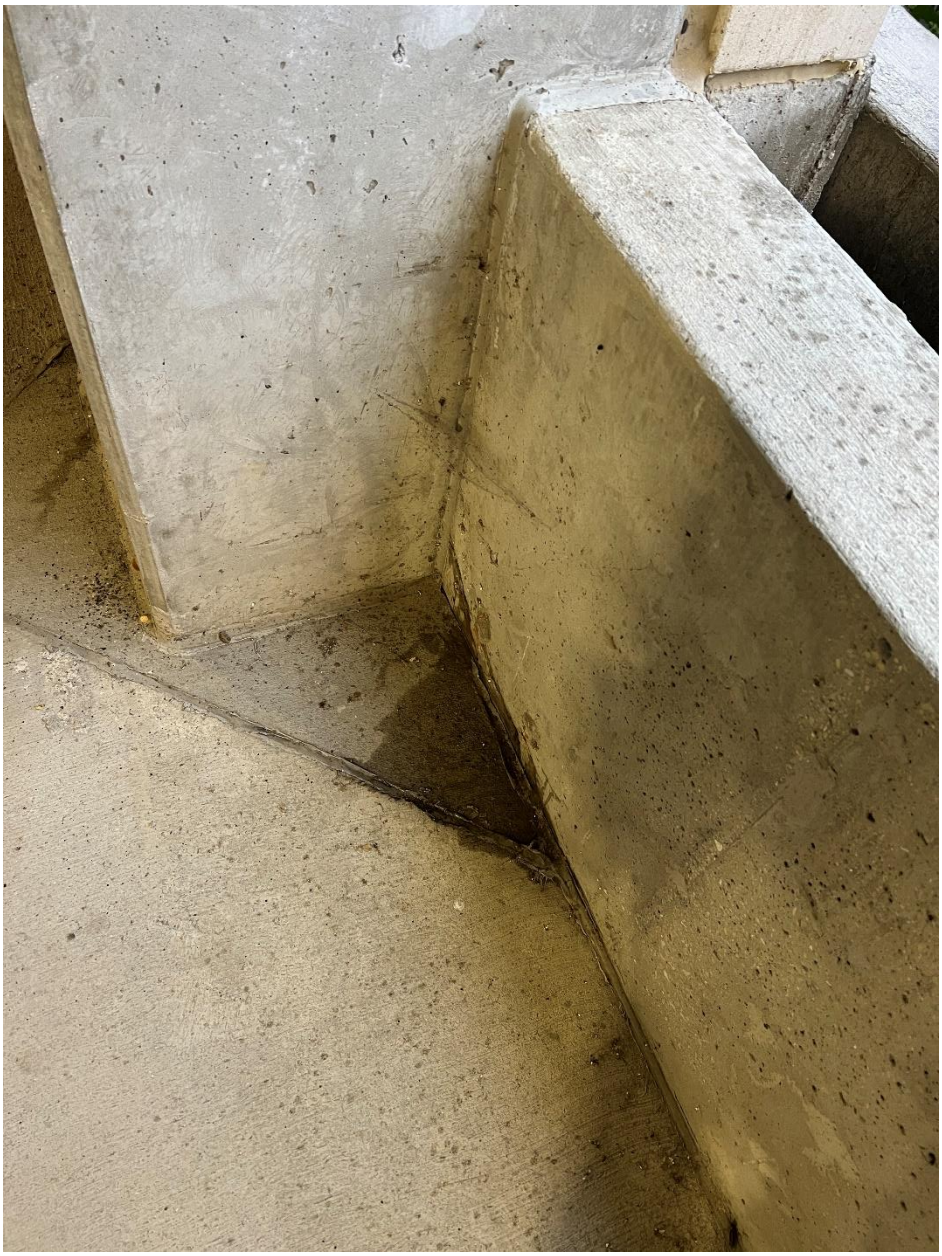


CSN 8: Overhead Crack in Slab with Suspected Grease Leakage from Post Tensioning Cable

