

SECTION 00 01 10

TABLE OF CONTENTS

DIVISION 0 - PROCUREMENT AND CONTRACTING REQUIREMENTS

DIVISION 1 - GENERAL REQUIREMENTS

Section 01.11.00 - Summary of the Work.	7
Section 01.31.00 - Project Management.	2
Section 01.32.00 - Construction Progress Documentation	2
Section 01.33.00 - Submittals.	3
Section 01.50.00 - Temporary Facilities and Controls	7
Section 01.77.00 - Closeout Procedures.	3

DIVISION 2 - EXISTING CONDITIONS

Section 02 25 19 - Masonry Assessment	25
---	----

DIVISION 4 - MASONRY

Section 04 01 40 - Maintenance of Stone Assemblies	6
--	---

END OF SECTION

THIS PAGE INTENTIONALLY LEFT BLANK

SECTION 01.11.00

SUMMARY OF WORK

I PART 1 - GENERAL

1.01 GENERAL PROVISIONS

- A. This section supplements the Conditions of the Contract, Prime Requirements, Drawings, and all other parts of the Contract Documents.
- B. This Contractor must be familiar with all other Divisions and Sections of the Specifications which affect the work of this Section.

1.02 REQUIREMENTS INCLUDED

- A. Work under this Contract.
- B. Examination of Site and Documents.
- C. Contract Method.
- D. Work Sequence.
- E. Supervision of Work.
- F. Prime Contractor's Use of Premises.
- G. Coordination.
- H. Project Meetings.
- I. Permits, Inspection, and Testing Required by Governing Authorities.
- J. Cutting, Coring, Patching, Unless Otherwise Indicated.
- K. Debris Removal.
- L. Field Measurements.
- M. Safety Regulations.
- N. OSHA Safety and Health Course Documentation.
- O. Damage Responsibility.
- P. Owner Furnished Products.
- Q. Asbestos and Hazardous Materials Discovery.
- R. Special Requirements.
- S. List of Drawings.

1.03 WORK UNDER THIS CONTRACT

- A. The work to be done under this contract consists of executing and completing all work required for **Masonry Wall Repairs at Elm Park, Worcester, MA 01609**
- B. The scope of work, without limiting the generality thereof, includes all labor, materials, equipment and services required to perform the work described fully in the Drawings and Specifications and includes, but is not limited to the following major work:
 - 1. Removing loose cap stones from the perimeter of the pond.
 - 2. Cleaning mortar from removed stones and abutting stones.
 - 3. Resetting stones in new mortar.
- C. The following major elements will be performed by the Owner, under separate contracts, for which the Prime Contractor has a coordinating responsibility:
 - 1. None. The Contractor will be responsible for performing or subcontracting all work required.

- D. The following major elements will be furnished by the Owner, for installation by the Contractor or sub-contractors:
 - 1. None. The Contractor is required to furnish all elements required for the complete project.
- E. Reference to Drawings: The work to be done under this Contract is shown on the Drawings listed at the end of this Section.
- F. Prevailing Wage: the Massachusetts Standard Labor Wage rates, as outlined in the exhibits, will be used in the construction of this project

1.04 EXAMINATION OF SITE AND DOCUMENTS

- A. A pre-bid meeting will be held at the job site on the date and at the time indicated in the Invitation to Bid.
- B. Bidders may also visit the site at any time, as this is a public park.
- C. The bidders are expected to examine and to be thoroughly familiar with all contract documents and with the conditions under which the work is to be carried out. The Owner and Designers will not be responsible for errors, omissions, and/or charges for extra work arising from the Prime Contractor's or Subcontractor's failure to familiarize themselves with the contract documents. The Prime Contractor and Subcontractors acknowledge that they are familiar with the conditions and requirements of the contract documents where they require, in any part of the work a given result to be produced, and that the contract documents are adequate and will produce the required results.

1.05 CONTRACT METHOD

- A. Work under this contract shall be lump sum price, for the scopes of work as described in these specifications and shown on the Drawings.

1.06 WORK SEQUENCE

- A. The Work will be conducted in the following sequence of demolition/construction:
 - 1. Actual sequence of the work will be left to the discretion of the Contractor, who will prepare a construction schedule showing the sequence and duration of work, for review and approval by the Owner.

1.07 SUPERVISION OF WORK

- A. The Prime Contractor shall be held directly responsible for the correct installation of all work performed under this Contract. The Prime Contractor must make good or repair, without expense to the Owner, of any part of the new work, or existing work to remain, which may become inoperative on account of leaving the work unprotected or unsupervised during construction of the system or which may break or give out in any manner by reason of poor workmanship, defective materials or any lack of space to allow for expansion and contraction of the work during the Prime Contractor's warranty period, from the date of final acceptance of the work by the Owner.
- B. The Prime Contractor shall furnish a competent Massachusetts licensed superintendent satisfactory to the Owner and to the Designer. The licensed superintendent shall supervise all work under this contract and who shall remain on duty at the site throughout the Contract period while work is in progress.
 - 1. Submit the name and resume of the superintendent for approval to the Architect. Include experience with projects of equal size and complexity.

1.08 PRIME CONTRACTOR'S USE OF PREMISES

- A. Use of the Site: Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.
 - 1. Owner Occupancy: Allow for continued use of the Park by the public, throughout construction. Provide barriers and other protective measures as appropriate to separate the public areas from work areas.
 - 2. Driveways and Entrances: Keep driveways and entrances serving the premises clear and available to the Owner, the Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- B. The Prime Contractor can gain access to the premises during the hours specified below. In addition the Prime Contractor and his personnel will limit themselves only within the working premises during working hours. If work needs to be scheduled during times other than those listed below, Prime Contractor shall inform the Owner one week prior to work.
 - 1. Deliveries: 7:00 AM to 6:00 PM.
 - 2. Work on site: 8:00 AM to 4:00 PM
- C. The Prime Contractor shall verify that Subcontractors have visited the site and included all costs associated with the location of the project, and any restriction or limitations the location of the project may pose.
- D. All contractors shall at all times conduct their operations in a courteous, professional manner while on the project or in the vicinity of the project. Harassment, offensive language or behavior will not be permitted on the site.
- E. The Owner can neither accept nor assume responsibility for the security of the Contractor's material or equipment which is lost, stolen or vandalized. The Contractor is advised to exert caution in placement and storage of his equipment and material.
- F. Parking: Parking spaces on site are very limited and the Owner may designate contractor parking which is not near the construction site for the Contractor's use. Public parking spaces for use by the public, are not to be used by Contractors.
- G. Radios, tape players, "boom boxes", or other audio entertainment equipment, including personal entertainment devices, shall not be allowed on the project site.
- H. The Contractor shall not permit smoking on site, nor allow the use of intoxicating beverages or non-prescription controlled substance drugs upon or about the work site.
- I. The Contractor shall provide and maintain in good serviceable condition at all times, warning signs and non-combustible barriers, forms and fire resistive tarps or plastic, each of which shall be approved by the Owner, shall be suitable for the purpose, and shall be installed adjacent to each work area, for complete enclosure and/or isolation of all excavations, wells, pits, manholes, shafts, overhead areas, etc., which are associated with the work under the contract. Barriers shall be a secure fence, guardrail, cover, or similar assembly designed and erected to provide protection for concrete, protection from the weather, and to prevent accidental access. Barrier tape and/or sawhorses shall not be used as a means of such access protection.

1.09 COORDINATION

- A. The Prime Contractor shall be responsible for the proper fitting of all the work and for the coordination of the operations of all Subcontractors or material and persons engaged upon the work. The Prime Contractor shall do, or cause his agents to do, all cutting, fitting, adjusting, and repair necessary in order to make the several parts of the work come together properly.
 - 1. Examine Contract Documents in advance of start of construction and identify in writing questions, irregularities or interference to the designer in writing. Failure to identify and address such issues in advance becomes the sole responsibility of the Prime Contractor. A conflict that would cause the reduction of the normal ceiling height of any occupied space is considered to be an interference.
- B. Execute the work in an orderly and careful manner with due regard to the occupants of the facility, the public, the employees, and the normal function of the facility.
- C. The work sequence shall follow planning and schedule established by the Prime Contractor as approved by the Designer and the Owner. The work upon the site of the project shall commence promptly and be executed with full simultaneous progress.
- D. The Prime Contractor shall review the tolerances established in the specifications for each type of work and as established by Subcontractor organizations. The Prime Contractor shall coordinate the various Subcontractors and resolve any conflicts that may exist between Subcontractor tolerances without additional cost to the Owner. The Prime Contractor shall provide any chipping, leveling, shoring or surveys to ensure that the various materials align as detailed by the Designer and as necessary for smooth transitions not noticeable in the finished work.

1.10 PROJECT MEETINGS

- A. Project meetings shall be held on a weekly basis and as required subject to the discretion of the Owner.
- B. Attendees: In addition to the Project Manager and Designer, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
- C. In order to expedite construction progress on this project, the Prime Contractor shall order all materials immediately after the approval of submittals and shall obtain a fixed date of delivery to the project site for all materials ordered which shall not impede or otherwise interfere with construction progress. The Prime Contractor shall present a list and written proof of all materials and equipment ordered (through purchase orders). Such list shall be presented at the meetings and shall be continuously updated.
- D. Scheduling shall be discussed with all concerned parties, and methods shall be presented by the Prime Contractor, which shall reflect construction completion not being deferred or foreshortened. Identify critical long-lead items and other special scheduling requirements. The project schedule is to include time for submission of shop drawing submittals, time for review, and allowance for resubmittal and review.

1.11 PERMITS, INSPECTION, AND TESTING REQUIRED BY GOVERNING AUTHORITIES

- A. If the Contract Documents, laws, ordinances, rules, regulations or orders of any public authority having any jurisdiction require any portion of the Work to be inspected, tested, or approved, the Prime Contractor shall give the Designer, the Owner or his/her designated representative, and such Authority timely notice (5 business days minimum) of its readiness so the Designer may observe such inspecting, testing, or approval.
- B. Unless otherwise specified under the Sections of the Specifications, the Prime Contractor shall pay such proper and legal fees to public officers and others as may be necessary for the due and faithful performance of the work and which may arise incidental to the fulfilling of this Contract. As such, all fees, charges, and assessments in connection with the above shall be paid by the Prime Contractor.

- C. Prime Contractor and specialized Subcontractors as applicable shall identify all permits required from Authorities having jurisdiction over the Project for the construction and occupancy of the work. The Prime Contractor shall prepare the necessary applications and submit required plans and documents to obtain such permits in a timely manner, and shall furnish the required information to the Building Official and obtain the required permits as early as practicable after award of the Contract.

1.12 CUTTING, CORING, AND PATCHING, UNLESS OTHERWISE INDICATED

- A. The Prime Contractor shall perform and/or coordinate all cutting, coring, fitting and patching of the work.
- B. The Prime Contractor shall coordinate that the work of the Subcontractor is not endangered by any cutting, coring, excavating, or otherwise altering of the work and shall not allow the cutting or altering the work of any Subcontractor except with the written consent of the Designer.
- C. Performance:
 - 1. Execute cutting and patching by methods which will prevent damage to other work, and will provide proper surfaces to receive installation of repairs.
 - (a) In general, where mechanical cutting is required, cut work with sawing and grinding tools, not with hammering and chopping tools.
 - 2. Execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances, and finishes.
 - 3. Restore work which has been cut or removed; install new products matching existing to provide completed Work in accordance with requirements of Contract Documents.
 - 4. Patch with seams which are durable and as invisible as possible. Flash and seal all penetration of exterior work. Comply with specified tolerances for the work.
 - 5. Restore exposed finishes of patched areas; and, where necessary extend finish restoration onto retained work adjoining, in a manner which will eliminate evidence of patching.
 - 6. Refinish entire surfaces as necessary to provide an even finish to match adjacent finishes:
 - (a) For continuous surfaces, refinish to nearest intersection.
 - (b) For an assembly, refinish entire unit.
- D. Existing Utilities Services:
 - 1. Not applicable. The building has no mechanical or electrical systems.

1.13 DEBRIS REMOVAL

- A. The Prime Contractor shall coordinate the removal of all demolition and construction waste including waste by all Subcontractors from the job site on a daily basis. ***Under no circumstances will debris be permitted within the pond.***
- B. Debris shall be legally disposed of in a D.E.P. approved disposal site.
- C. The Prime Contractor shall bear responsibility for maintaining the site clean and free of debris, leaving all work in clean and proper condition satisfactory to the Owner and the Designer. The Prime Contractor shall

ensure that each of the Subcontractors clean up during and immediately upon completion of their work. Clean up includes the following tasks:

1. Remove all rubbish, waste, tools, equipment, appurtenances caused by and used in the execution of work.
- D. Prevent the accumulation of debris at the construction site, storage areas, parking areas, and along access roads and haul routes.
- E. Provide containers for deposit of debris and schedule periodic collection and disposal of debris.
- F. Prohibit overloading of trucks to prevent spillage on access and haul routes.
- G. The Prime Contractor shall be responsible for proper disposal of all construction debris leaving the site.

1.14 FIELD MEASUREMENTS

- A. Although care has been taken to ensure their accuracy, the dimensions shown for existing items and structures are not guaranteed. It is the responsibility of the Prime Contractor to verify these dimensions in the field before fabricating any construction component. No claims for extra payment due to incorrect dimensions will be considered by the Owner.

1.15 SAFETY REGULATIONS

- A. This project is subject to compliance with Public Law 91 596 "Occupational Safety and Health Act" latest edition (OSHA 29 CFR 1926), with respect to all rules and regulations pertaining to construction, including Volume 36, numbers 75 and 105, of the Federal Register, as amended, and as published by the U.S. Department of Labor.
- B. Hazardous Waste Generation: Any work generating Hazardous or so-called Universal Wastes will comply with all requirements of 310 CMR 30.000. The proper storage, use and disposal of any hazardous chemicals or substances brought on site by the Contractor are the responsibility of Contractor. The Owner will not be responsible for any hazardous materials left on site, the cost to remove these materials will be the Contractor's responsibility. All hazardous wastes generated as a result of demolition and remodeling shall be contained, collected, segregated, labeled per all applicable federal EPA, Massachusetts DEP, and Federal DOT regulations or other applicable local, state or federal hazardous waste regulations, pending the appropriate disposition.

1.16 OSHA SAFETY AND HEALTH COURSE DOCUMENTATION

- A. OSHA Safety and Health Course Documentation Records: Chapter 306 of the Massachusetts Acts of 2004 requires that everyone employed at the jobsite must complete a minimum 10-hour long course in construction safety and health approved by the U.S. Occupational Safety and Health Administration (OSHA) prior to working at the jobsite. Compliance is required of Prime Contractors' and Subcontractors' on-site employees at all levels whether stationed in the trailer or working in the field. Unless the Massachusetts Attorney General's office indicates otherwise, this requirement does not apply to home-office employees visiting the site or to suppliers' employees who are making deliveries.
- B. OSHA 10 cards for anyone working on site are to be submitted prior to the first requisition.
- C. Documentation records shall be initially compiled by the Prime Contractor and Subcontractors, and the Prime Contractor shall create and maintain a copy of the documentation on site at all times.

1.17 DAMAGE RESPONSIBILITY

- A. The Prime Contractor shall repair, at no cost to the Owner, any damage to building elements, site appurtenances, landscaping, utilities, etc. caused during demolition operation and work of this Contract.

1.18 OWNER FURNISHED PRODUCTS

- A. Products indicated “N.I.C.” (Not in Contract), or “E. O.” (Equipment by Owner), or “O.F.O.I.” (Owner Furnished Owner Installed), or other similar acronyms as defined in the contract documents will be furnished and installed by the Owner. Coordination and provision of service lines for such products shall be included under these Construction Contract Documents, if indicated. Final connections from service lines to equipment will be by the Owner, unless otherwise indicated

1.19 ASBESTOS AND HAZARDOUS MATERIALS DISCOVERY

- A. If unanticipated asbestos-containing materials or other Hazardous Materials not included in Contract are discovered at any time during the course of work, the Prime Contractor shall cease work in the affected areas only and continue work in other areas, at the same time notify the Designer of such discovery. Do not proceed with work in such affected areas until written instructions are received. If removal is required, payment will be made in accordance with the contract unit prices bid for each respective material. In the absence of unit prices, costs shall be negotiated or otherwise established prior to commencement of removal, in accordance with provisions of the Contract.
- B. The Owner or Designer will work with the Contractor to initiate removal or encapsulation of the asbestos. An extension of the completion date may be granted equal to the time lost. Proper notification must be made to the MADEP through the ANF-001 form, and the Owner.

