

Request for Proposals



**City of Minneapolis
Public Works**

**Request for Proposals
Contractor-Art Restoration and Re-installation
Nicollet Mall Public Art
RFP 2016-158 Issue Date: October 26, 2016**

Proposals Due by: Wednesday, November 16, 2016 at 4:00 p.m.

October 26, 2016

To Qualified Proposers:

Attached is a Request for Proposals for a **Contractor-Art Restoration and Reinstallation for Nicollet Mall Public Art** from January – November 2017. Please consider submitting a proposal for providing these services if you or your firm meets the qualifications (listed on page 4 under “Evaluation of Proposals” and is available. Review the RFP for more details.

Proposals are due by November 16th at 4:00 p.m. Any questions about this project should be submitted via email to Mary Altman, Public Arts Administrator at mary.altman@minneapolismn.gov. The deadline for submitting questions is November 2nd at 12 noon.

Thank you for your consideration.

Sincerely,

Robin Hutcheson
Director, Public Works

Table of Contents

RFP General Information	Page
I. Invitation	3
II. Proposal Due-Date and Location.....	3
III. Proposal Format	3
IV. Evaluation of Proposals – Consultant Selection	4
V. Schedule.....	5
VI. Contract.....	5
VII. Department Contact/Request for clarification	5
VIII. Rejection of Proposals	5
IX. Addenda to the RFP.....	5
Attachment A - Terms and Conditions for RFP	7
Attachment B – Scope of Services.....	17
Final Nicollet Mall Public Art Specs	
01 25 13 Product Substitution Procedures	
Images of Artworks and Maps of Locations	
Public Art Locations Map	

REQUEST FOR PROPOSALS
FOR
Art Restoration and Re-installation for Nicollet Mall Public Art

- I. INVITATION:** It is the intention of the City to solicit proposals for a **Contractor-Art Restoration and Re-installation for Nicollet Mall Public Art** from January – November 2017. The services included in this solicitation include the restoration of the Nicollet Mall Sculpture Clock Tower Case, transportation and installation of this Case, as well as the transportation and reinstallation of three other public artworks, *Stoneboats*, *Enjoyment of Nature and Shadows of Spirit*

The City of Minneapolis (hereinafter referred to as the City) makes this Request for Proposals (hereinafter referred to as the RFP) in order to select a qualified Contractor (hereinafter referred to as the Consultant) for providing Art Restoration and Re-installation Services (hereinafter called the Project). The Project is generally described in the “Scope of Services” (Attachment B), contained within this RFP, including descriptions of roles, responsibilities and relationship of the Consultant, City, and other parties involved in the Project.

- II. PROPOSAL DUE DATE and LOCATION:** The Consultant shall submit electronic copies of their proposal to email to RFP.Responses@minneapolismn.gov. Only emailed proposals will be accepted. Please include the project name Nicollet Mall Public Art in the subject line of the email.

The submittal shall be made at or before **4:00 P.M. (Minneapolis Time), November 16, 2016.**

NOTE: Late Proposals may not be accepted.

- III. PROPOSAL FORMAT:** The Consultant shall provide the appropriate information in sufficient detail to demonstrate that the evaluation criteria has been satisfied as specified in Section V – “EVALUATION OF PROPOSALS”.

To allow for easier comparison of proposals during evaluation, proposals should contain the following sections and appendices and be arranged in consecutive order.

1. Scope of Services and Cost/Fees - Include a listing and description of services. Indicate proposed cost of service, breaking the work down by subconsultants and by each artwork, including; list of hourly rates and direct costs.
2. Consultant Experience and Capacity and Personnel Listing –
 - Describe background and related experience of the Consultant demonstrating ability to provide required services and demonstrate that they meet the qualifications outlined in section V.
 - Provide a list of the individuals and subconsultants involved and list their specific applicable experience and number of years with that experience. Indicate any consultants that are certified in the City of Minneapolis Small & Underutilized Business Program.
 - Provide a list of similar projects;at least three, no more than ten, and at least one for restoration, and one for art moving. For each include information on the client, title of artwork, approximate value, weight and name of artist.

3. References - List three references from contracts similar in size and scope. One reference must be from an outdoor sculpture conservator.
4. Company Financial Information Proof of financial responsibility, any bankruptcy filings by the consultant, its principles and officers during the previous seven years.