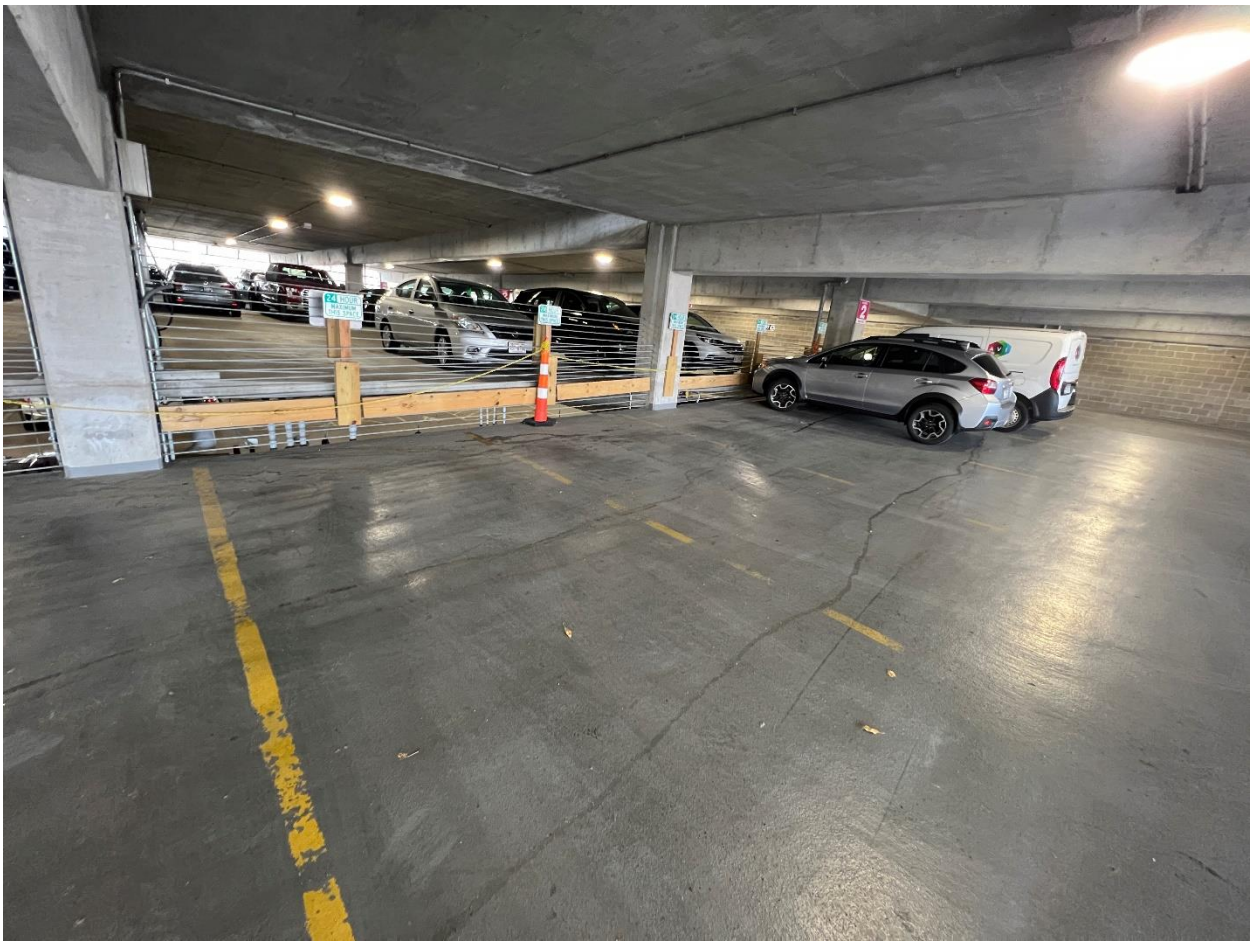
SLS 1: Missing Sealant at Roof Light Pole Bases

SLS 2: Misaligned Precast to Beam and Knee Wall Embeds (Level 1)

SLS 3: Degraded Cementitious Xypex Crack Repair Material



SLS 4: Leak Through Base of Cracked Gutter Knee Wall (Level 1, South)