1.20 LIST OF DRAWINGS

A1 - SITE PLAN

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 31 00

PROJECT MANAGEMENT AND COORDINATION

I. PART I - GENERAL

1.01 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.02 SUMMARY

- A. Without limitations, coordination will include scheduling, coordination of submittals, coordination of all elements of the Work, and coordination of contract closeout.
- B. Description:
 - 1. Coordinate scheduling, submittals, and work of the various trades and elements of the Work to assure efficient and orderly sequence of installation of construction elements, with provisions for accommodating items to be installed later.
 - 2. Coordinate sequence of the Work by all trades.
- C. Meetings:
 - 1. In addition to progress meetings, hold coordination meetings and pre-installation conferences with personnel and Sub-Contractors to assure coordination of the Work. The coordination meetings are to be separate from the commissioning or commissioning meetings.
- D. Coordination of Submittals:
 - 1. Schedule and coordinate submittals.
 - 2. Coordinate work of various trades having interdependent responsibilities for installing, connecting to, and placing in service such equipment.
 - 3. Coordinate requests for substitutions to assure compatibility of space, of operating elements, and effect on work of other trades.
 - 4. Contractor's mark-up will be excluded from change orders caused by lack of coordination during design.
- E. Commissioning:
 - 1. Not applicable.

1.03 FIELD COORDINATION

- A. Coordination drawings are not required, however, the Prime Contractor remains responsible for field coordinating the work of all trades, to see that it comes together without conflict or loss of functionality.
 - 1. Where field coordination is performed, the Prime Contractor shall advise the Designers of any conflict or field condition which results in the system being installed other than as designed.
 - 2. In such instances, contractors are expected to propose alternative approaches based on field conditions revealed through the performance of the demolition. Deviations shall not be constructed, however, until

first approved by the Designers. No additional compensation will be due for field coordination efforts.

3. Where deviation from design details creates a conflict with another trade, which was not foreseen or properly coordinated between the contractors, the conflicting work shall be revised at no expense to the Owner, to eliminate the conflict.

1.04 MEP COORDINATION DRAWINGS

- A. Not applicable.

II. PRODUCTS (Not Used)

III. EXECUTION (Not Used)

END OF SECTION

SECTION 01 32 00

CONSTRUCTION PROGRESS DOCUMENTATION

I. PART I - GENERAL

1.01 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.02 REQUIREMENTS INCLUDED

- A. Procedures and requirements for submission and review of progress schedules and reports.

1.03 RELATED SECTIONS

- A. Section 01.11.00 – SUMMARY
 - 1. Project meetings.
- B. Section 01.31.00 - PROJECT MANAGEMENT AND COORDINATION
 - 1. Progress and coordination meetings.
- C. Section 01.33.00 - SUBMITTAL REQUIREMENTS
 - 1. Project reports.
 - 2. Schedule of values.
 - 3. Shop drawings, product data, and samples.

1.04 CONSTRUCTION SCHEDULE

- A. Prime Contractor shall prepare and submit for Designer and Owner's information, a Construction Schedule for the work of the project. Said schedule will be coordinated to include sequencing of the project work and shall be submitted within 2 weeks of pre-construction meeting.
- B. In addition, the Prime Contractor shall prepare and submit at each project meeting, a two-week look-ahead schedule. The schedule shall identify:
 - 1. Major elements of the work which were complete since the last project meeting, organized by room or by trade.
 - 2. Major elements of the work to be performed in the next two weeks, to be able to track short-term conformance to the overall project schedule.

1.05 CRITICAL PATH METHOD SCHEDULING

- A. The Prime Contractor remains responsible for identifying the critical path of all project activities and milestones, and will not be entitled to any additional compensation or any additional days related to Change Order work unless it can be demonstrated that latent conditions impact the critical path.
- B. The critical path schedule shall be updated and resubmitted with each Application for Payment, and shall be considered a prerequisite for payment.
- C. Additional Requirements

1. Provide a list of every submittal of shop drawings, product data, samples and other submittals required by the contract, General Conditions, Supplementary Conditions and/or technical specifications of the construction contract. The list shall identify:
 - (a) the date the submittal is expected to be made and the date that it needs to be returned in order to maintain the construction schedule.
 - (b) the lead time associated with the item, from the date of approval to the anticipated delivery date.

II. PRODUCTS (Not Used)

III. EXECUTION (Not Used)

END OF SECTION

SECTION 01 33 00

SUBMITTALS

I. PART 1 - GENERAL

1.01 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.02 RELATED DOCUMENTS

- A. This Section supplements the General Conditions.
- B. Consult the individual sections of the specifications for the specific submittals required under those sections and for further details and descriptions of the requirements

1.03 GENERAL PROCEDURES FOR SUBMITTALS

- A. Timeliness - The Contractor shall transmit each submittal to the Architect sufficiently in advance of performing related Work or other applicable activities so that the installation is not delayed by processing times, including disapproval and resubmittal (if required), coordination with other submittals, testing, purchasing, fabrication, delivery, and similar sequenced activities. No extension of time will be authorized because of the Contractor's failure to transmit submittals to the Architect in advance of the Work.
- B. Sequence - The Contractor shall transmit each submittal in a sequence which will not result in the Architect's approval having to be later modified or rescinded by reason of subsequent submittals which should have been processed earlier or concurrently for coordination.
- C. Contractor's Review and Approval - Only submittals received from and bearing the stamp of approval of the Contractor will be considered for review by the Architect. Submittals shall be accompanied by a transmittal notice stating name of Project, date of submittal, "To", "From" (Contractor, Subcontractor, Installer, Manufacturer, Supplier), Specification Section, or Drawing No. to which the submittal refers, purpose (first submittal, resubmittal), description, remarks, distribution record, and signature of transmitter.
- D. Architect's Action - The Architect will review the Contractor's submittals and return them with one of the following actions recorded thereon by appropriate markings:
 - 1. Final Unrestricted Release: Where marked "No Exceptions Taken" the Work covered by the submittal may proceed provided it complies with the requirements of the Contract Documents.
 - 2. Final-But-Restricted Release: When marked "Note Markings" or "Comments Attached" the Work may proceed provided it complies with the Architect's notations or corrections on the submittal and complies with the requirements of the Contract Documents. Acceptance of the Work will depend on these compliances.
 - 3. Returned for Resubmittal: When marked "Resubmit" or "Rejected" the Work covered by the submittal (such as purchasing, fabrication, delivery, or other activity) should not proceed. The submittal should be revised or a new submittal resubmitted without delay, in accordance with the Architect's notations stating the reasons for returning the submittal.
- E. Processing - All costs for printing, preparing, packaging, submitting, resubmitting, and mailing, or delivering submittals required by this contract shall be included in the Contract Sum.

1.04 OR EQUALS

- A. Definition - Whenever a specification section names one or more brands for a given item, and the Contractor wishes to submit, for consideration, another brand, the submission shall be considered an "or-equal" or a "material substitution". For the purposes of this Contract, the terms "or-equal" and "material substitution" shall be considered synonymous.
- B. In no case may an item be furnished on the Work other than the item named or described, unless the Architect, with the Owner's written concurrence, shall consider the item equal to the Item so named or described.
- C. The equality of items offered as "equal" to items named or described shall be proved to the satisfaction of the Architect at the expense of the Contractor submitting the substitution.

1.05 SUBMISSION OF PRODUCT DATA

- A. The Contractor shall submit an electronic copy of Product Data, in Adobe Acrobat (pdf) format to the Architect. All such data shall be specific and identification of material or equipment submitted shall be clearly marked or highlighted. Data of general nature will not be accepted.
- B. Product Data shall be accompanied by a transmittal notice. The Contractor's stamp of approval shall appear on the printed information itself, in a location which will not impair legibility.
- C. Product Data returned by the Architect as "Rejected" shall be resubmitted until the Architects approval is obtained.
- D. When the Product Data are acceptable, the Architect will stamp them "No Exceptions Taken", and return 1 copy to the Contractor. The Contractor shall provide and distribute additional copies as may be required to complete the Work.
- E. The Contractor shall maintain one full set of approved, original, Product Data at the site.

1.06 SUBMISSION OF SHOP DRAWINGS

- A. Shop Drawings shall be complete, giving all information necessary or requested in the individual section of the specifications. They shall also show adjoining Work and details of connection thereto.
- B. Shop Drawings shall be for whole systems. Partial submissions will not be accepted.
- C. The Architect reserves the right to review and approve shop drawings only after approval of related product data and samples.
- D. Shop drawings shall be properly identified and contain the name of the project, name of the firm submitting the shop drawings, shop drawing number, date of shop drawings and revisions, Contractor's stamp of approval, and sufficient spaces near the title block for the Architect's stamp.
- E. The Contractor shall submit to the Architect three (3) black line prints of each shop drawing or one electronic copy in Adobe Acrobat (pdf) format, at the Architect's discretion. Prints may be mailed, delivered in roll form or emailed. Each submittal shall be accompanied by a transmittal notice bearing the Contractor's approval stamp.
- F. When the Architect returns a marked submittal with the stamp "Resubmit" or "Confirm", the Contractor shall correct the original drawing or prepare a new drawing and resubmit three prints or an electronic version thereof to the Architect for approval. This procedure shall be repeated until the Architect's approval is obtained.
- G. When the Architect returns submittal with the stamp "No Exceptions Taken", the Contractor shall provide and distribute the prints for all Contractor and Subcontractors use.

- H. The Contractor shall maintain one full set of approved shop drawings at the site.

1.07 SUBMISSION OF SAMPLES

- A. Unless otherwise specified in the individual section, the Contractor shall submit two specimens of each sample.
- B. A transmittal notice with the Contractors stamp of approval shall be included with all sample submittals.
- C. Samples shall be of adequate size to permit proper evaluation of materials. Where variations in color or in other characteristics are to be expected, samples shall show the maximum range of variation. Materials exceeding the variation of approved samples will not be approved on the Work.
- D. Samples that can be conveniently mailed shall be sent directly to the Architect, accompanied by a transmittal notice. All transmittals shall be stamped with the Contractor's approval stamp of the material submitted.
- E. All other samples shall be delivered at the field office of the Project Representative with sample identification tag attached and properly filled in.
- F. If a sample is rejected by the Architect, a new sample shall be resubmitted in the specified manner. This procedure shall be repeated until the Architect approves the sample.
- G. Samples will not be returned unless return is requested at the time of submission. The right is reserved to require submission of samples whether or not particular mention is made in the specifications, at no additional cost to the Owner.

END OF SECTION

THIS PAGE INTENTIONALLY LEFT BLANK

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

I. PART I - GENERAL

1.01 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.02 REQUIREMENTS INCLUDED

- A. Temporary Facilities and Controls including the following:

1. Temporary Water.
2. Weather Protection.
3. Heating During Construction.
4. Temporary Power.
5. Hoisting Equipment and Machinery.
6. Staging.
7. Maintenance of Access.
8. Dust Control.
9. Noise Control.
10. Indoor Air Quality (IAQ) Management.
11. Enclosures.
12. Cleaning During Construction.
13. Field Offices.
14. Telephone Service.
15. Sanitary Facilities.
16. Construction Barriers.
17. Parking.
18. Debris Control and Removal.
19. Safety Protection.
20. Vehicle and Equipment Protection.
21. Shoring.
22. Construction Fence.
23. Project Identification Sign.
24. Delivery of Materials.

1.03 TEMPORARY WATER

- A. Contractors will be allowed to draw water for construction purposes from the adjacent building, provided water is not wasted and the use of the water has no negative impact on the use of the park by the public.
1. Under no circumstance may water from the pond be used for construction activities.
 2. Washing tools or construction materials in the pond is strictly prohibited.
- B. Provide any temporary hoses necessary for conveying water to the locations on site where needed.
- C. Temporary hoses used for transporting water shall not be run unattended or unprotected across parking areas, parking area entrance, walkways, plazas, or steps. Temporary hoses shall not be permitted to be installed along, through or across corridor and occupied rooms or spaces.
- D. The General Contractor shall provide an adequate supply of drinking water from approved sources of acceptable quality, satisfactorily cooled, for his employees and those of his Subcontractors.

- E. Use of the water may be discontinued by the Owner if, in their opinion, it is wastefully used.

1.04 WEATHER PROTECTION

- A. It is the intent of these Specifications to require that the General Contractor shall provide temporary enclosures and heat to permit construction work to be carried on during the months of November through March in compliance with M.G.L. Chapter 149, Section 44D(G). Under no circumstances shall the General Contractor suspend any work during the months of November through March because of their reluctance to provide and pay for temporary weather protection. These Specifications are not to be construed as requiring enclosures or heat for operations that are not economically feasible to protect in the judgment of the Designer. Included in the preceding category, without limitation, are such items as site work, excavation, steel erection, erection of certain "exterior" wall panels, roofing, and similar operations.
- B. "WEATHER PROTECTION" shall mean the temporary protection of that work adversely affected by moisture, wind, and cold, by covering, enclosing and/or heating. This protection shall provide adequate working areas during the months of November through March as determined by the Designer and consistent with the approved construction schedule to permit the continuous progress of all work necessary to maintain an orderly and efficient sequence of construction operations. The General Contractor shall furnish and install all "weather protection" material and be responsible for all costs, including heating required to maintain a minimum temperature of 50 degrees F. at the working surface. This provision does not supersede any specific requirements for methods of construction, curing of materials or the applicable general conditions set forth in the Contract Articles with added regard to performance obligations of the General Contractor.
 - 1. Within 30 calendar days after his award of contract, the General Contractor shall submit in writing to the Designer for approval, three copies of his proposed methods for "Weather Protection."
 - 2. Installation of weather protection and heating devices shall comply with all safety regulations including provisions for adequate ventilation and fire protection devices. Heating devices which may cause damage to finish surfaces shall not be used.
 - 3. The General Contractor shall furnish and install one accurate Fahrenheit thermometer at each work area as designated by the Designer. However, one additional accurate Fahrenheit thermometer shall be provided for every 2,000 square feet of floor space where the work areas exceed 2,000 square feet.

1.05 HEATING DURING CONSTRUCTION

- A. Should the work environment need to be within a certain temperature range for materials to properly cure or dry, the Contractor shall provide temporary heat at no cost to the project.
- B. The installation and operation of heating devices shall comply with all safety regulations including provisions for adequate ventilation and fire protection. Heating devices which may cause damage to finish surfaces shall not be used.
- C. Contractors shall have qualified personnel available 7 days a week, 24 hours a day to respond to emergencies or service or check heating equipment when required, to protect the Work and the building.

1.06 TEMPORARY POWER

- A. The adjacent building has no electrical service, and there is no source of power on site which can be used by Contractors.
- B. The use of cordless tools is strongly encouraged.
- C. Generators will be permitted where equipped with mufflers or silencers, subject to the City's approval. Generators which are excessively loud or create exhaust which is objectionable to the neighborhood, may be prohibited.
 - 1. Contractors shall provide their own electrical cords, and cords shall not be run through, across or draped

across sidewalks or circulation spaces used by the public. If running electrical cords across circulation spaces is unavoidable, cords shall be secured to the surface with readily visible colored duct tape, and shall be removed as soon as power is no longer needed.

1.07 HOISTING EQUIPMENT AND MACHINERY

- A. Hoisting equipment will be allowed to be driven on the park sidewalks and lawns (with suitable protection) where required to lift stones which are too heavy to be safely lifted manually.
 - 1. Routes for driven equipment must be presented to and approved by the City prior to their use on site. Submit a plan showing locations of travel, setting locations for pick points.
 - 2. Provide a minimum of 2 spotters on foot, in front and behind all vehicles while moving vehicles, to alert park visitors.
 - 3. Erect and maintain barriers around all construction equipment while on site, to keep the public at a safe distance.
 - 4. If lifting stones overhead across sidewalks, provide spotters on either side to ensure no park visitors walk under any construction equipment.
- B. All hoisting equipment and machinery required for the proper and expeditious prosecution and progress of the work shall be furnished, installed, operated and maintained in safe condition by the individual Subcontractors and is so stated in each appropriately related Section of the Specifications. All costs for hoisting operating services shall be borne by the Subcontractors unless specifically excepted in the Contract Documents.
 - 1. A licensed equipment manufacturer's representative shall be present at all times, to witness the erection and dismantling of all hoisting equipment and machinery, whenever such equipment is being erected or dismantled. No such work will be performed without the presence of such representative.
 - 2. Hoisting equipment and machinery erection and dismantling shall be performed only by trained, certified, and experienced riggers qualified to perform such work.
 - 3. Copies of such licenses and/or certifications, clearly indicating qualifications, shall be provided to the designer prior to commencement of such erecting and dismantling work.
- C. Review Drawings for hoisting requirements and openness of traffic access routes to installed destinations of specified equipment and furnishings.
- D. Remove all construction equipment from site daily, or secure properly. The City assumes no liability for theft, vandalism or injuries to the public related to any of the contractor's tools or equipment left on site.