IV. EVALUATION OF PROPOSALS – SELECTION OF *CONSULTANT*: Proposals will be reviewed by an Evaluation Panel made up of representatives of the City of Minneapolis, Departments of Public Works and Community Planning and Economic Development and other City staff assistance as they might require. The Evaluation Panel will select a "short list" of qualified Consultants who will be formally interviewed as part of the final selection, as deemed necessary by the City. Evaluations will be based on the completeness of the proposal contents identified in Section IV "PROPOSAL FORMAT" above, and the following criteria:

- A. Quality, thoroughness, and clarity of proposal.
- B. Qualifications and experience of Consultant and subconsultants (includes a review of references). The Consultant must have:
 - A minimum of 7 years' experience transporting and installing outdoor sculptures, including a minimum of 30 works total, and works that weigh at least 15,000 pounds, are valued at least \$200,000 and are installed in urban settings and urban conditions.
 - Experience working under the direction of an outdoor sculpture conservator.
 - Experience working on with historically architectural significant objects.
 - A project manager leading the team with a minimum of 5 years' experience working on similar projects and assignments.
 - A project plan that involves the main consultant conducting at least 50% of all services.
- C. How well the Scope of Services offered meets department objectives.
- D. Financial responsibility and capacity of company including whether or not the company, any affiliates, subsidiaries, officers or directors have filed for federal bankruptcy protection within seven years of the date of this RFP.
- E. Organization and management approach and involvement for a successful project.
- F. Small & Underutilized Business participation.
- G. Cost of services proposed.
- H. Insurance coverage as defined for the services.

An interview *may* be requested of the "short list" Consultant/s. Specifically, the City requests that the Consultant's Project Manager and that appropriate members of the project team (including any sub-consultants) participate in the interview.

The Presentation/Interview of the "short listed" Consultant's will consist of the following elements:

1. Discussion of the Consultant's approach to providing services for this Project based upon the Scope of Services described herein.
2. Overview of the Consultant's experience as related to the Scope of Services, including qualifications and experience of assigned staff and subconsultants

The Evaluation Panel will schedule and arrange for the presentations.

V. **SCHEDULE:** The following is a listing of key Proposal and Project milestones:

RFP Release	<i>October 26, 2016</i>
Questions on RFP Due by	<i>November 2, 2016, 12 noon</i>
Responses to Questions posted by	<i>November 7, 2016</i>
Proposals due by	4:00 PM on November 16, 2016
Consultant Finalist Interviews (if needed)	<i>November 21, 2016</i>
Estimated Consultant selection	<i>November 21, 2016</i>
Estimated services start date	<i>January 30, 2017</i>
Estimated services end date	<i>November 30, 2017</i>

VI. **CONTRACT:** The contracting parties will be the City of Minneapolis and the Consultant selected to provide the services as described herein. The selected proposal, along with the RFP and any counter proposal will be incorporated into a formal agreement after negotiations. It is the intent of the City to award a single contract for one year.

VII. **DEPARTMENT CONTACT/REQUESTS FOR CLARIFICATION:** The Consultant’s primary interface with the City will be with the Contract Manager who will act as the City’s designated representative for the Project. Prospective responders shall direct inquiries/questions ***in writing only*** to:

Contract Manager: Mary Altman, Public Arts Administrator
City of Minneapolis
Community Planning and Economic Development
mary.altman@minneapolismn.gov

All questions are due no later than **November 2, 2016, 12 noon**. Responses to the Questions will be posted by **November 6, 2016** on City’s RFP website at: <http://www.minneapolismn.gov/finance/procurement/rfp>

The Contract Manager is the only individual who can be contacted regarding the Project before proposals are submitted. The Contract Manager cannot vary the terms of the RFP.

VIII. **REJECTION OF PROPOSALS:** The City reserves the right to reject any Consultant on the basis of the proposals submitted. The City reserves the right to reject all proposals or any Consultant on the basis of the proposal submitted.

IX. **ADDENDUM TO THE RFP:** If any addendum is issued for this RFP, it will be posted on the City of Minneapolis web site at: <http://www.minneapolismn.gov/finance/procurement/rfp>
The City reserves the right to cancel or amend the RFP at any time.

ATTACHMENT A

RFP Terms & Conditions

See Attachments:

General Conditions for Request for Proposals

City of Minneapolis Small and Underutilized Business Program (SUBP)

MNUCP Report (List of MBEs/WBEs) (Attachment 1)

General Conditions for Request For Proposals (RFP)

(Revised: Dec, 2015)

The General Conditions are terms and conditions that the City expects all of its Consultants to meet. The Consultant agrees to be bound by these requirements unless otherwise noted in the Proposal. The Consultant may suggest alternative language to any section at the time it submits its response to this RFP. Some negotiation is possible to accommodate the Consultant's suggestions.