SLS 5: Worn Striping at Interior Parking Stalls on Level 2 Ramp

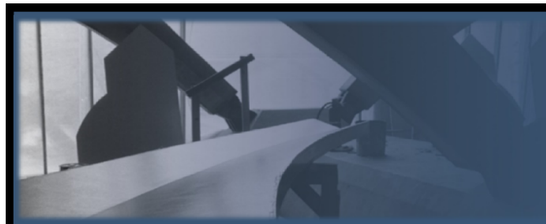
WSG 1: Active Leak in Foundation Wall

WSG 2: Efflorescence of CMU Wall at Level 1

WSG 3: Unsealed Interior Ramp Columns

APPENDIX 2: COST ESTIMATE

TOTAL COST ESTIMATE



GRAEF

CHICAGO | GREEN BAY | MADISON | MIAMI | MILWAUKEE | MINNEAPOLIS | ORLANDO

1010 East Washington Avenue
Suite 202
608 / 242 1550
Madison, WI 53703

2023 Parking Garage Condition Assessments
Cost Estimate

GRAEF Project Number: 2023-5008.01

Prepared For: City of Madison Parking Utility

Date: 11/01/2023

Description	Discipline	Unit Cost	Unit	SSL Quantity	SSL Facility Cost	SSF Quantity	SSF Facility Cost	SSCo Quantity	SSCo Facility Cost	CSN Quantity	CSN Facility Cost	OC Quantity	OC Facility Cost	SLS Quantity	SLS Facility Cost	WSG Quantity	WSG Facility Cost	Total Quantity	Total Cost	Notes
Concrete Topside Surface Spall Repair	Structural	$ 216.00	SF	0	$ -	3	$ 648.00	70	$ 15,120.00	130	$ 28,080.00	8	$ 1,728.00	40	$ 8,640.00	0	$ -	251	$ 54,216.00	
Concrete Overhead Surface Spall Repair	Structural	$ 510.00	SF	80	$ 40,800.00	2	$ 1,020.00	110	$ 56,100.00	4	$ 2,040.00	20	$ 10,200.00	0	$ -	0	$ -	216	$ 110,160.00	
Concrete Vertical Surface/Beam Spall Repair	Structural	$ 489.00	SF	4	$ 1,956.00	20	$ 9,780.00	40	$ 19,560.00	140	$ 68,460.00	30	$ 14,670.00	6	$ 2,934.00	20	$ 9,780.00	260	$ 127,140.00	
Concrete Joist Spall Repair	Structural	$ 557.00	SF	120	$ 66,840.00	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	120	$ 66,840.00	
Concrete Stair Spall Repair	Structural	$ 835.00	SF	0	$ -	0	$ -	8	$ 6,680.00	0	$ -	8	$ 6,680.00	0	$ -	0	$ -	16	$ 13,360.00	
Localized Full-System Traffic Membrane Repair	Structural	$ 10.00	SF	50	$ 500.00	0	$ -	0	$ -	20480	$ 204,800.00	8	$ 80.00	0	$ -	0	$ -	20538	$ 205,380.00	One and one half of Level 3 Interior Bays Compromised
Clean and Paint Exposed Rebar	Structural	$ 88.00	LF	530	$ 46,640.00	1	$ 88.00	0	$ -	20	$ 1,760.00	2	$ 176.00	0	$ -	0	$ -	553	$ 48,664.00	
Concrete Slab Crack Repair	Structural	$ 9.00	LF	190	$ 1,710.00	40	$ 360.00	0	$ -	330	$ 2,970.00	6	$ 54.00	400	$ 3,600.00	0	$ -	966	$ 8,694.00	Typical Rout and Seal
Concrete Slab Crack Repair	Structural	$ 13.00	LF	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	2000	$ 26,000.00	2000	$ 26,000.00	Routed Slot with Bond Breaker Tape
CMU Crack/Mortar Joint Repair	Structural	$ 12.00	LF	430	$ 5,160.00	0	$ -	6	$ 72.00	580	$ 6,960.00	60	$ 720.00	0	$ -	0	$ -	1076	$ 12,912.00	
CMU Replacement	Structural	$ 91.00	SF	0	$ -	3	$ 273.00	20	$ 1,820.00	40	$ 3,640.00	7	$ 637.00	0	$ -	0	$ -	70	$ 6,370.00	Replace or Repair Damaged Face Shells with Mortar
Replace or Install New Compression Seal Joint	Structural	$ 192.00	LF	0	$ -	0	$ -	0	$ -	40	$ 7,680.00	0	$ -	0	$ -	0	$ -	40	$ 7,680.00	