1.08 STAGING

- A. Not required.

1.09 MAINTENANCE OF ACCESS

- A. The General Contractor shall provide and maintain for the duration of his contract, a means of access to, around and within the site, as indicated on the Contract Drawings, for vehicular traffic and authorized personnel. This means of access shall be construed to sustain the weight of equipment customarily engaged for use in construction projects of this type and magnitude. The General Contractor shall, without additional compensation from the Owner, furnish labor and materials as may be required from time to time to maintain this means of access in an acceptable condition as determined by the Designer. Pedestrian access shall provide adequate protection against falling debris, slippage, adequate lighting, warning and directional signs, and protection against construction activities.

1.10 DUST CONTROL

- A. The General Contractor shall have all Subcontractors provide adequate means for the purpose of preventing dust caused by construction operations from creating a hazard, nuisance, and from entering adjacent occupied areas throughout the period of the construction contract.
- B. This provision does not supersede any specific requirements for methods of construction or applicable general conditions set forth in the Contract Articles with added regard to performance obligations of the General Contractor.

1.11 NOISE CONTROL

- A. The park is surrounded by a residential neighborhood, and is subject to the City of Worcester noise ordinances. It shall be a material breach of this contract if the contractor and each subcontractor shall not at all times adhere to the provisions of § 1A(e)(9) of chapter nine of the Revised Ordinances of the city by limiting their on-site, noise producing construction and related work to the hours specified by said ordinance.
 - 1. No person shall operate any powered construction equipment or build, erect construct, demolish, alter, repair, excavate or engage in hoisting, grading, site work, including tree and brush removal, dredging or pneumatic hammering, or deliver construction equipment and/or supplies to the site on any building, road, tower, parking lot, machine, pipe, sewer, sidewalk, or any other construction project, except between the hours of 7:00 a.m. and 9:00 p.m. on weekdays and Saturday, and between the hours 9:00 a.m. and 7:00 p.m. on Sundays except for work performed by a public service or municipal utility department or “emergency work” performed with the express written permission of the commissioner of inspectional services or the commissioner of public works and parks. Emergency work shall be limited to such work that is clearly essential to response to a sudden and unexpected threat to public health or public safety. Emergency work permission may be granted to a general or sub-contractor on a blanket basis governing all persons working on a specified portion of a particular job. Emergency work permission may be granted for not more than one week at a time, and may be renewed for additional one week periods at the discretion of the commissioner who granted the initial permission..
- B. Comply with requirements of authorities having jurisdiction. Develop and maintain a noise-abatement program and enforce strict discipline over all personnel to keep noise to a minimum.
- C. Execute construction work by methods and by use of equipment which will reduce excess noise.
 - 1. Equip air compressors with silencers, and power equipment with mufflers.
 - 2. Manage vehicular traffic and scheduling to reduce noise.
 - 3. No heavy equipment may be started or idled before 7A.M.

1.12 INDOOR AIR QUALITY (IAQ) MANAGEMENT

- A. Not applicable.

1.13 ENCLOSURES

- A. Not applicable.

1.14 CLEANING DURING CONSTRUCTION

- A. Unless otherwise specified under the various Sections of the Specifications, the General Contractor shall perform clean-up operations during construction as herein specified.
- B. Control accumulation of waste materials and rubbish; periodically dispose of off-site in a legal manner. The General Contractor shall bear all costs, including fees resulting from such disposal.
- C. Clean all dirt and debris tracked into the adjacent building by construction personnel, to the satisfaction of the

Owner.

- D. Maintain project in accordance with all local and Federal Regulatory Requirements.
- E. Store volatile wastes in covered metal containers, and remove from premises.
- F. Prevent accumulation of wastes which create hazardous conditions.
- G. Provide adequate ventilation during use of volatile or noxious substances.
- H. Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
 - 1. Do not burn or bury rubbish and waste materials on site.
 - 2. Do not dispose of volatile wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains.
 - 3. Do not dispose of wastes into streams or waterways.
 - 4. Identify potential sources of cleaning water runoff and propose abatement procedures.
- I. Use only those materials which will not create hazards to health or property and which will not damage surfaces.
- J. Use only those cleaning materials and methods recommended by manufacturer of surface materials to be cleaned.
- K. Execute cleaning to ensure that the buildings, the site, and adjacent properties are maintained free from accumulations of waste materials and rubbish and windblown debris, resulting from construction operations.
- L. Provide on-site containers for collection of waste materials, debris, and rubbish.
- M. Remove waste materials, debris and rubbish from the site periodically and dispose of at legal disposal dump site (DEP approved). Recycle where possible.
- N. Handle material in a controlled manner with as few handlings as possible. Do not drop or throw materials from heights.
- O. Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not damage surrounding surfaces.

1.15 FIELD OFFICES

- A. Not permitted.

1.16 TELEPHONE SERVICE

- A. All Superintendents and Project Managers shall maintain cellular telephones and be reachable Monday - Friday between 8AM and 5PM, and after hours for emergency calls. Phone numbers shall be listed on a Project Directory, to be submitted at the pre-construction meeting.

1.17 SANITARY FACILITIES

- A. Contractors may use the public toilets in the adjacent building, provided that they are kept in a clean and orderly condition.
- B. Otherwise, the General Contractor shall provide suitable toilet facilities on site, in a location as required by the Owner. Maintain chemical toilets where work is in progress and in quantity required by OSHA Code.
 - 1. Locate toilets within the construction fence area, and secure them as appropriate to prevent unauthorized use by park patrons or vandalism at night.
- C. Chemical toilets and their maintenance shall meet requirements of state and local health regulations and

ordinances and shall be subject to the approval the Resident Engineer and Designer.

1.18 CONSTRUCTION BARRIERS

- A. Proper construction barriers shall be provided around the contract work area to prevent park patrons from accessing construction equipment of materials.
- B. Barriers shall be erected at such approved locations as are necessary, sufficiently cross-braced and supported adequately from floors and ceilings as required.

1.19 PARKING

- A. Parking passenger vehicles on the park will not be permitted. On-street parking is available around the park and the side streets. Where metered parking exists, contractors shall pay any related parking fees.
- B. One tool trucks will be allowed to be driven to the work areas so that tools may be kept in reasonable proximity to the work. Once on site, the truck is to remain parked until it is removed for the day. Vehicular movement through the occupied park is to be minimized.
 - 1. All protection of lawns/sidewalks and any repairs required are the responsibility of the contractor.
- C. Idling of vehicles on site will not be permitted, except for heavy equipment actively being used to move stones.

1.20 DEBRIS CONTROL AND REMOVAL

- A. Debris shall not be permitted to accumulate or migrate and the work shall at all times be kept satisfactorily clean.
- B. Dumpsters are not permitted; Contractors must truck debris off site daily to any private or public DEP approved dump.

1.21 SAFETY PROTECTION

- A. Contractors are advised that the building is located in a public park, which will remain open to the public throughout the duration of the project, including night time.
- B. At no time shall the work be left unattended without proper safety protection and shall not be left unprotected to the weather and accessible to the public. It is the responsibility of the Contractor to maintain proper safety protection for the public while work is in progress or unattended.
- C. After suspending work for the day, all tools, equipment and materials are to be secured properly to prevent unauthorized access by the public. No space within the adjacent building may be used for storage.

1.22 VEHICLE AND EQUIPMENT PROTECTION

- A. All construction activities shall be performed in such a manner so as not to dust, stain or damage any building elements, equipment, vehicles, etc. within general vicinity of the construction work area. Any damage to these items shall be cleaned and repaired at the expense of the Contractor.
 - 1. All construction vehicles and equipment on site shall be effectively disabled and secured when not in use.

1.23 SHORING

- A. The Subcontractors shall provide all temporary shoring and bracing as required for the proposed work. Comply with all applicable codes and standards.

1.24 CONSTRUCTION FENCE

- A. A construction fence shall be provided at all areas where work is being performed and at all pedestrian walkways throughout construction. Fencing shall be kept in good repair at all times, and shall be arranged to maintain ongoing operation's access and egress.
- B. Construction barriers shall consist chain link fencing, a minimum of 48" high with non-penetrating bases. Provide fencing wherever work is actively performed and leave fencing in place until mortar materials have reached their initial set and can resist shifting under foot traffic.
- C. Fencing shall be removed by the General Contractor at no cost to the Owner at such time before final completion as the Designer directs. Restore site to acceptable condition after removing fence.

1.25 PROJECT IDENTIFICATION

- A. No project sign is required by the Owner.
- B. If the Contractor wishes to provide a project sign, at his own expense, the Owner reserves the right to approve the content and appearance of the sign.
- C. Any signs will be located on site where directed by the Owner, and shall be relocated or removed if the Owner so directs.

1.26 DELIVERY OF MATERIALS

- A. All materials shall be delivered to the Contractor's or Sub-Contractor's warehouse or may be delivered to the site if the Contractor's representative is present to receive them.
- B. No materials will be received by the Owner's personnel.

II. PART II - PRODUCTS (Not Used)

III. PART III - EXECUTION (Not Used)

END OF SECTION

THIS PAGE INTENTIONALLY LEFT BLANK

SECTION 01 77 00

CLOSEOUT PROCEDURES

I. PART 1 - GENERAL

1.01 SCOPE

- A. This section lists the procedures required for the proper completion of this project including processing the Release of Retainage and making the Final Payment to the Contractor.
- B. Consult the Individual sections of the specifications for requirements affecting Project Close Out.

1.02 RELATED DOCUMENTS

- A. This section supplements the General Conditions.
- B. Consult the individual sections of the specifications for specific items required under those sections.

1.03 SUBSTANTIAL COMPLETION

- A. Prior to requesting Substantial Completion the Contractor shall make a thorough inspection of the Work. During this inspection the Contractor shall prepare a comprehensive list of all items remaining to be completed or corrected. This list shall include all remaining Contractor and Subcontractor items to be provided under the Contract Documents.
- B. Upon completion of the items noted on the Contractor's list the Contractor shall notify the Architect that the Work is Substantially Complete. The Architect shall then conduct a similar thorough inspection. If the Architect agrees that the Work is Substantially Complete, the Architect will promptly make a thorough inspection and prepare a punch list, setting forth in accurate detail any items on the Contractor's list and additional items that are not acceptable or incomplete. The Contractor shall coordinate all Subcontractors to achieve prompt completion of the punch list.
- C. The Contractor shall not be relieved of the responsibility to provide Contract items left off of the Architect's punch list.
- D. If the Architect determines that the Work is not Substantially Complete, the Architect shall inform the Contractor of those items that must be completed before the Architect will prepare a punch list. Upon completion of those items, the Contractor shall again request the Architect to prepare a punch list.
- E. When the punch list has been prepared, the Architect will arrange a meeting with the Contractor and Subcontractors to identify and explain all punch list items and answer questions on work which must be done before final acceptance.
- F. The Architect may revise the punch list, from time to time, to ensure that all items of Work are properly completed.
- G. The Architect shall prepare the Certificate of Substantial Completion in accordance with the General Conditions.
- H. The Contractors shall correct the items noted on the punchlist(s). The General Contractor shall check the work of his forces, and of all sub-contractors to verify that the work has been corrected, and notify the architect that the project is ready for reinspection. The Architect and Engineers may, at their discretion, check the work to confirm the punchlist has been completed, and advise the Owner.
 - 1. If the Contractor calls for reinspection, and the Project is not actually ready or punchlist items have not been corrected and subsequent reinspections are required, the Architect reserves the right to bill

the Owner for the reinspections, and such monies will be deducted from the balance due to the Contractor.

1.04 RECORD DRAWINGS

- A. As-built Drawings shall consist of all the Contract Drawings. As-built Drawings shall be kept up-to-date. Information from on-going Work shall be recorded on As-built Drawings within 48 hours of Work being performed.
- B. The General Contractor and each Subcontractor shall be required to maintain one set of As-built Drawings, as the work relates to their Sections of the Specifications, at the site.
- C. The As-built Drawings shall be stored and maintained in the General Contractor's field office or a secure location apart from other documents used for construction. The As-built Drawings shall be maintained in a clean, dry, and legible condition and shall not be used for construction purposes.
- D. As-built Drawings, as submitted by the General Contractor shall be verified in the field by the Designer or his Consultants. Verification by the Designer shall occur during the construction process and prior to the related work being completed and covered up.
- E. The As-built Drawings shall be available at all time for inspection by the Project Manager or Designer. All deficiencies noted shall be promptly corrected.
- F. The following information shall be indicated on the As-Built Drawings:
 - 1. Record all changes, including change orders, in the location, size, number and type both horizontally and vertically of all elements of the project which deviate from those indicated on all the Contract Drawings.
 - 2. The tolerance for the actual location of utilities and appurtenances within the building to be marked on the As-built Drawings shall be plus or minus two (2) inches.
- G. At the end of each month and before payment for materials installed, the General Contractor, each Subcontractor, the Architect and Project Manager shall review the As-built Drawings for purpose of payment.
 - 1. If the changes in location of all installed elements are not shown on the As-Built Drawings and verified in the field, then the material shall not be considered as installed and payment will be withheld.
- H. Prior to the installation of all finish materials, a review of the As-built Drawings shall be made to confirm that all changes have been recorded. All costs to investigate such conditions shall be borne by the applicable party as determined by the Designer.
- I. At the completion of the contract, each Subcontractor shall submit to the General Contractor a complete set of his respective As-built Drawings indicating all changes. After checking the above drawings, the General Contractor shall certify in writing on the title sheet of the drawings that they are complete and correct and shall submit the As-built Drawings to the Designer.
- J. The original hand-noted as-Built Drawings shall be scanned in color to Adobe Acrobat (*.pdf) format and submitted on CD or DVD to the Designer, to be added to the complete plans as constructed.

1.05 RECORD SURVEYS

- A. Not required.

1.06 OPERATING AND MAINTENANCE INSTRUCTIONS

- A. Not required.

1.07 PARTIAL RELEASE OF RETAINAGE

- A. If within 65 days after Substantial Completion, any of the items on the Architect's punch list are not complete or if the Contractor has not provided the appropriate marked up As Built Drawings, Operating Manuals, Warranties, Guarantees, or Spare Parts the Architect shall assign a monetary value for each incomplete item as well as any other items as provided by M.G.L. c.30 §39K, and the Architect shall prepare a Certificate for Partial Release of Retainage
- B. If the Architect is required to prepare a Certificate for Partial Release of Retainage the Contractor shall complete all remaining Work in accordance with the provisions of the General Conditions.
- C. The Contractor's signature on this Certificate shall be notarized.
- D. The Contractor may make a request for additional releases of retainage when portions of the Work listed on the Architect's punch list have been satisfactorily completed. Each request shall be accompanied by a new application for payment and a new signed and notarized Certificate for Partial Release of Retainage.
- E. The Architect's inspections, required to complete the additional payment applications described above, are subject to provisions of the General Conditions.
- F. If the Owner has required Performance and Payment Bonds, then prior to the partial release of retainage, the General Contractor shall submit to the Owner Consent of Surety to Partial Release of Retainage using AIA Document G707A or an equivalent document.

1.08 FINAL RELEASE OF RETAINAGE

- A. Prior to the final release of retainage, the General Contractor shall submit to the Owner:
 - 1. Consent of Surety, using AIA Document G707 or similar document, if performance and payment bonds were required for the project.
 - 2. Contractor's Affidavit of Release of Liens, using AIA Document G706A or equivalent. This document shall be accompanied by certified statements from all sub-contractors working on the project, that they have received all monies due, and have paid all suppliers and sub-sub contractors accordingly.
 - (a) Should any payments be outstanding and contingent upon receipt of the retainage in order to be paid, the General Contractor shall submit AIA Document 706, itemizing those items which have not been paid.

END OF SECTION

THIS PAGE INTENTIONALLY LEFT BLANK

SECTION 02 25 19

MASONRY ASSESSMENT

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
 - 1. Evaluating the condition of the existing capstones around the Elm Park Pond. This section includes photographs of stones requiring work, which establishes the basic scope of work for the project. A pre-work evaluation by the contractor is required to identify any additional work to be performed on a Unit Price basis.
- B. Alternates: Not Applicable.
- C. Items To Be Installed Only: Install the following items as furnished by the designated Sections:
 - 1. None.
- D. Items To Be Furnished Only: Furnish the following items for installation by the designated Sections:
 - 1. None.
- E. Related Work: The following items are not included in this Section and will be performed under the designated Sections:
 - 1. Section 04 20 00 – MASONRY WORK for repair procedures.

1.3 DEFINITIONS

- A. Cap Stone: The top weathering stone course covering the masonry or concrete retention wall surrounding the pond perimeter.
- B. Non-Destructive Testing (NDT): Testing methods that evaluate the stone and bedding without causing physical damage or degradation to the historic fabric.