1. City's Rights

The City reserves the right to reject any or all proposals or parts of proposals, to accept part or all of proposals on the basis of considerations other than lowest cost, and to create a project of lesser or greater expense and reimbursement than described in the Request for Proposal, or the respondent's reply based on the component prices submitted.

2. Equal Opportunity Statement

The Consultant agrees to comply with applicable provisions of applicable federal, state and city regulations, statutes and ordinances pertaining to the civil rights and non-discrimination in the application for and employment of applicants, employees, subcontractors and suppliers of the Consultant. Among the federal, state and city statutes and ordinances to which the Consultant shall be subject under the terms of this Contract include, without limitation, Minnesota Statutes, section 181.59 and Chapter 363A, Minneapolis Code of Ordinances Chapter 139, 42 U.S.C Section 2000e, et. seq. (Title VII of the Civil Rights Act of 1964), 29 U.S.C Sections 621-624 (the Age Discrimination in Employment Act), 42 U.S.C Sections 12101-12213 (the Americans with Disability Act or ADA), 29 U.S.C Section 206(d) (the Equal Pay Act), 8 U.S.C Section 1324 (the Immigration Reform and Control Act of 1986) and all regulations and policies promulgated to enforce these laws. The Consultant shall have submitted and had an "affirmative action plan" approved by the City prior to entering into a Contract.

3. Insurance

Insurance secured by the Consultant shall be issued by insurance companies acceptable to the City and admitted in Minnesota. The insurance specified may be in a policy or policies of insurance, primary or excess. Such insurance shall be in force on the date of execution of the Contract and shall remain continuously in force for the duration of the Contract.

Acceptance of the insurance by the City shall not relieve, limit or decrease the liability of the Consultant. Any policy deductibles or retention shall be the responsibility of the Consultant. The Consultant shall control any special or unusual hazards and be responsible for any damages that result from those hazards. The City does not represent that the insurance requirements are sufficient to protect the Consultant's interest or provide adequate coverage. Evidence of coverage is to be provided on a current ACORD Form. A thirty (30) day written notice is required if the policy is canceled, not renewed or materially changed. The Consultant shall require any of its subcontractors, if sub-contracting is allowable under this Contract, to comply with these provisions, or the Consultant will assume full liability of the subcontractors.

The Consultant and its subcontractors shall secure and maintain the following insurance:

- a) **Workers Compensation** insurance that meets the statutory obligations with Coverage B-Employers Liability limits of at least \$100,000 each accident, \$500,000 disease - policy limit and \$100,000 disease each employee.
- b) **Commercial General Liability** insurance with limits of at least \$2,000,000 general aggregate, \$2,000,000 products - completed operations \$2,000,000 personal and advertising injury, \$100,000 each occurrence fire damage and \$10,000 medical expense any one person. The policy shall be on an "occurrence" basis, shall include contractual liability coverage and the City shall be named an additional insured. The amount of coverage will be automatically increased if the project amount is expected to exceed \$2,000,000 or involves potentially high risk activity.
- c) **Commercial Automobile Liability** insurance covering all owned, non-owned and hired automobiles with limits of at least \$1,000,000 per accident.
- d) **Professional Liability** Insurance or Errors & Omissions Insurance providing coverage for 1) the claims that arise from the errors or omissions of the Consultant or its subcontractors and 2) the negligence or failure to render a professional service by the Consultant or its subcontractors. The insurance policy should provide coverage in the amount of \$2,000,000 each claim and \$2,000,000 annual aggregate. The insurance policy must provide the protection stated for two years after completion of the work.

4. **Hold Harmless**

The Consultant will defend, indemnify and hold harmless the City and its officers and employees from all liabilities, claims, damages, costs, judgments, lawsuits and expenses, including court costs and reasonable attorney's fees regardless of the Consultant's insurance coverage, arising directly from any negligent act or omission of the Consultant, its employees, agents, by any sub-contractor or sub-consultant, and by any employees of the sub-contractors and sub-consultants of the Consultant, in the performance of work and delivery of services provided by or through this Contract or by reason of the failure of the Consultant to perform, in any respect, any of its obligations under this Contract.

The City will defend, indemnify and hold harmless the Consultant and its employees from all liabilities, claims, damages, costs, judgments, lawsuits and expenses including court costs and reasonable attorney's fees arising directly from the negligent acts and omissions of the City by reason of the failure of the City to perform its obligations under this Contract. The provisions of the Minnesota Statutes, Chapter 466 shall apply to any tort claims brought against the City as a result of this Contract.