Replace or Install New Expansion Joint (Flange-Type)	Structural	$ 143.00	LF	0	$ -	0	$ -	210	$ 30,030.00	0	$ -	0	$ -	0	$ -	0	$ -	210	$ 30,030.00	
Replace or Install New Sealant	Structural	$ 11.00	LF	130	$ 1,430.00	160	$ 1,760.00	610	$ 6,710.00	560	$ 6,160.00	220	$ 2,420.00	110	$ 1,210.00	285	$ 3,135.00	2075	$ 22,825.00	
Replace Existing Sealant Joint at Precast Double Tees (SSF)	Structural	$ 16.00	LF	0	$ -	1650	$ 26,400.00	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	1650	$ 26,400.00	
Repair Broken Precast Double Connectors (SSF)	Structural	$ 550.00	EACH	0	$ -	30	$ 16,500.00	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	30	$ 16,500.00	
Brick Masonry Replacement (CSN)	Structural	$ 430.00	SF	0	$ -	0	$ -	0	$ -	7	$ 3,010.00	1	$ 430.00	0	$ -	0	$ -	8	$ 3,440.00	In Conjunction with Stair Tower Sealing
Brick Masonry Sealing	Structural	$ 12,697.00	LS	0	$ -	0	$ -	0	$ -	1	$ 12,697.00	0	$ -	0	$ -	0	$ -	1	$ 12,697.00	
Silane Sealer (SSCo)	Structural	$ 0.80	SF	0	$ -	0	$ -	316580	$ 253,264.00	0	$ -	0	$ -	0	$ -	0	$ -	316580	$ 253,264.00	
Roof Steel Barrier Repairs (CSN)	Structural	$ 4,019.00	EACH	0	$ -	0	$ -	0	$ -	2	$ 8,038.00	0	$ -	0	$ -	0	$ -	2	$ 8,038.00	
Localized Planter Repair (CSN)	Structural	$ 25,600.00	LS	0	$ -	0	$ -	0	$ -	1	$ 25,600.00	0	$ -	0	$ -	0	$ -	1	$ 25,600.00	
Paint Existing Roof-Level Steel Barriers (CSN)	Structural	$ 23,385.00	LS	0	$ -	0	$ -	0	$ -	1	$ 23,385.00	0	$ -	0	$ -	0	$ -	1	$ 23,385.00	
Clean, Paint, and Re-Sheathe Barrier Cables (OC)	Structural	$ 8.00	LF	0	$ -	0	$ -	0	$ -	0	$ -	2940	$ 23,520.00	0	$ -	0	$ -	2940	$ 23,520.00	
Install New Precast Connections (SSCo/SLS)	Structural	$ 1,299.00	EACH	0	$ -	0	$ -	2	$ 2,598.00	0	$ -	0	$ -	4	$ 5,196.00	0	$ -	6	$ 7,794.00	
Refasten Stair Treads	Structural	$ 149.00	EACH	0	$ -	0	$ -	7	$ 1,043.00	0	$ -	0	$ -	0	$ -	0	$ -	7	$ 1,043.00	
Tuckpoint Brick Masonry	Structural	$ 12.00	SF	0	$ -	0	$ -	30	$ 360.00	4	$ 48.00	1	$ 12.00	0	$ -	0	$ -	35	$ 420.00	
Polyurethane Injection of Concrete Walls	Structural	$ 268.00	LF	20	$ 5,360.00	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	30	$ 8,040.00	50	$ 13,400.00	
Install New Floor Drain	Structural	$ 4,011.00	EACH	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	7	$ 28,077.00	7	$ 28,077.00	Estimated Cost for Plubming and Structural Work
Replace Cast-In Pipe Hangers	Structural	$ 589.00	EACH	4	$ 2,356.00	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	4	$ 2,356.00	
Replace Wooden Bumpers	Structural	$ 150.00	EACH	4	$ 600.00	0	$ -	0	$ -	2	$ 300.00	0	$ -	0	$ -	0	$ -	6	$ 900.00	Typically Performed by City Staff
Replace Conduit and Clips/Remove Abandoned Conduit	Electrical	$ 100.00	LF	5	$ 500.00	5	$ 500.00	5	$ 500.00	5	$ 500.00	0	$ -	0	$ -	0	$ -	20	$ 2,000.00	
Replace/Clean Lighting Fixture/Cover	Electrical	$ 150.00	EACH	1	$ 150.00	1	$ 150.00	3	$ 450.00	2	$ 300.00	1	$ 150.00	0	$ -	0	$ -	8	$ 1,200.00	