1.4 SUBMITTALS

- A. Assessment Work Plan: Submit a narrative outlining proposed methodology for evaluating stones, access methods from the water/shoreline, and containment strategies to eliminate pond debris.
- B. Final Assessment Report: Comprehensive digital document detailing all visual anomalies, structural stability ratings, safety risks, and repair recommendations.

1.5 PROJECT CONDITIONS / ENVIRONMENTAL SITE CONSTRAINTS

- A. Aquatic Protection: No chemical testing agents, destructive debris, or pulverized stone particles may enter the pond water.
- B. Public Safety: The pond perimeter is located in a high-traffic public space. The Assessor must provide temporary physical barriers and safety signage around active workspace zones.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 FIELD EXAMINATION AND VISUAL ASSESSMENT

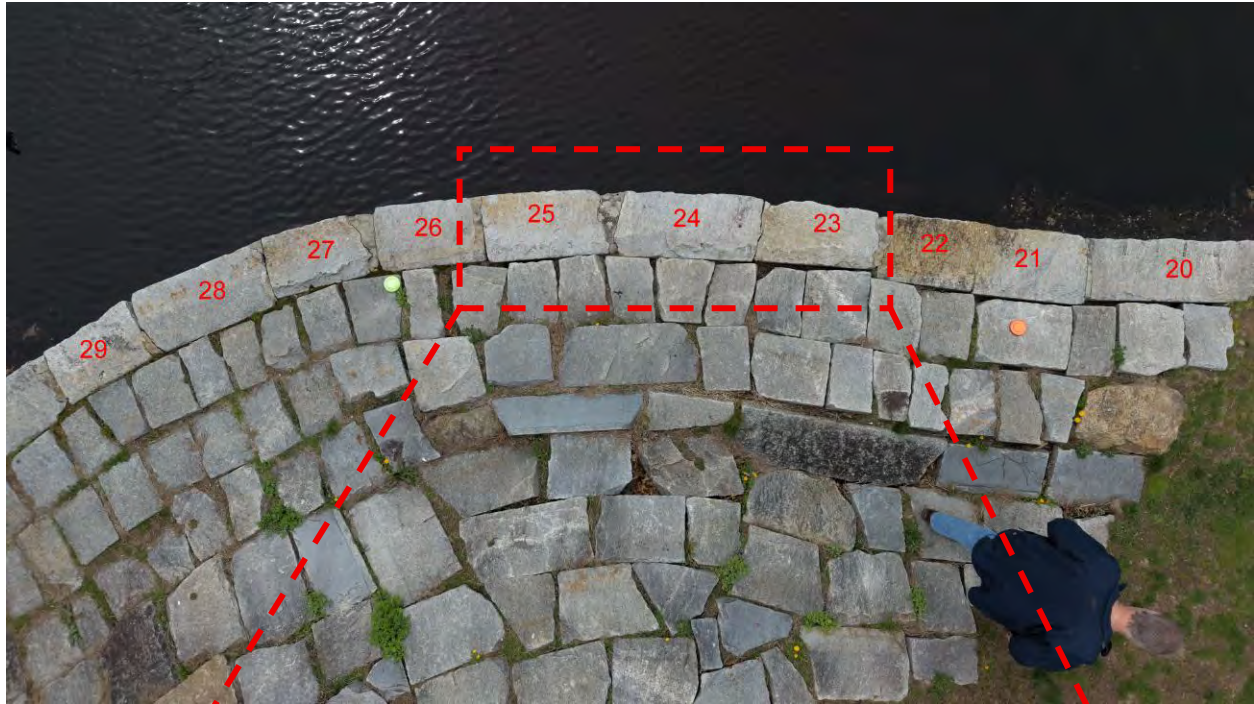
- A. Systematic Survey: Perform a 100% visual inspection of all granite cap stones along the pond perimeter. Document findings on the site plan included in the bid set, to record the location of stones not currently included in the scope or work but which may require repair.
- B. Dimensional Stability: Measure and record lateral shifting, rotation, tipping, uneven settlement, or vertical displacement between adjacent cap stones.
- C. Review findings on site with the Architect and Owner to determine whether any additional stone resetting should be added to the project scope, prior to the start of work.
 - 1. Work performed on stones other than those indicated for repair, without the prior approval of the Owner, are at the Contractor's expense.

3.2 CLEANUP AND PROTECTION

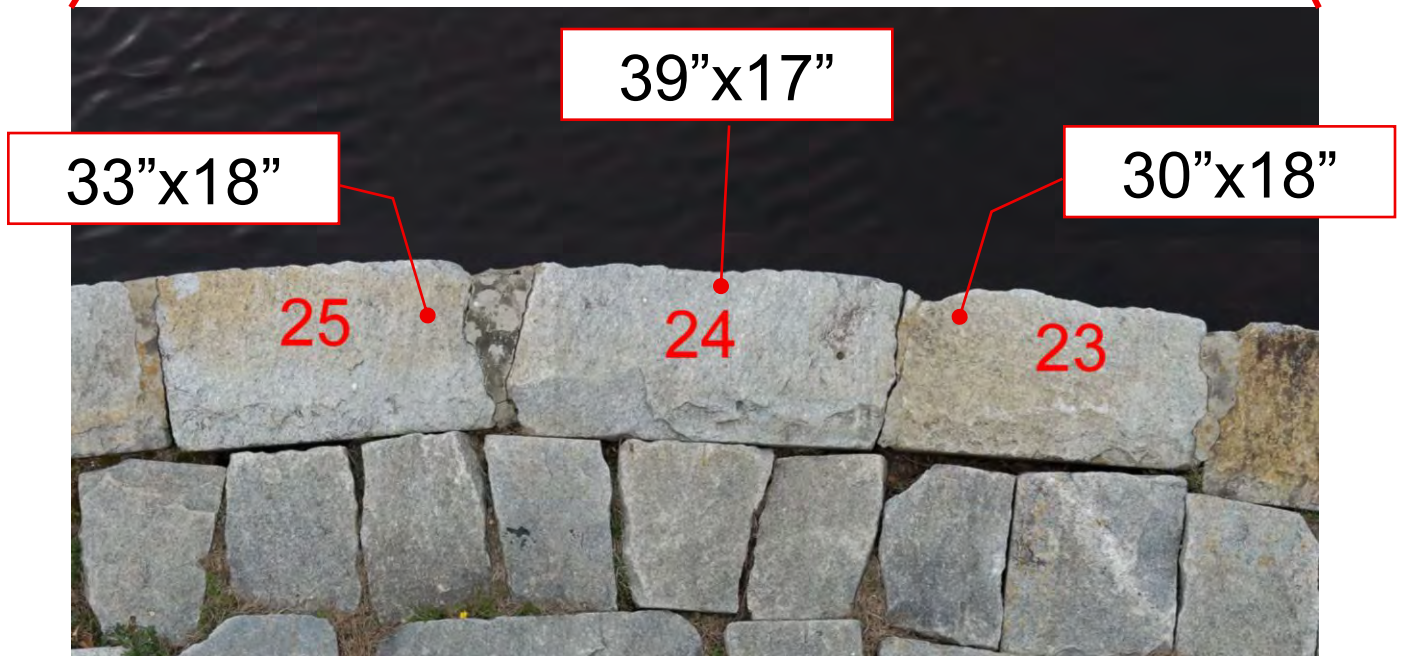
- A. Immediate Remediation: Remove all testing gear, tape, and markings daily.
- B. Structural Hazards: If any cap stone is found to be entirely detached, loose, or posing an immediate tipping hazard into the water or onto public pathways, barricade the zone immediately and notify the Owner.

3.3 SCHEDULE OF STONE REPAIRS

- A. The following photos indicate stones to be removed, cleaned and reset to be included in the base bid. Additional stones, if additional work is agreed to, will be addressed on a Unit Price basis as specified in Section 01 22 00 – UNIT PRICES.
- B. Stones have been numbered sequentially, but only the photos showing stones to be removed, cleaned and reset are included; stones considered to be stable have been omitted. The complete photo survey will be provided to the Contractor for use in assessing the condition of the stones.
 - 1. Utilize the same numbering system when identifying additional stones to be repaired.
- C. Sizes have been indicated to give bidders a rough sense of the size of the stone, and are not to be misconstrued as exact dimensions. All stones are readily visible and bidders should visit the site to examine the stones requiring work, and fully understand the effort required, prior to submitting a bid.