Except as provided in the section titled Data Practices, neither party will be responsible for or be required to defend any consequential, indirect or punitive damage claims brought against the other party.

5. **Subcontracting**

The Consultant shall provide written notice to the City and obtain the City's authorization to sub-contract any work or services to be provided to the City pursuant to this Contract. As required by Minnesota Statutes, Section 471.425, the Consultant shall pay all subcontractors for subcontractor's undisputed, completed work, within ten (10) days after the Consultant has received payment from the City.

6. **Assignment or Transfer of Interest**

The Consultant shall not assign any interest in the Contract, and shall not transfer any interest in the same either by assignment or novation without the prior written approval of the City. The Consultant shall not subcontract any services under this Contract without prior written approval of the City Department Contract Manager designated herein.

7. General Compliance

The Consultant agrees to comply with all applicable Federal, State and local laws and regulations governing funds provided under the Contract.

8. Performance Monitoring

The City will monitor the performance of the Consultant against goals and performance standards required herein. Substandard performance as determined by the City will constitute non-compliance with this Contract. If action to correct such substandard performance is not taken by the Consultant within a reasonable period of time to cure such substantial performance after being notified by the City, Contract termination procedures will be initiated. All work submitted by Consultant shall be subject to the approval and acceptance by the City Department Contract Manager designated herein. The City Department Contract Manager designated herein shall review each portion of the work when certified as complete and submitted by the Consultant and shall inform the Consultant of any apparent deficiencies, defects, or incomplete work, at any stage of the project.

9. Prior Uncured Defaults

Pursuant to Section 18.115 of the City's Code of Ordinances, the City may not contract with persons or entities that have defaulted under a previous contract or agreement with the City and have failed to cure the default.

10. Independent Consultant

Nothing contained in this Contract is intended to, or shall be construed in any manner, as creating or establishing the relationship of employer/employee between the parties. The Consultant shall at all times remain an independent Consultant with respect to the work and/or services to be performed under this Contract. Any and all employees of Consultant or other persons engaged in the performance of any work or services required by Consultant under this Contract shall be considered employees or subcontractors of the Consultant only and not of the City; and any and all claims that might arise, including Worker's Compensation claims under the Worker's Compensation Act of the State of Minnesota or any other state, on behalf of said employees or other persons while so engaged in any of the work or services to be rendered or provided herein, shall be the sole obligation and responsibility of the Consultant.

11. Accounting Standards

The Consultant agrees to maintain the necessary source documentation and enforce sufficient internal controls as dictated by generally accepted accounting practices (GAAP) to properly account for expenses incurred under this Contract.

12. Retention of Records

The Consultant shall retain all records pertinent to expenditures incurred under this Contract in a legible form for a period of six years commencing after the later of contract close-out or resolution of all audit findings. Records for non-expendable property acquired with funds under this Contract shall be retained for six years after final disposition of such property.

13. Data Practices

The Consultant agrees to comply with the Minnesota Government Data Practices Act (Minnesota Statutes, Chapter 13) and all other applicable state and federal laws relating to data privacy or confidentiality. The Consultant and any of the Consultant's sub-consultants or sub-contractors retained to provide services under this Contract shall comply with the Act and be subject to penalties for non-compliance as though they were a "governmental entity." The Consultant must immediately report to the City any requests from third parties for information relating to this Contract. The City agrees to promptly respond to inquiries from the Consultant concerning data requests. The Consultant agrees to hold the City, its officers, and employees harmless from any claims resulting from the Consultant's unlawful disclosure or use of data protected under state and federal laws.

All Proposals shall be treated as non-public information until the Proposals are opened for review by the City. At that time, the names of the responders become public data. All other data is private or non-public until the City has completed negotiating the Contract with the selected Consultant(s). At that time, the proposals and their contents become public data under the provisions of the Minnesota Government Data Practices Act, Minnesota Statutes, Chapter 13 and as such are open for public review.

14. Inspection of Records

Pursuant to Minnesota Statutes, Section 16C.05, all Consultant payroll and expense records with respect to any matters covered by this Contract shall be made available to the City and the State of Minnesota, Office of the State Auditor, or their designees upon notice, at any time during normal business hours, as often as the City deems necessary, to audit, examine, and make excerpts or transcripts of all relevant data.