Replace Corroded Standpipes and FDVs	Fire Protection	$ 45.00	LF	0	$ -	400	$ 18,000.00	210	$ 9,450.00	0	$ -	0	$ -	0	$ -	0	$ -	610	$ 27,450.00	
Replace Corroded Fittings	Plumbing	$ 200.00	EACH	0	$ -	1	$ 200.00	0	$ -	6	$ 1,200.00	10	$ 2,000.00	0	$ -	0	$ -	17	$ 3,400.00	
Replace Corroded Piping	Plumbing	$ 50.00	LF	123	$ 6,150.00	160	$ 8,000.00	531	$ 26,550.00	230	$ 11,500.00	323	$ 16,150.00	0	$ -	0	$ -	1367	$ 68,350.00	
Replace Pipe Insulation	Plumbing	$ 20.00	LF	0	$ -	10	$ 200.00	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	10	$ 200.00	
Replace Hose Bibb Cover	Plumbing	$ 500.00	EACH	0	$ -	2	$ 1,000.00	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	2	$ 1,000.00	
Replace Corroded Gutters	Plumbing	$ 25.00	LF	50	$ 1,250.00	0	$ -	0	$ -	0	$ -	10	$ 250.00	0	$ -	0	$ -	60	$ 1,500.00	
Clean Drains/Storm Drains	Plumbing	$ 500.00	EACH	0	$ -	0	$ -	0	$ -	0	$ -	2	$ 1,000.00	0	$ -	0	$ -	2	$ 1,000.00	
Replace Pipe Supports	Plumbing	$ 200.00	EACH	0	$ -	2	$ 400.00	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	2	$ 400.00	
Replace Reznor Heating Unit	Mechanical	$ 5,000.00	EACH	2	$ 10,000.00	1	$ 5,000.00	3	$ 15,000.00	2	$ 10,000.00	4	$ 20,000.00	0	$ -	0	$ -	12	$ 60,000.00	
Exhaust Fan Replacement	Mechanical	$ 7,500.00	EACH	0	$ -	1	$ 7,500.00	0	$ -	4	$ 30,000.00	0	$ -	0	$ -	0	$ -	5	$ 37,500.00	
Estimated Total Costs				**Structural**	**$ 173,352.00**	**Structural**	**$ 56,829.00**	**Structural**	**$ 393,357.00**	**Structural**	**$ 405,628.00**	**Structural**	**$ 61,327.00**	**Structural**	**$ 21,580.00**	**Structural**	**$ 75,032.00**	**Structural**	**$ 1,187,105.00**	Due to unsuccesful bid in 2023 (2022 Parking Garage Maintenance project), the City projects an available budget of up to $750,000 for typical Structural repairs. GRAEF to present options to reduce scope of maintenance items for critical short term repairs and most effective long term maintenance items.
				Mechanical	**$ 10,000.00**	**Mechanical**	**$ 12,500.00**	**Mechanical**	**$ 15,000.00**	**Mechanical**	**$ 40,000.00**	**Mechanical**	**$ 20,000.00**	**Mechanical**	**$ -**	**Mechanical**	**$ -**	**Mechanical**	**$ 97,500.00**	
				Plumbing	**$ 7,400.00**	**Plumbing**	**$ 9,800.00**	**Plumbing**	**$ 26,550.00**	**Plumbing**	**$ 12,700.00**	**Plumbing**	**$ 19,400.00**	**Plumbing**	**$ -**	**Plumbing**	**$ -**	**Plumbing**	**$ 75,850.00**	
				Electrical	**$ 650.00**	**Electrical**	**$ 650.00**	**Electrical**	**$ 950.00**	**Electrical**	**$ 800.00**	**Electrical**	**$ 150.00**	**Electrical**	**$ -**	**Electrical**	**$ -**	**Electrical**	**$ 3,200.00**	
				Total	**$ 191,402.00**	**Total**	**$ 97,779.00**	**Total**	**$ 445,307.00**	**Total**	**$ 459,128.00**	**Total**	**$ 100,877.00**	**Total**	**$ 21,580.00**	**Total**	**$ 75,032.00**	**Total**	**$ 1,391,105.00**	

APPENDIX 3: INSPECTION DATA