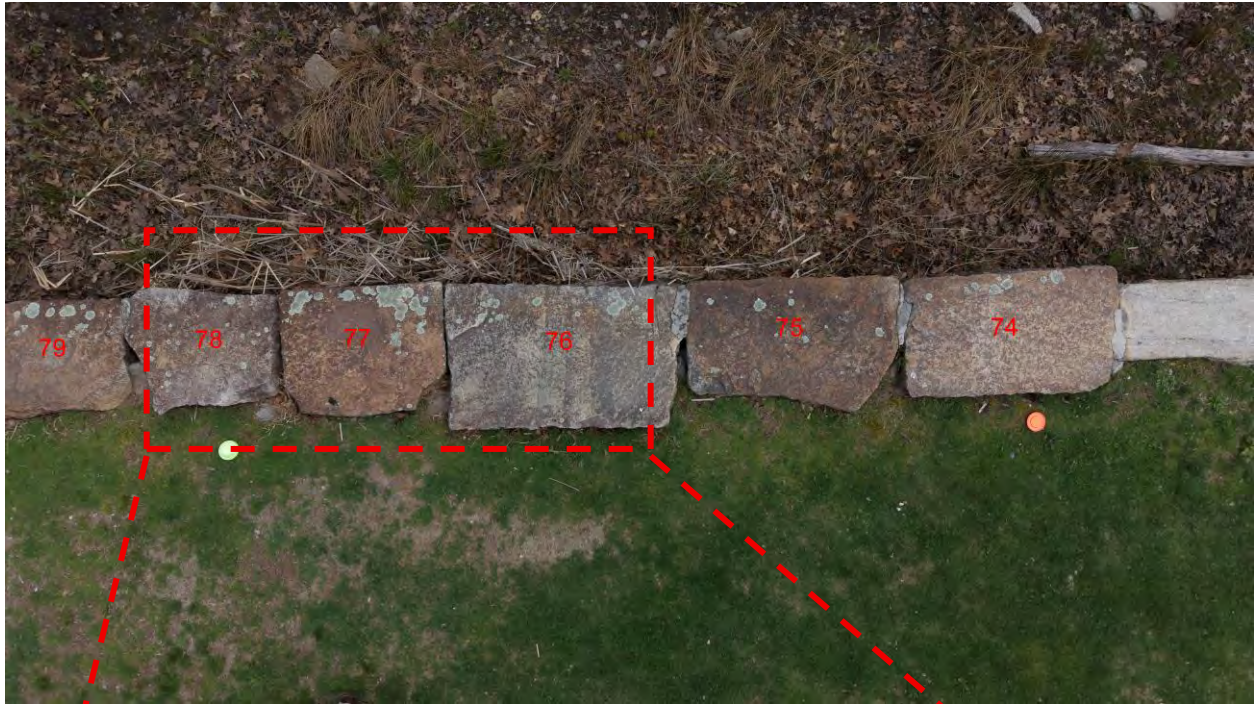
#006



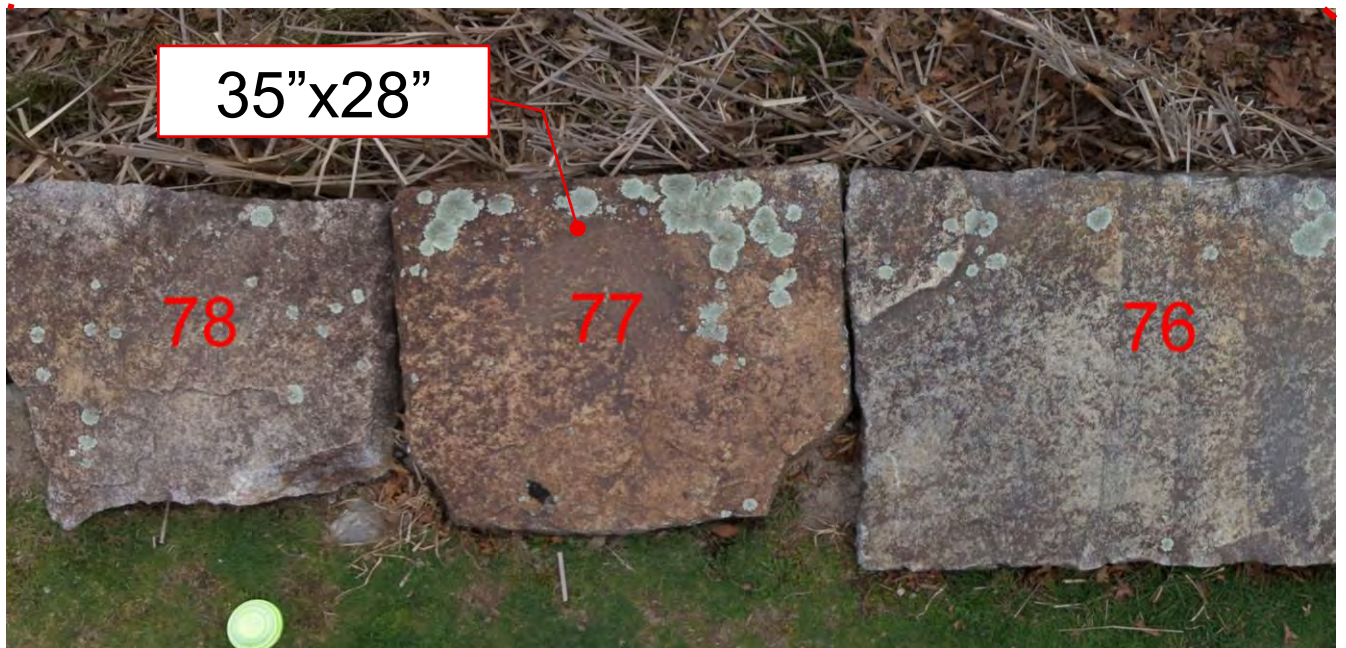


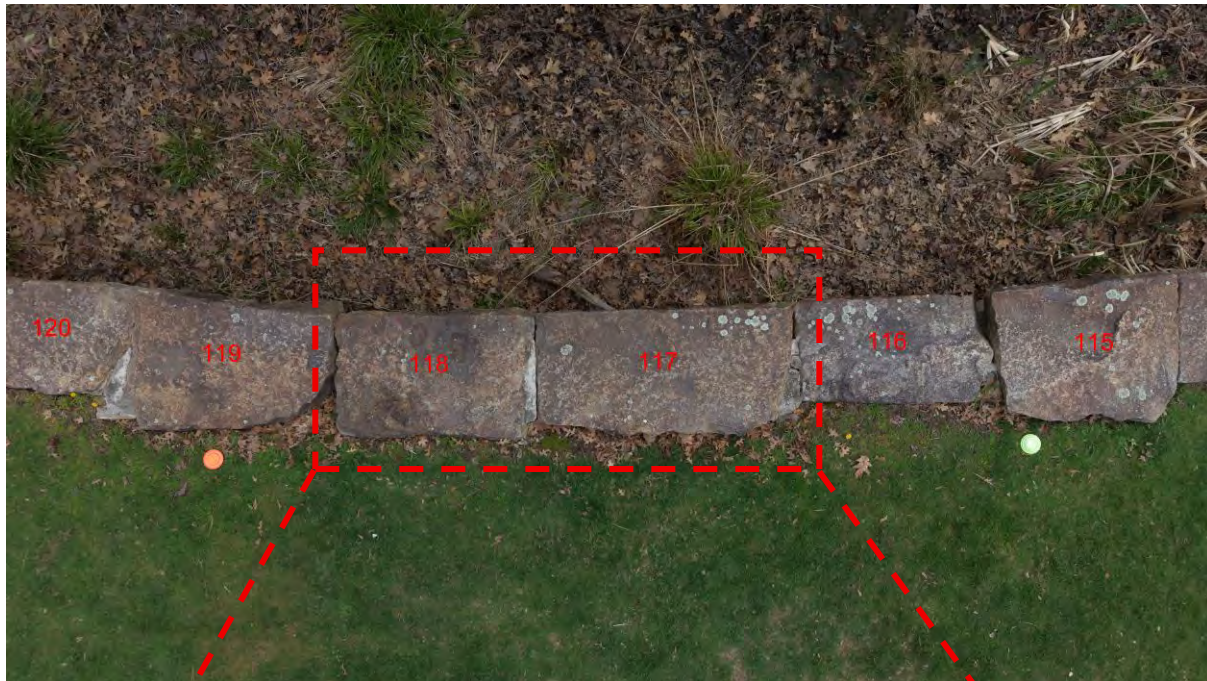
#009



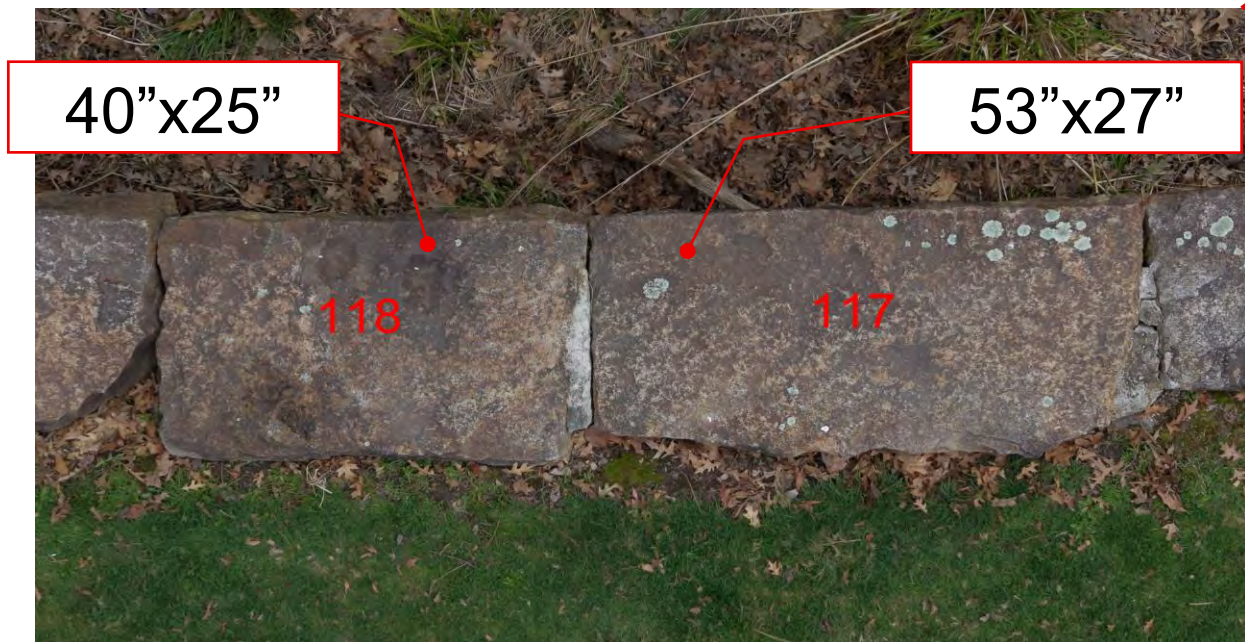


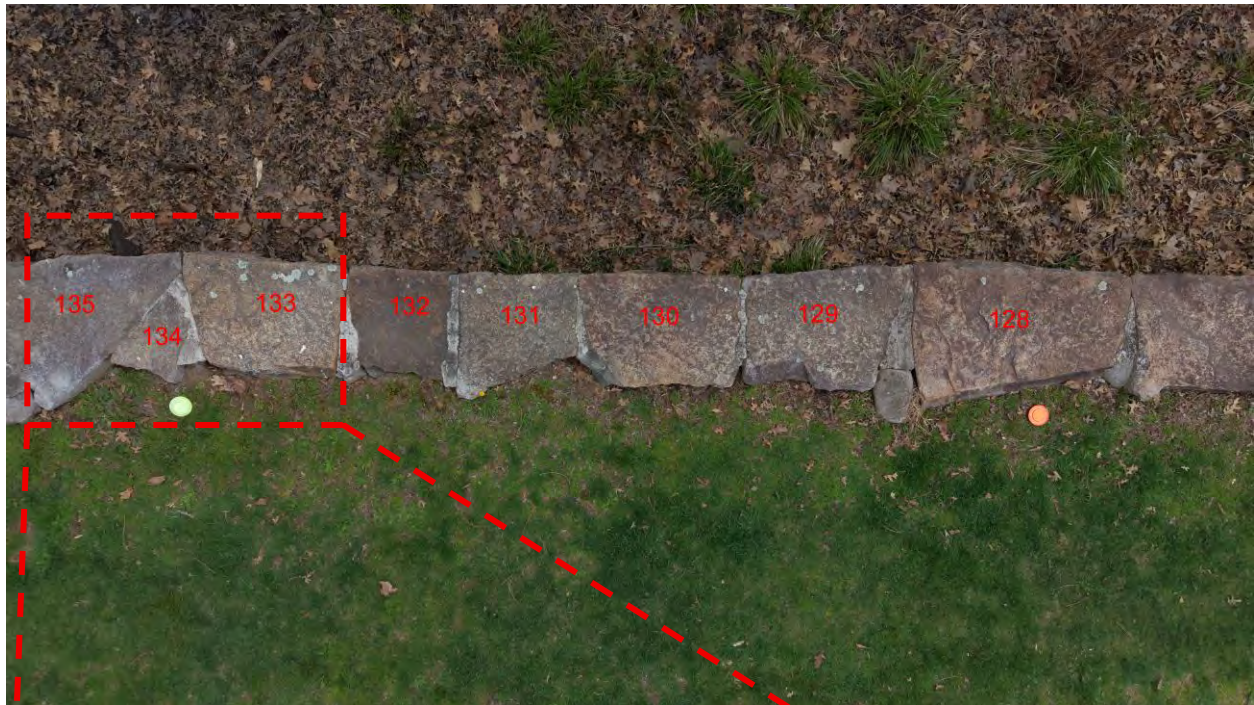
#017



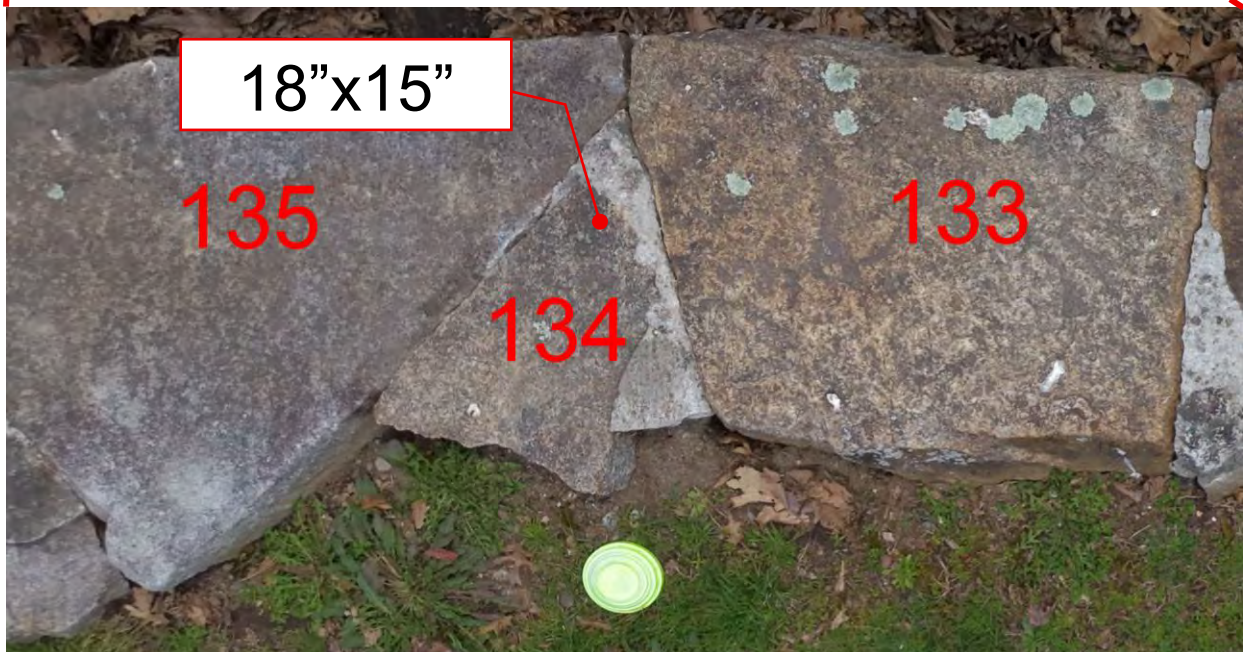


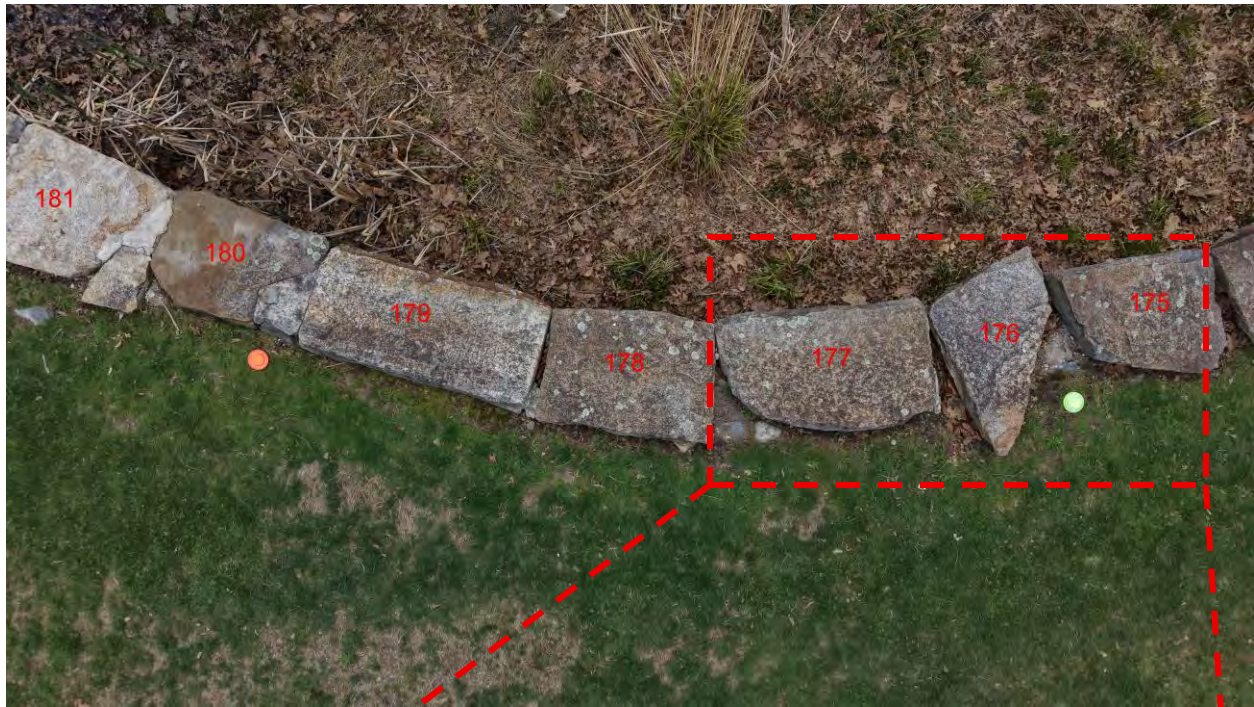
#028