15. Living Wage Ordinance

The Consultant may be required to comply with the "[Minneapolis Living Wage and Responsible Public Spending Ordinance](http://www.minneapolislivingwage.org/)" (http://www.minneapolismn.gov/www/groups/public/@finance/documents/webcontent/convert_255695.pdf), Chapter 38 of the City's Code of Ordinances (the "Ordinance"). Unless otherwise exempt from the ordinance as provided in Section 38.40 (c), any City contract for services valued at \$100,000 or more or any City financial assistance or subsidy valued at \$100,000 or more will be subject to the Ordinance's requirement that the Consultant and its subcontractors pay their employees a "living wage" as defined and provided for in the Ordinance.

16. Applicable Law

The laws of the State of Minnesota shall govern all interpretations of this Contract, and the appropriate venue and jurisdiction for any litigation which may arise hereunder will be in those courts located within the County of Hennepin, State of Minnesota, regardless of the place of business, residence or incorporation of the Consultant.

17. Conflict and Priority

In the event that a conflict is found between provisions in this Contract, the Consultant's Proposal or the City's Request for Proposals, the provisions in the following rank order shall take precedence: 1) Contract; 2) Proposal; and last 3) Request for Proposals (only for Contracts awarded using RFP).

18. Travel

If travel by the Consultant is allowable and approved for this Contract, then Consultant travel expenses shall be reimbursed in accordance with the City's [Consultant Travel Reimbursement Conditions](http://www.minneapolismn.gov/www/groups/public/@finance/documents/webcontent/wcms1p-096175.pdf) (<http://www.minneapolismn.gov/www/groups/public/@finance/documents/webcontent/wcms1p-096175.pdf>).

19. Billboard Advertising

City Code of Ordinance 544.120, prohibits the use of City and City-derived funds to pay for billboard advertising as a part of a City project or undertaking.

20. Conflict of Interest/Code of Ethics

Pursuant to Section 15.250 of the City's Code of Ordinances, both the City and the Consultant are required to comply with the City's Code of Ethics. Chapter 15 of the Code of Ordinances requires City officials and the Consultant to avoid any situation that may give rise to a "conflict of interest." A "conflict of interest" will arise if Consultant represents any other party or other client whose interests are adverse to the interests of the City.

As it applies to the Consultant, the City's Code of Ethics will also apply to the Consultant in its role as an "interested person" since Consultant has a direct financial interest in this Agreement. The City's Code of Ethics prevents "interested persons" from giving certain gifts to employees and elected officials.

21. Termination, Default and Remedies

The City may cancel this Contract for any reason without cause upon thirty (30) days' written notice. Both the City and the Consultant may terminate this Contract upon sixty (60) days' written notice if either party fails to fulfill its obligations under the Contract in a proper and timely manner, or otherwise violates the terms of this Contract. The non-defaulting party shall have the right to terminate this Contract, if the default has not been cured after ten (10) days' written notice or such other reasonable time period to cure the default has been provided. If termination shall be without cause, the City shall pay Consultant all compensation earned to the date of termination. If the termination shall be for breach of this Contract by Consultant, the City shall pay Consultant all compensation earned prior to the date of termination minus any damages and costs incurred by the City as a result of the breach. If the Contract is canceled or terminated, all finished or unfinished documents, data, studies, surveys, maps, models, photographs, reports or other materials prepared by the Consultant under this Contract shall, at the option of the City, become the property of the City, and the Consultant shall be entitled to receive just and equitable compensation for any satisfactory work completed on such documents or materials prior to the termination.

Notwithstanding the above, the Consultant shall not be relieved of liability to the City for damages sustained by the City as a result of any breach of this Contract by the Consultant. The City may, in such event, withhold payments due to the Consultant for the purpose of set-off until such time as the exact amount of damages due to the City is determined. The rights or remedies provided for herein shall not limit the City, in case of any default by the Consultant, from asserting any other right or remedy allowed by law, equity, or by statute. The Consultant has not waived any rights or defenses in seeking any amounts withheld by the City or any damages due the Consultant.

22. Ownership of Materials

All finished or unfinished documents, data, studies, surveys, maps, models, photographs, reports or other materials resulting from this Contract shall become the property of the City upon the City's payment for and final approval of the final report or upon payment and request by the City at any time before then. The City at its own risk, may use, extend, or enlarge any document produced under this Contract without the consent, permission of, or further compensation to the Consultant.

23. Intellectual Property

All Work produced by the Consultant under this Contract is classified as "work for hire" and upon payment by the City to the Consultant will be the exclusive property of the City and will be surrendered to the City immediately upon completion, expiration, or cancellation of this Contract. "Work" covered includes all reports, notes, studies, photographs, designs, drawings, specifications, materials, tapes or other media and any databases established to store or retain the Work. The Consultant may retain a copy of the work for its files in order to engage in future consultation with the City and to satisfy professional records retention standards. The Consultant represents and warrants that the Work does not and will not infringe upon any intellectual property rights of other persons or entities.