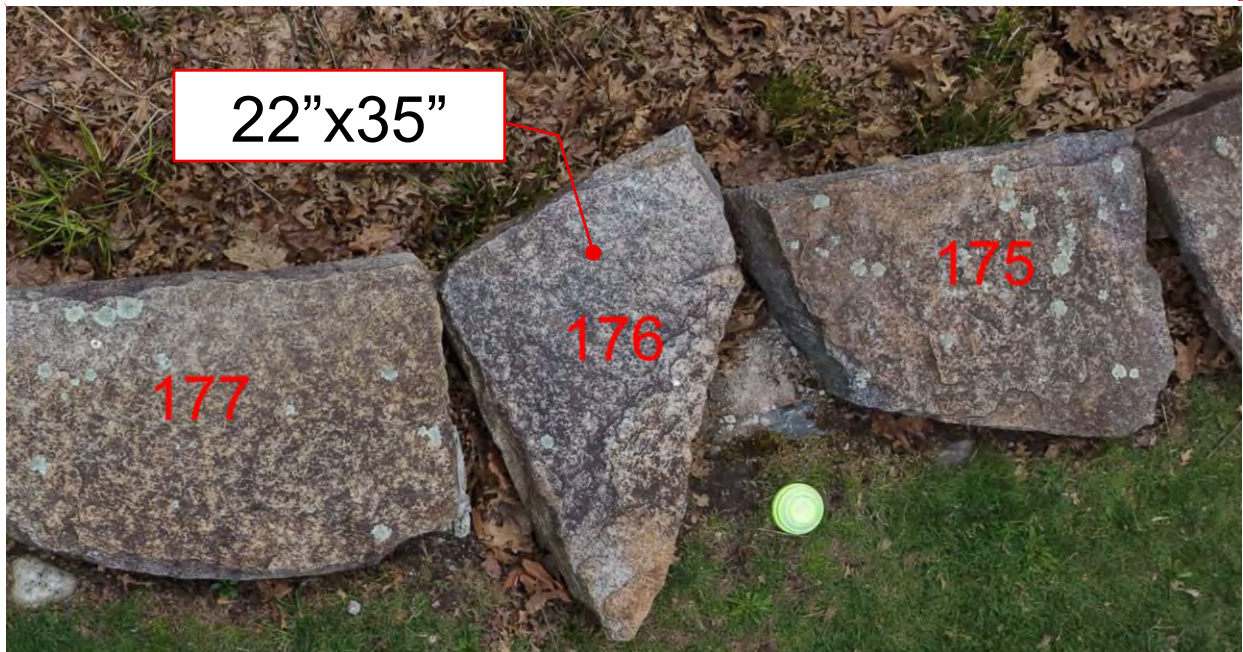


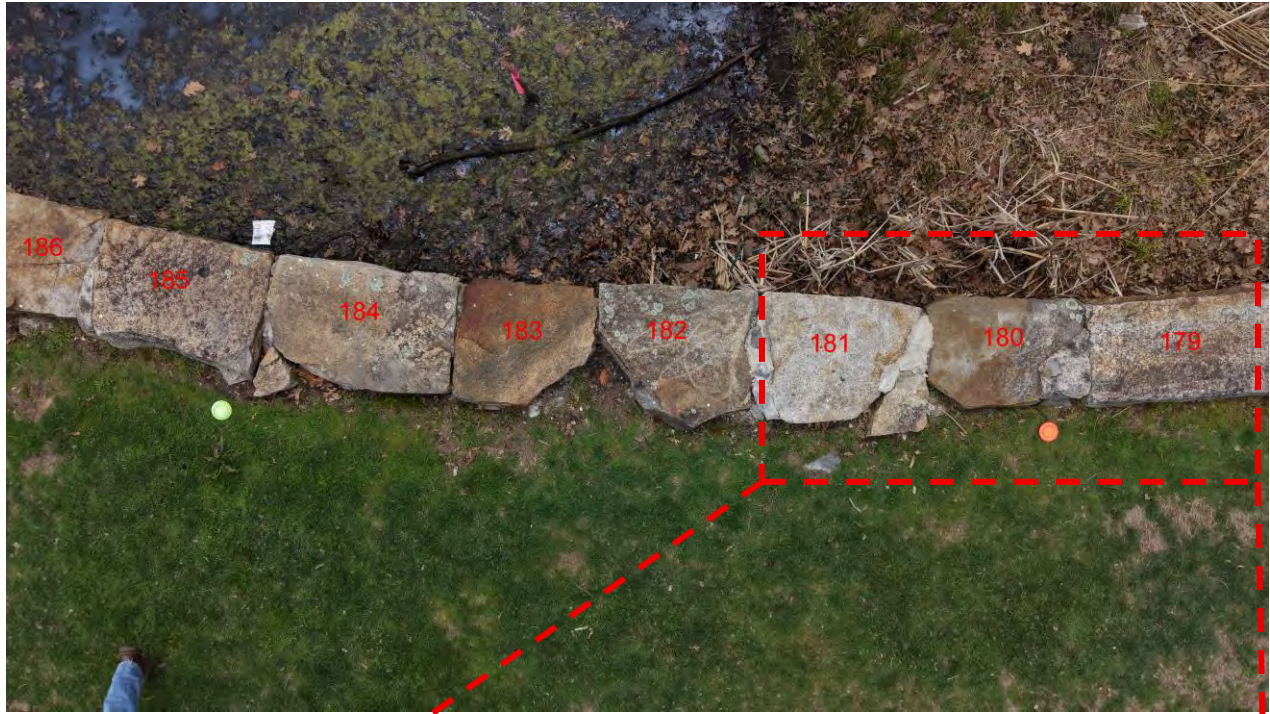
#031



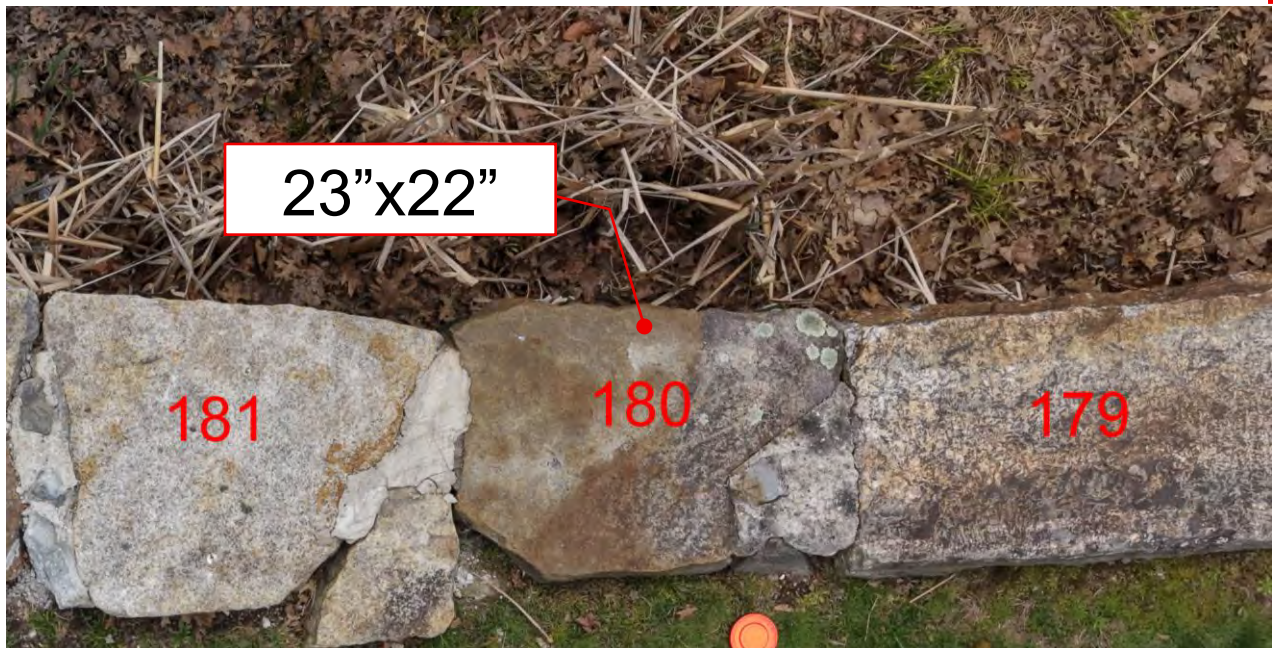


#042



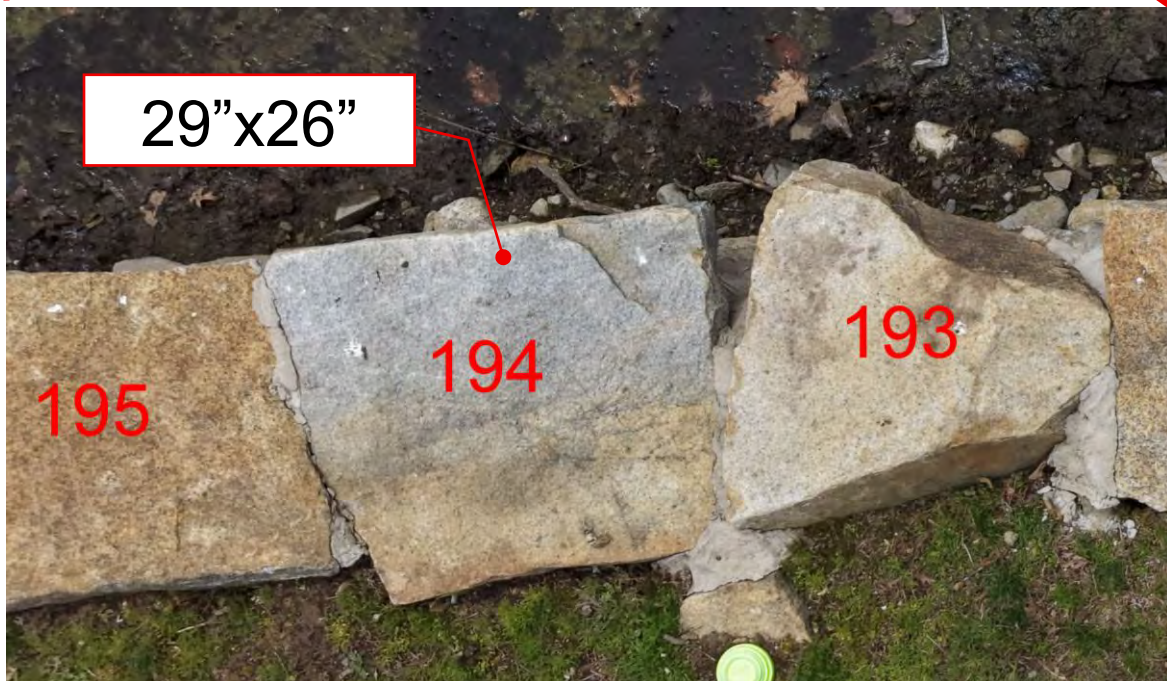


#043





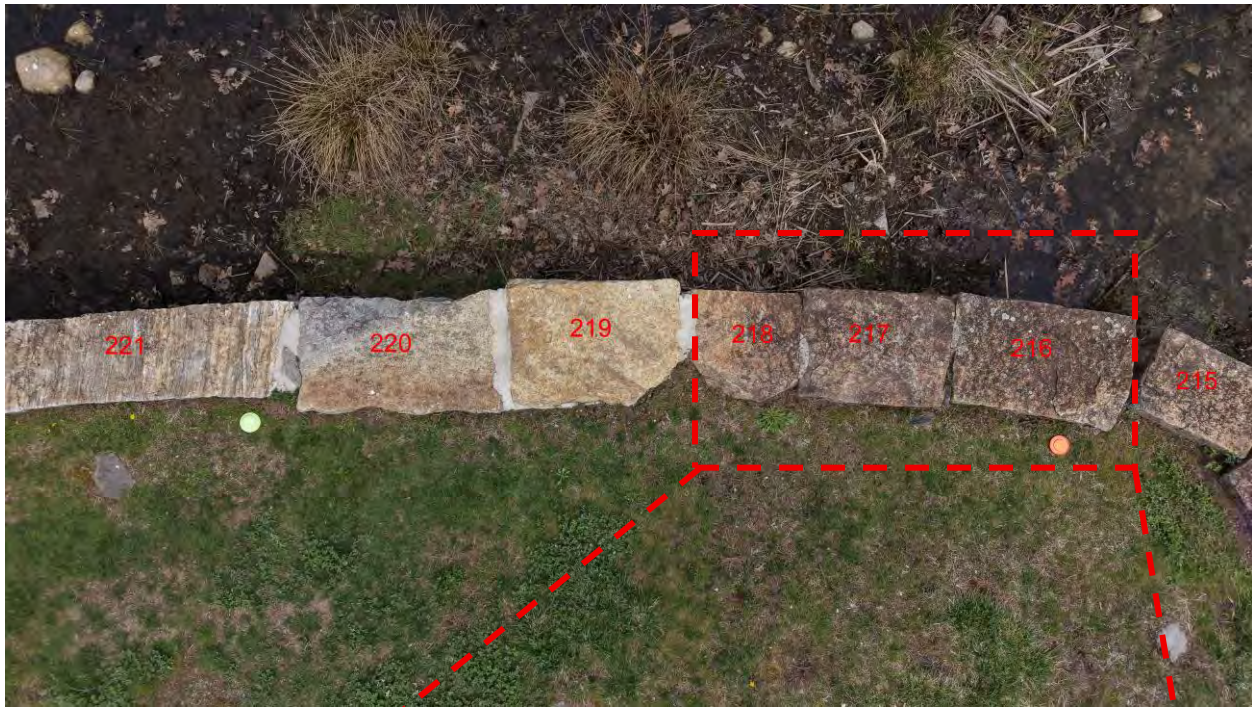
#045





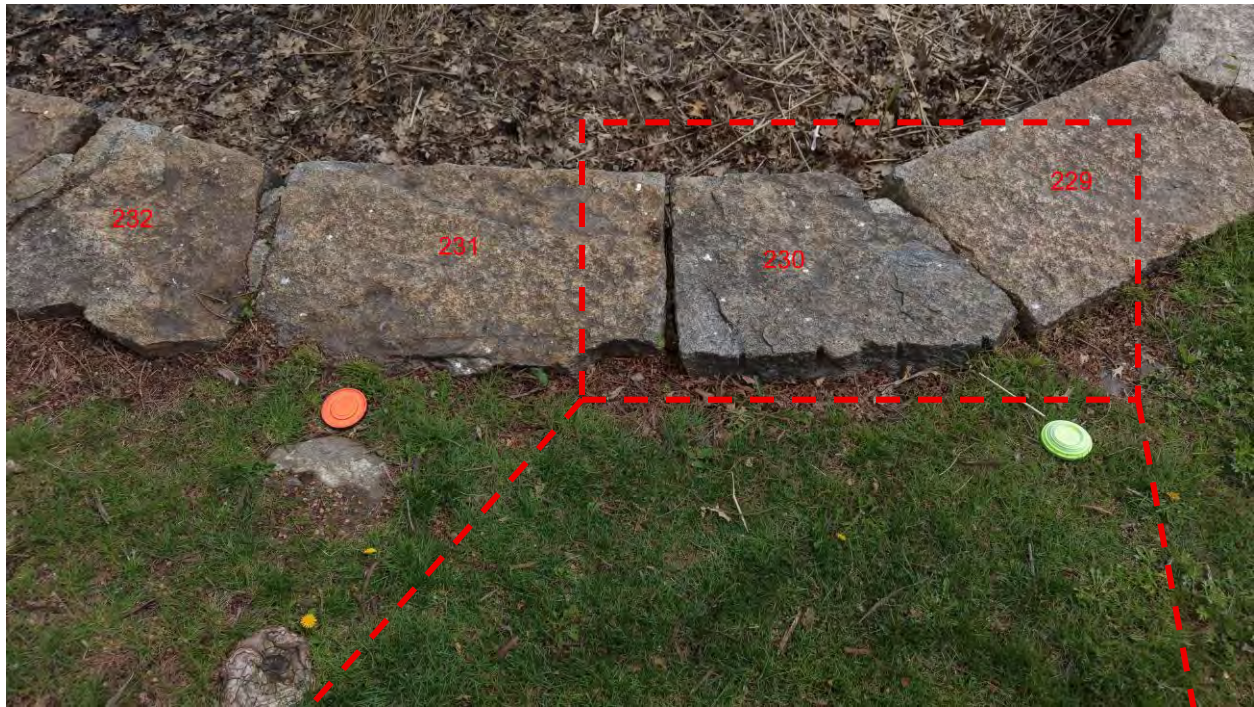
#050



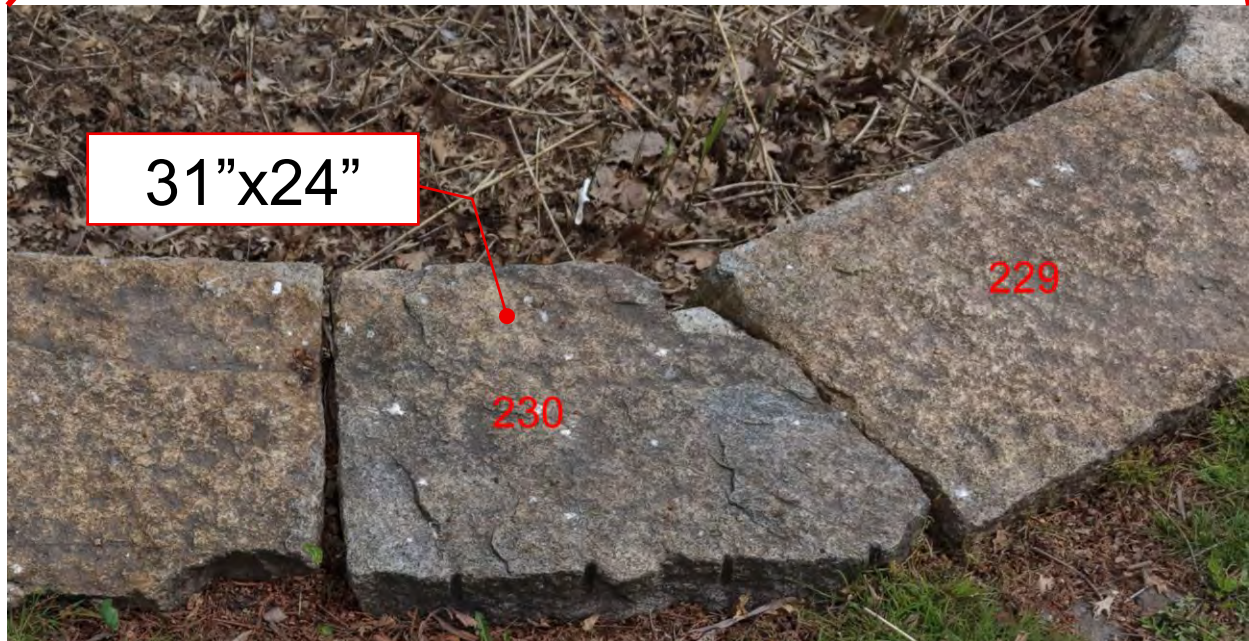


#051