Each party acknowledges and agrees that each party is the sole and exclusive owner of all right, title, and interest in and to its services, products, software, source and object code, specifications, designs, techniques, concepts, improvements, discoveries and inventions including all intellectual property rights thereto, including without limitations any modifications, improvements, or derivative works thereof, created prior to, or independently, during the terms of this Contract. This Contract does not affect the ownership of each party's pre-existing, intellectual property. Each party further acknowledges that it acquires no rights under this Contract to the other party's pre-existing intellectual property, other than any limited right explicitly granted in this Contract.

24. Equal Benefits Ordinance

Minneapolis Code of Ordinances, Section 18.200, relating to equal benefits for domestic partners, applies to each Consultant and subcontractor with 21 or more employees that enters into a "contract", as defined by the ordinance that exceeds \$100,000. The categories to which the ordinance applies are personal services; the sale or purchase of supplies, materials, equipment or the rental thereof; and the construction, alteration, repair or maintenance of personal property. The categories to which the ordinance does not apply include real property and development contracts.

Please be aware that if a "contract", as defined by the ordinance, initially does not exceed \$100,000, but is later modified so the Contract does exceed \$100,000, the ordinance will then apply to the Contract. A complete text of the ordinance is available

at: http://www.minneapolismn.gov/www/groups/public/@finance/documents/webcontent/convert_261694.pdf

It is the Consultant's and subcontractor's responsibility to review and understand the requirements and applicability of this ordinance.

City of Minneapolis Small and Underutilized Business Program (SUBP)

I. Overview

The City of Minneapolis policy is to provide equal opportunities to all businesses, with an effort to redress discrimination in the City's marketplace and in public contracting against Minority-owned business enterprises (MBEs) and Women-owned business enterprises (WBEs). Therefore, the City has set SUBP goals to facilitate participation of qualified and available MBEs and WBEs (MBEs/WBEs) on this contract.

The goals on this contract will be 2% MBE and 2% WBE.

A list of qualified and available MBEs/WBEs¹ within the scope of services is attached. However, this list is updated periodically and may not be exhaustive. Please visit the Minnesota Uniform Certification Program (MnUCP) directory for more information (<http://mnucp.metc.state.mn.us/>).² This is the only certification accepted by the program.

Consultants must make a Good Faith Effort to meet the SUBP goals prior to submitting their proposal. This means that Consultants must make *every necessary and reasonable effort* to subcontract with MBEs/WBEs³ prior to submitting their proposal. **Commitment to use MBEs/WBEs, Good Faith Efforts to include MBEs/WBEs participation, and compliance with SUBP will be a factor in the selection of proposal(s).**

II. GOOD FAITH EFFORTS EVALUATION

If a Consultant does not meet the project SUBP goals, the Consultant shall demonstrate its good faith efforts to do so. To determine if the Consultant solicited MBEs/WBEs in good faith, following list of actions may be considered:

1. Soliciting through all reasonable and available means (attendance at pre-proposal meetings, advertising and/or written notices) the interest of all MBEs/WBEs certified in the scopes of work of the contract. The Consultant must solicit MBEs/WBEs in sufficient time prior to proposal submission or to allow MBEs/WBEs to respond to solicitations. The Consultant must determine with reasonable certainty if the MBEs/WBEs are interested by taking appropriate steps to follow up on initial solicitations.
2. Selecting portions of the work to be performed by MBEs/WBEs in order to increase the likelihood that the project goals will be achieved. This includes, where appropriate, breaking out contract work into smaller units to facilitate MBE/WBE participation, even when a contractor might otherwise prefer to perform these work items with its own forces.
3. Providing interested MBEs/WBEs with adequate information about the scope, specifications, design criteria, and technical requirements of the contract in a timely manner to assist them in responding to a solicitation.
4. The Consultant must negotiate in good faith with interested MBEs/WBEs and provide written documentation of such negotiation with each such business. In determining whether the Consultant negotiated in good faith, the Evaluation Panel may consider a number of factors including price, scheduling and capabilities as well as the contract goal.
5. The fact that there may be some additional costs involved in finding and using MBEs/WBEs is not itself sufficient reason for a Consultant's failure to meet the project goals as long as such costs are reasonable.
6. If requested by a solicited MBE/WBE, the Consultant must make reasonable efforts to assist such MBEs/WBEs in obtaining bonding, lines of credit or insurance as required by the city or by the Consultant, provided that the Consultant need not provide financial assistance toward this effort.
7. Effectively using the services of minority/woman community organizations; local, state and federal business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the solicitation and placement of MBEs/WBEs. A list of organizations can be found

¹ The MBE/WBE must be located within the Minnesota counties of Anoka, Carver, Chisago, Dakota, Hennepin, Isanti, Ramsey, Scott, Sherburne, Washington, and Wright.