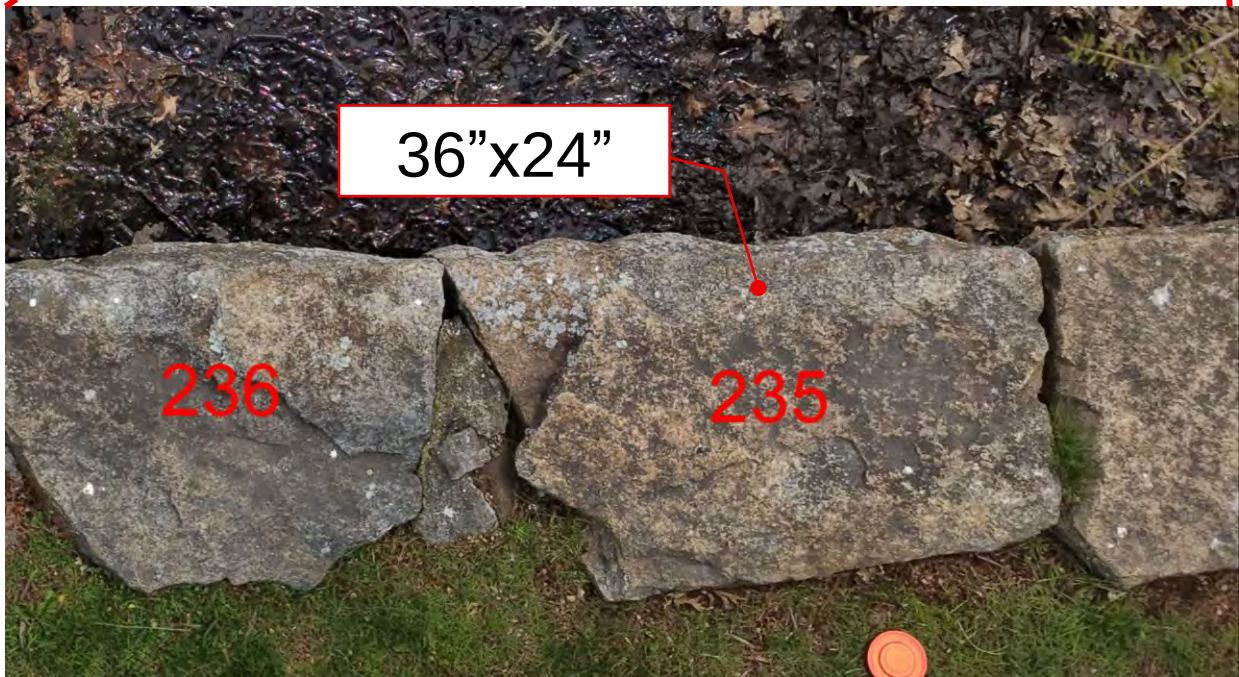


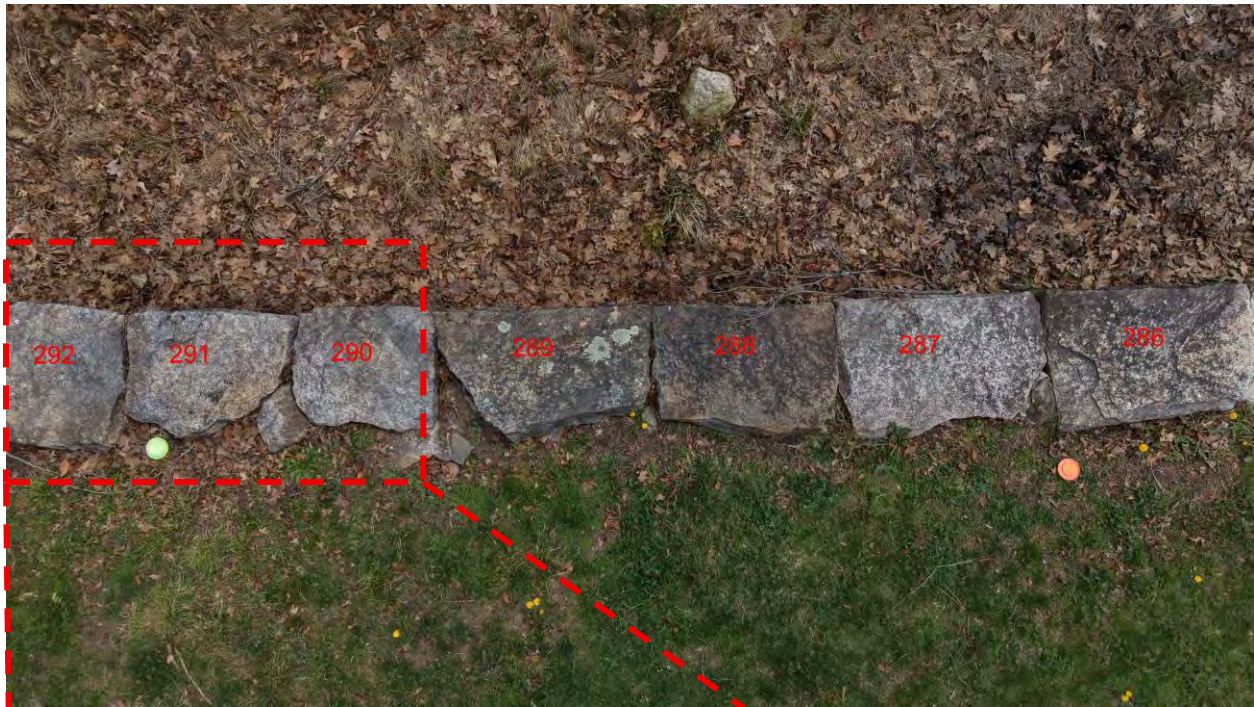
#056



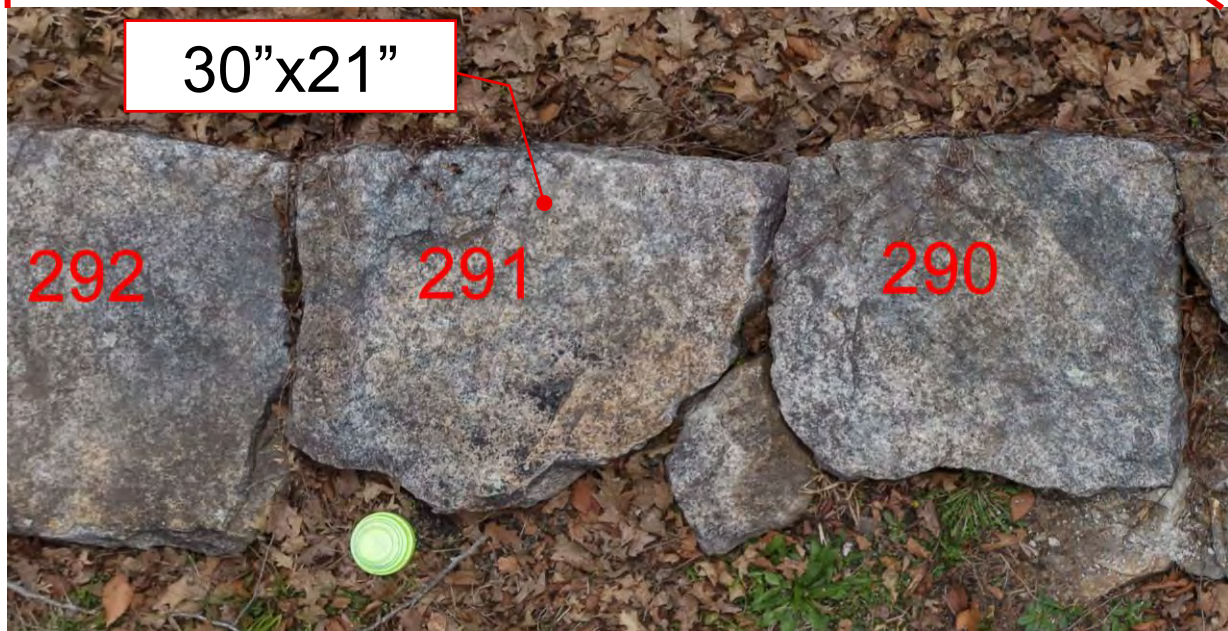


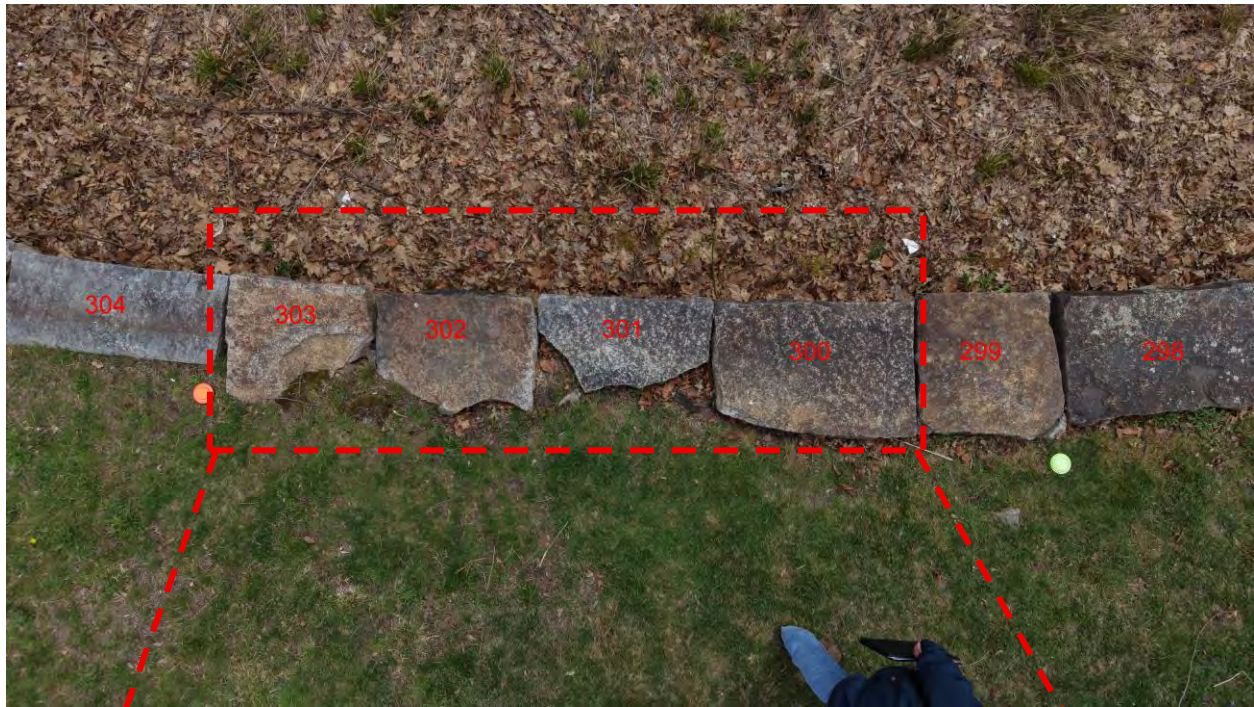
#059





#071





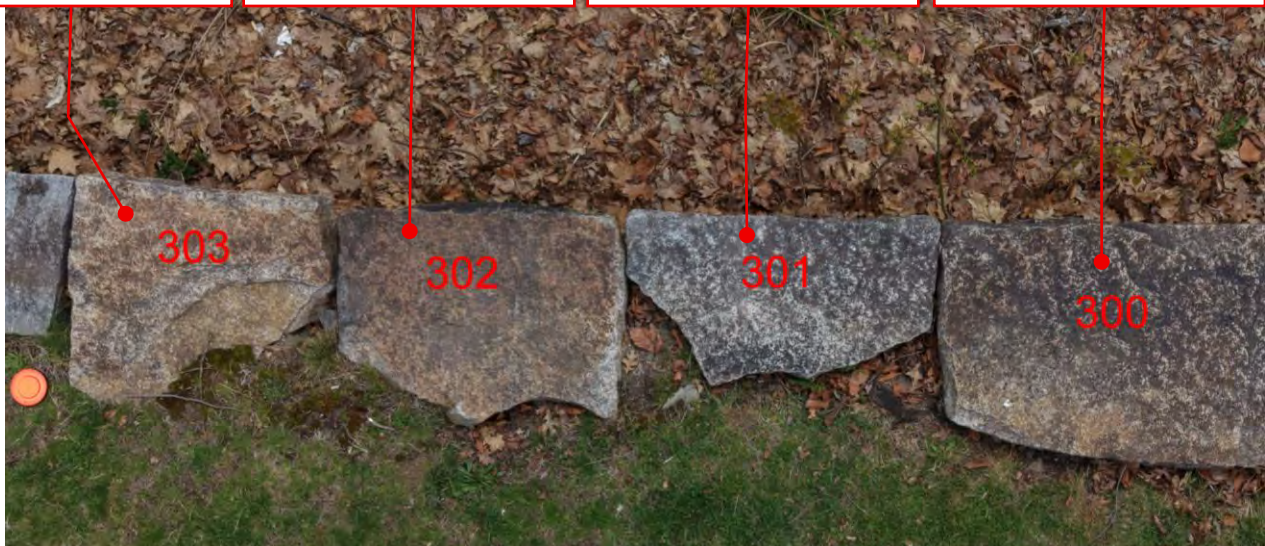
#074

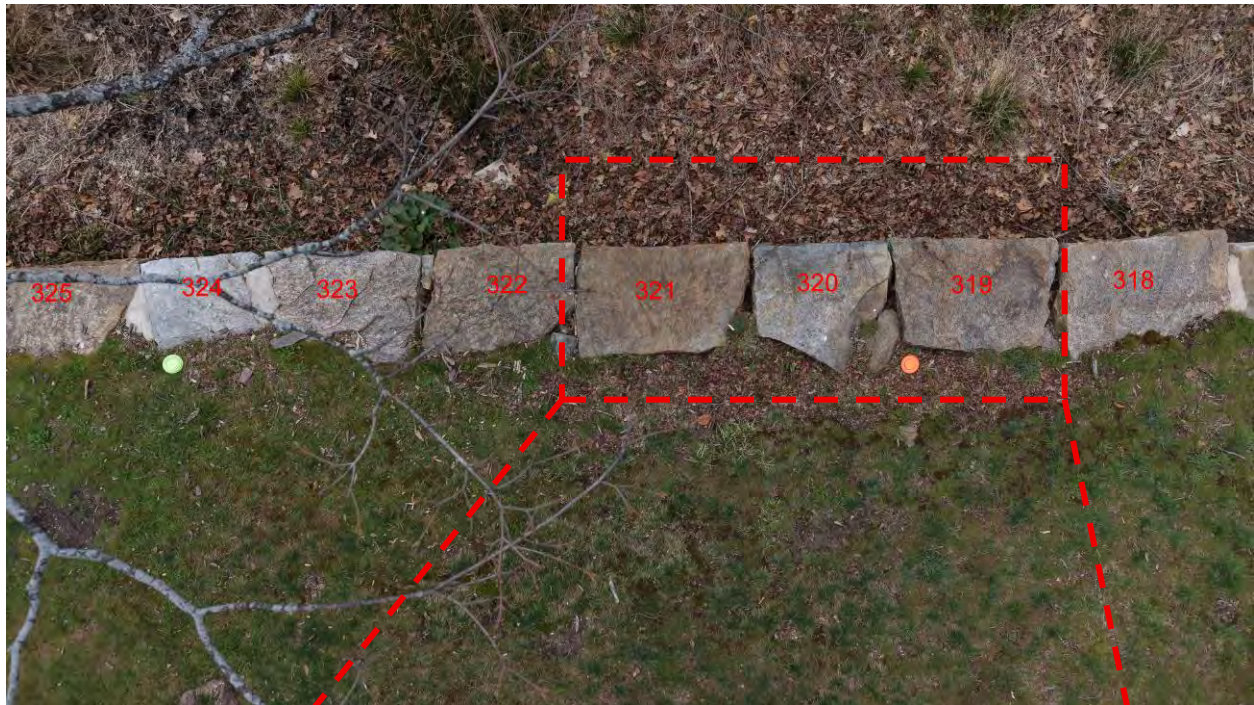
30"x25"

33"x24"

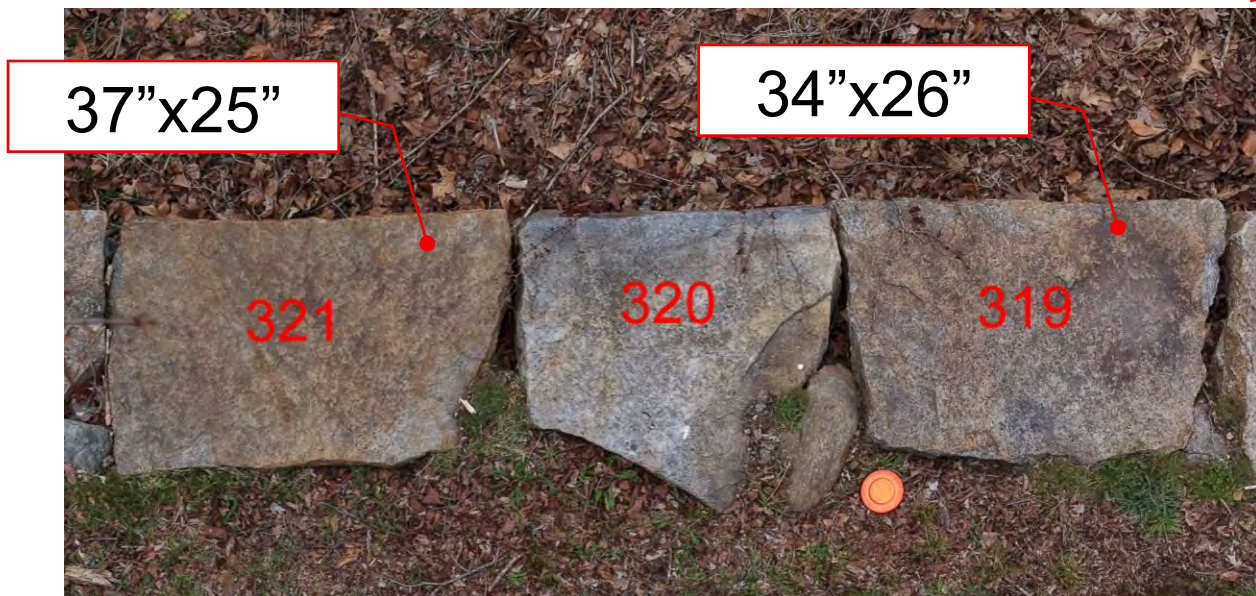
36"x18"