² If a Consultant identifies a business that is not yet certified, but may qualify for certification as MBE/WBE, the Consultant should encourage the business to immediately begin the application process for certification with the MNUCP. The Consultant should include this in their Good Faith Efforts.

³ The MBE/WBE must be certified within in the scope of work and must perform a commercially useful function.

here: http://www.ci.minneapolis.mn.us/civilrights/contractcompliance/subp/subp_minbusres
or http://www.ci.minneapolis.mn.us/civilrights/contractcompliance/subp/subp_wmnbusres.

Consultants must thoroughly document their efforts to solicit to and include MBEs/WBEs participation. Please completely and accurately fill out the attached forms. The City will monitor compliance of SUBP throughout the contract. Compliance with the MBE/WBE goal and other SUBP requirements will be a material condition of the contract and failure to comply may be deemed a breach of contract.

Please review Minneapolis Code of Ordinances Chapter 423 for more information or the contact the City of Minneapolis Civil Rights Department (612.673.2086).

City of Minneapolis Small and Underutilized Business Program (SUBP)

Art Restoration and Re-installation, Nicollet Mall Public Art

This report lists MBEs and WBEs that have been certified by the Minnesota Uniform Certification Program (MnUCP) in scopes of services relevant to this project. If additional scopes of services are identified, the MnUCP online directory (<http://mnucp.metc.state.mn.us/>) should be utilized to find additional certified MBEs and WBEs in those scopes. Another way to locate additional MBEs and WBEs is to contact the National Association of Minority Contractors (NAMC) or the Association of Women Contractors (AWC). NAMC contact: 612-521-3366; staff@namc-um.org. AWC contact: 651-489-2221; awc@awcmn.org.

Note that if a firm is certified as both 'MBE' and 'WBE', that firm's participation in the project will only count toward the 'MBE' goal.

The scopes of services are categorized using the North American Industry Classification System (NAICS). For definitions and more information about NAICS Codes visit the U.S. Census Bureau (<http://www.census.gov/eos/www/naics/>).

NAICS CODE: 238110		Poured Concrete Foundation and Structure Contractors					
Company	Contact	Email	Phone	Fax	MBE	WBE	
BOOKER CONSTRUCTION INC	EMMETT C BOOKER	booker_construction@yahoo.com	651-644-1026	651-644-3646	Yes	No	
BUILDING CODE TECH	EMMANUEL SACKY	EMMANUEL@BUILDINGCODETECH.COM	800-917-7182		Yes	No	
C OLSON CONCRETE INC	MARIBETH OLSON	bigolsonconcrete@msn.com	763-498-8095	763-498-5426	No	Yes	
E-CON-PLACER INC	RICHARD TOUSIGNANT	dickt@econplacer.com	651-452-1183	651-688-7820	Yes	No	
FRIDA DRYWALL SYSTEM LLC	KARLA S. ARCEO	frida.drywall@gmail.com	612-298-0418		Yes	Yes	
LOEFFEL CONSTRUCTION	BRIAN LOEFFEL	bloeffel@loeffelconstruction.com	952-474-4263	952-474-4368	Yes	No	
NATIVE CONCRETE & MASONRY INC.	CHARLES MONETTE	Cmonette2004@msn.com	612-597-0421	763-432-2152	Yes	No	
PARAGON RESTORATION II LLC	STACY PARK	stacy.park@paragonrestoration2.com	952-435-4354	952-435-2633	No	Yes	
PRO INSTALLERS PLUS	LUCAS BRAZIER	proinstallersplus@yahoo.com	800-394-9951	866-331-6565	Yes	No	
QUALITY CUTTING AND CORING INC	KARI LANDRUS	office@qualitycutting.net	763-785-9605	763-767-8525	No	Yes	
STANDARD CONTRACTING INC	REBECCA SEIDENKRANZ	becky@stanconinc.com	651-463-2510	651-463-2525	No	Yes	
WENDT MASONRY INC.	KALYNN WENDT	wendt.masonry@gmail.com	763-443-9175		No	Yes	