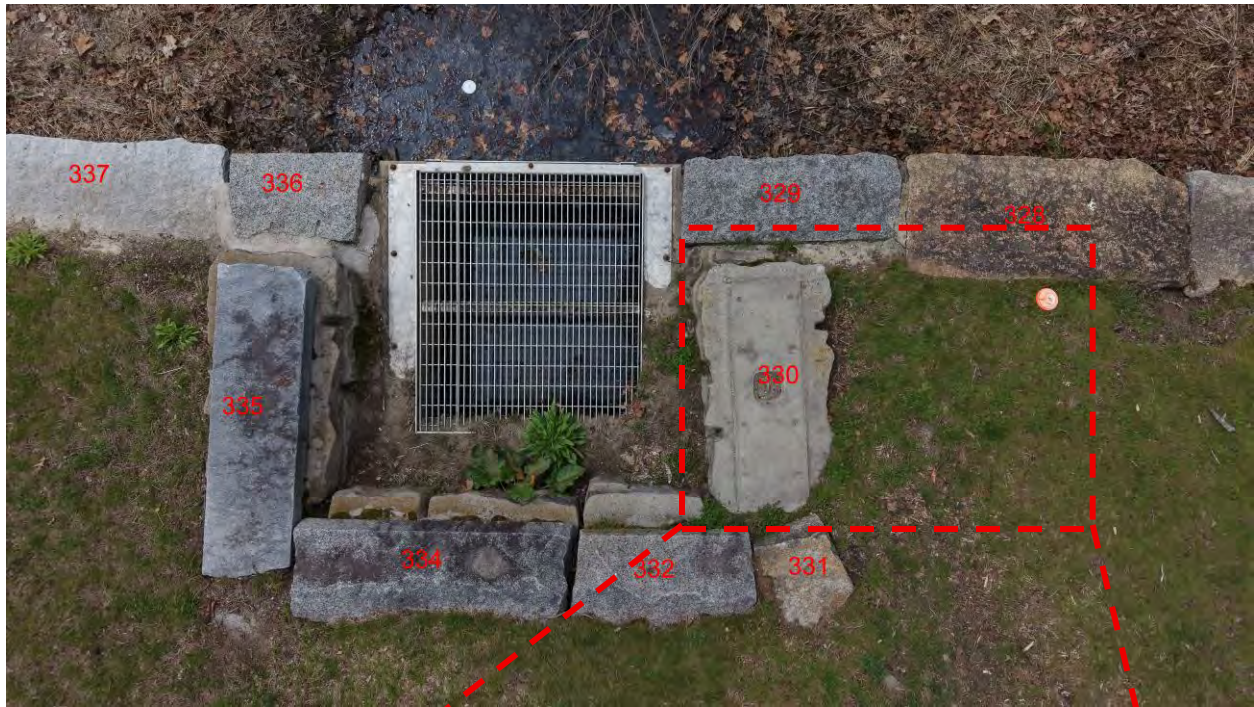
39"x27"



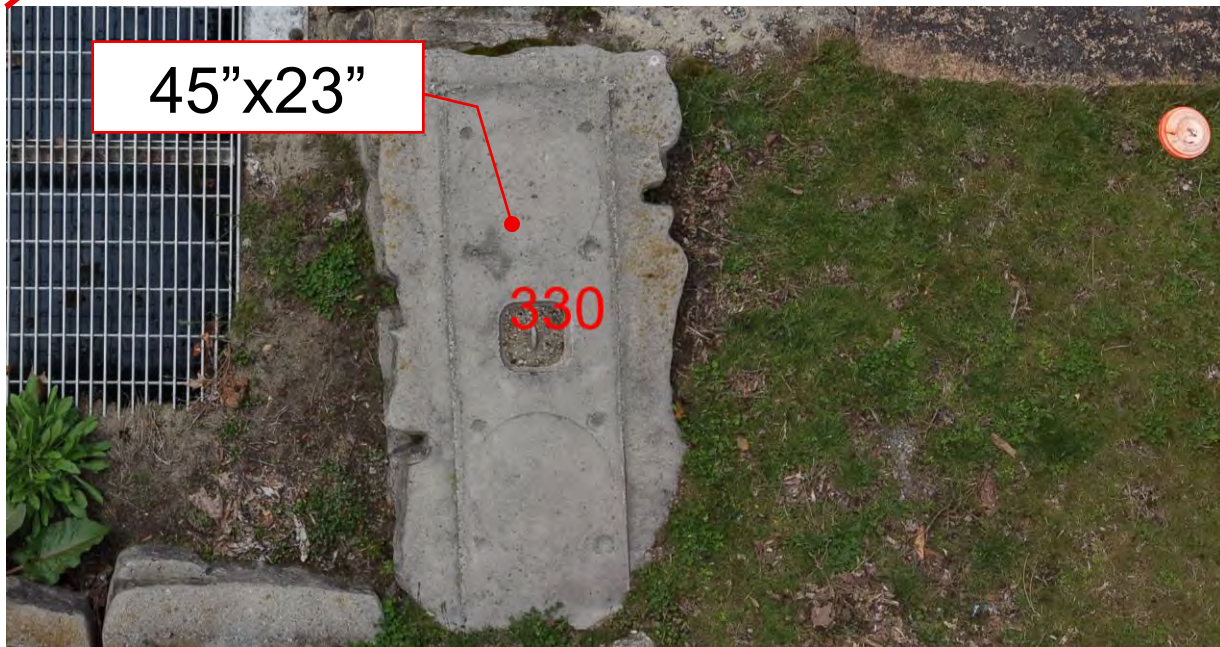


#079





#081





#117



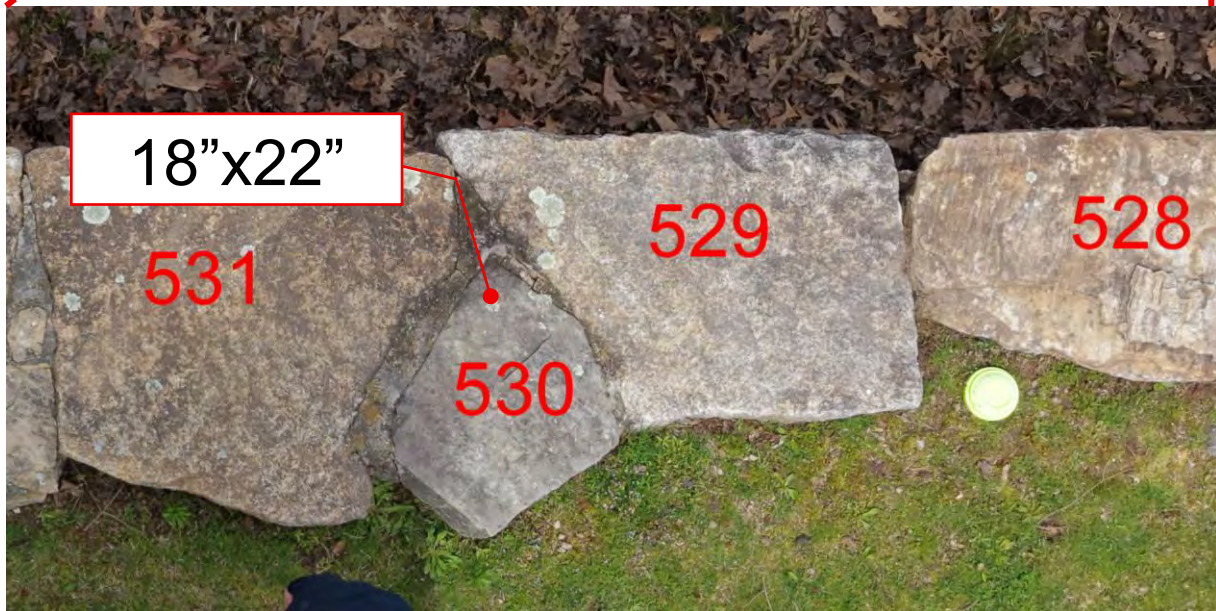


#121



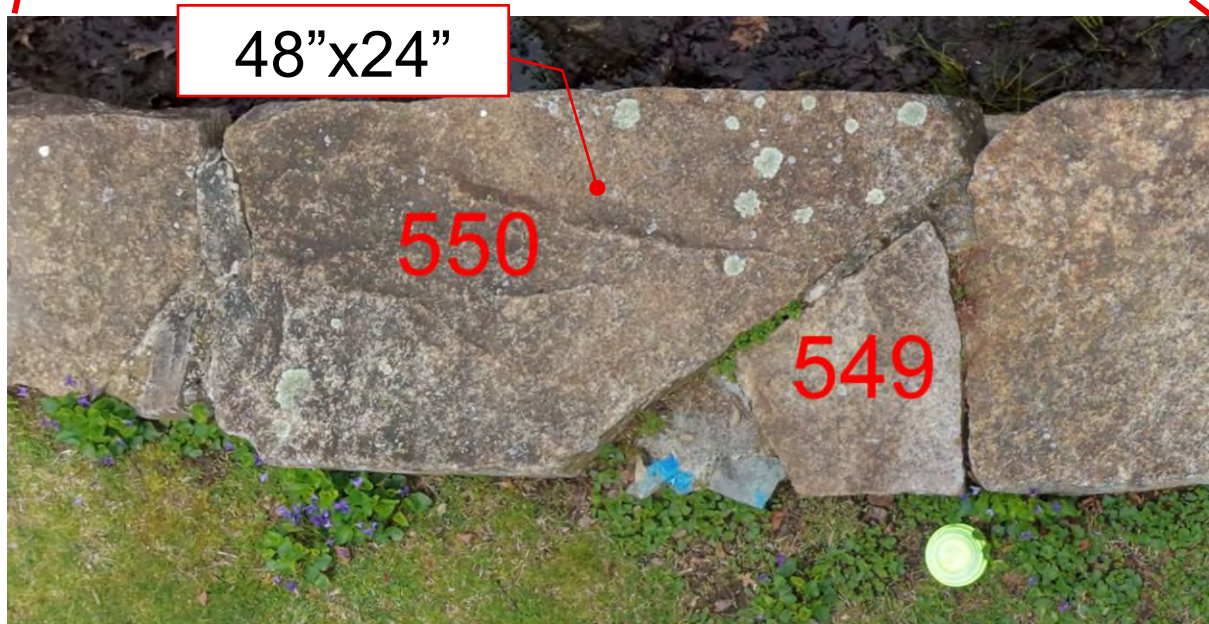


#124





#127





#130





#150



THIS PAGE INTENTIONALLY LEFT BLANK

SECTION 04 01 40

MAINTENANCE OF STONE ASSEMBLIES

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
 - 1. Removing, cleaning and resetting loose stones in new mortar beds.
- B. Alternates: Not Applicable.
- C. Items To Be Installed Only: Install the following items as furnished by the designated Sections:
 - 1. None.
- D. Items To Be Furnished Only: Furnish the following items for installation by the designated Sections:
 - 1. None.
- E. Related Work: The following items are not included in this Section and will be performed under the designated Sections:
 - 1. Not applicable.

1.3 PERFORMANCE REQUIREMENTS

- A. Provide unit masonry that develops indicated net-area compressive strengths at 28 days.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Not required.

- C. Material Certificates: Include statements of material properties indicating compliance with requirements including compliance with standards and type designations within standards. Provide for each type and size of the following:
 - 1. Cementitious materials. Include brand, type, and name of manufacturer.
 - 2. Mortar mixes. Include description of type and proportions of ingredients.
- D. Mix Designs: For each type of mortar and grout. Include description of type and proportions of ingredients.
 - 1. Include test reports, per ASTM C 780 for mortar mixes required to comply with property specification.
- E. Statement of Compressive Strength of Masonry: For each combination of masonry unit type and mortar type, provide statement of average net-area compressive strength of masonry units, mortar type, and resulting net-area compressive strength of masonry determined according to Tables 1 and 2 in ACI 530.1/ASCE 6/TMS 602.

1.5 QUALITY ASSURANCE

- A. Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, through one source from a single manufacturer for each product required.
- B. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from a single manufacturer for each cementitious component and from one source or producer for each aggregate.
- C. Sample Panels: Not required.
- D. Testing Services: The Owner may elect to engage a qualified independent testing agency to perform field testing. Payment for these services will be made by the Owner. Retesting of materials that fail to meet specified requirements shall be done at Contractor's expense.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver concrete mortar materials to the job site on manufacturer's standard pallets.
- B. Store on elevated platforms in a dry location. If materials are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied daily. If material becomes wet, do not install until they are dry.

1.7 PROJECT CONDITIONS

- A. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting when inclement weather is forecasted to occur prior to mortar materials setting up. Cover partially completed masonry when construction is not in progress.
 - 1. Extend cover a minimum of 24 inches down both sides and hold cover securely in place.

- B. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.
 - 1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F and above and will remain so until masonry has dried, but not less than 7 days after completing cleaning.
- C. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

PART 2 - PRODUCTS

2.1 MORTAR AND GROUT MATERIALS

- A. Portland Cement: ASTM C 150, Type I or II, except Type III may be used for cold-weather construction. Provide natural color or white cement as required to produce mortar color indicated.
- B. Hydrated Lime: ASTM C 207, Type SA.
- C. Mortar Pigments: Not required.
- D. Aggregate for Mortar: ASTM C 144. For mortar that is exposed to view, use washed aggregate consisting of natural sand or crushed stone.
- E. Water-Repellent Admixture: Liquid water-repellent mortar admixture intended for use with concrete masonry units, containing integral water repellent by same manufacturer.
 - 1. Available Products:
 - a. Addiment Incorporated; Mortar Tite.
 - b. Grace Construction Products, a unit of W. R. Grace & Co. - Conn.; Dry-Block Mortar Admixture.
 - c. BASF Construction Chemicals, Admixture Systems; Rheapel Plus Mortar Admixture.
 - d. Or equal.
- F. Water: Potable.

2.2 MASONRY CLEANERS

- A. Cleaner specifically designed and tested for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry associated with ponds supporting aquatic life. Use product expressly approved for intended use by cleaner manufacturer and manufacturer of masonry units being cleaned.

2.3 MORTAR AND GROUT MIXES

- A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures, unless otherwise indicated.
 - 1. Do not use calcium chloride in mortar or grout.
 - 2. Limit cementitious materials in mortar to portland cement and lime.
- B. Mortar for Unit Masonry: Comply with ASTM C 270, Proportion Specification. Provide the following types of mortar for applications stated unless another type is indicated.
 - 1. Type: N, in the following ratio, unless recommended otherwise by the manufacturer of the Portland Cement:
 - a. One part Portland Cement
 - b. One parts Lime
 - c. Six Parts sand.
- C. Pigmented Mortar: Not required.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. All loose cap stones around the pond are to be reset in new mortar beds. Stones have been tested for stability and those found to be loose are indicated on the Drawings and Division 2. Contractors must recheck stones and advise the Architect of any rocking, unstable or loose stones prior to proceeding with the work.
- B. Photograph any existing damage which could be misconstrued as having been caused by construction operations, and file photos with the Architect and Owner prior to the start of work.

3.2 PREPARATION

- A. Erect and maintain barricades around the work area and laydown areas, as specified in Section 015000. Contractors are reminded that this is an active public park, which will not be closed to the public for this project.
- B. Protect lawns and walks from damage by motorized equipment to be used for lifting stones. Any damage caused by construction operations must be repaired at the contractor's expense.
- C. Remove loose stones to fully expose the mortar bed below. Where mortar head joints could potentially loosen adjacent stones which are otherwise soundly supported, separate the stone to be removed from the mortar using chisels, cutters or other methods. Do not use chipping hammers or similar power tools which could break the bond of the adjacent stone from its setting bed.
 - 1. Number stones if required, to ensure their reinstallation in their original location.

2. Photograph stones prior to removal to ensure reinstallation in the proper orientation.
- D. Clean existing mortar setting bed from lower stones, as completely as possible without loosening lower stones. Clean mortar from stone prior to reinstallation.
 1. Minor amounts of well-bonded mortar may remain attached, provided the material does not inhibit the reinstallation of the stone. Thickness of mortar allowed to remain should not typically exceed 1/4 inch in thickness.
- E. Remove all debris from site daily.

3.3 INSTALLATION, GENERAL

- A. Mix mortar materials to conform to the specified compressive strength per ASTM C270. Adjust for hot or cold weather per ACI 530.1/ASCE 6/TMS 602.
 1. Do not mix more material than can be placed prior to initial set.
 2. Do not retemper mortar material.
- B. Reset stones in the original location and orientation, on a full bed of mortar with full head joints. Where the weight of the stones would squeeze out the mortar bed, use non-ferrous, non-organic setting buttons or structural shims to support the weight of the stone at the proper height, in three locations per stone.
- C. Take precautions to prevent mortar squeeze-out from falling into the pond. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness.

3.4 FIELD QUALITY CONTROL

- A. Independent Testing Agency: Cooperate with the Independent Testing Agency engaged by Owner for field quality control activities for the Work of this Section.
- B. Cooperate with field quality control personnel. Allow inspectors access to work areas, as needed to perform inspections.
- C. Additional inspections and retesting of materials which fail to comply with specified material and installation requirements shall be performed at Contractor's expense.

3.5 REPAIRING, POINTING, AND CLEANING

- A. Remove and replace masonry units that remain loose after mortar has set, in fresh mortar, pointed to eliminate evidence of replacement.
- B. Pointing: During the tooling of joints, enlarge voids and holes and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application, around penetrations and where indicated.

3.6 CLEANING

- A. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.
- B. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:
 - 1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
 - 2. Test cleaning methods on sample stone; leave one-half uncleaned for comparison purposes. Obtain Designer's approval of sample cleaning before proceeding with cleaning of masonry.
 - 3. Protect adjacent non-masonry surfaces from contact with cleaner by covering them with polyethylene film and waterproof masking tape.
 - 4. Wet stones with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.

3.7 MASONRY WASTE DISPOSAL

- A. Salvageable Materials: Unless otherwise indicated, excess masonry materials are Contractor's property. At completion of unit masonry work, remove from Project site.
- B. Masonry Waste: Remove masonry waste and legally dispose of off the Site.

END OF SECTION