NAICS CODE: 238210 Electrical Contractors and Other Wiring Installation Contractors

Company	Contact	Email	Phone	Fax	MBE	WBE
AFS SYSTEMS INC	KATHRYN F QUIGLEY	kathrynquigley@afssystemsin.com	763-425-8396	763-425-8397	No	Yes
AMS CONTRACTING LLC	ANTHONY SEBURG	office@amscont.com	651-797-3685	651-797-3942	Yes	No
COVENANT ELECTRIC INC	BARBARA GRAYDON	bgraydon@covenantelectric.com	612-554-2066	651-638-0071	Yes	Yes
CROCUS HILL ELECTRIC CO	ELIZABETH ROCCO	liz@crocushillelectric.com	651-221-0261	651-221-0354	No	Yes
ELLIOTT CONTRACTING CORP	JOHN T ELLIOTT	kcomphe@elliottcontracting.com	763-489-7300	763-571-9333	Yes	No
GUNNAR ELECTRIC INC	LAURA KAROW	Lkarow@GUNNARELECTRIC.COM	952-937-9262	952-937-1034	No	Yes
LIGHTINGHOUSEUSA INC.	SUDHIR SINGH	sudhirs@lightinghouseusa.com	763-443-2112	763-235-4536	Yes	No
MIDWEST ELECTRIC CORP	DELORES WERMERSKIRCHEN	dwermer@msn.com	763-551-7992	763-551-7968	No	Yes
MODERN ELECTRICAL SOLUTIONS INC	TYRA DINH TRAN	luyen_le@modernelectricalsolutions.com	651-313-0110	763-780-6398	Yes	Yes
MTEC ELECTRIC INC	HUONG PHAM	nick@mtecelectric.com	763-537-1570	763-537-7786	Yes	Yes
PHONE JACKS UNLIMITED INC. (DBA ALLAREA CONTRACTORS)	SCARLETT BIESEMEYER	scarlett@allareacontractors.com	763-413-8488	763-413-0019	No	Yes
ROSS ELECTRIC COMPANY INC	CEDRIC ROSS	rosselectricco.mn@gmail.com	612-702-7840	651-776-5018	Yes	No
SUESS ELECTRIC LLC	SUSAN SUESS THOMSON	info@suesselectric.com	651-429-0968	651-429-1691	No	Yes
TRIUMPH ELECTRICAL SERVICES INC.	DOUG RUIZ SR.	doug@triumphes.com	612-298-3221		Yes	No
UNITECH ELECTRONIC CONTRACTING LLC	MICHAEL VETTER	MichaelV@unitechcontractors.com	763-428-3600		Yes	No

NAICS CODE: 238320 Painting and Wall Covering Contractors

Company	Contact	Email	Phone	Fax	MBE	WBE
A-1 PROFESSIONAL PAINTING AND LANDSCAPING INC.	ALBERTO MOLINA	A1professionalpainting@outlook.com	763-913-4766		Yes	No
AMANI CONSTRUCTION AND RENOVATIONS LLC	JENNIFER KURIA	JENNIFER.KURIA@yahoo.com	612-232-7264		Yes	Yes
ASSURE QUALITY PAINTING LLC	JANE YUEN-LIN MAHOWALD	jane@aqpainting.com	612-270-6889	800-644-7216	Yes	Yes
ATLAS CONSTRUCTION & ENVIRONMENTAL LLC	NORMAN JARRETT	nj@atlasabatment.com	612-808-9210	612-437-4497	Yes	No
B T CONTRACTING SERVICES LLC	BERNARD TURNER	bernardturner@yahoo.com	651-795-8671		Yes	No
BEAR CLAW CONSTRUCTION LLC	JESSICA BARON	bear.claw.const@earthlink.net	763-753-5800	763-753-5801	Yes	Yes
BOGAR CONSTRUCTION CO LLC	MARVIN SMITH	info@bogarconstruction.com	612-327-6362	612-866-4799	Yes	No

CAMACHO CONTRACTORS INC. (DBA INDUSTRIAL ROOFING)	CATHRYN CAMACHO	ccamacho@camachocontractors.com	612-331-7622	612-331-7629	Yes	Yes
CASTREJON INCORPORATED	MONICA CASTREJON	MONICA@CASTREJONINC.COM	763-450-2055	763-450-2056	Yes	No
DACE DECORATING AND PAINTING LLC	DAC'E LORENZ	dacejune@yahoo.com	651-890-7089	651-483-4114	No	Yes
DAVE CONSTRUCTION LLC	DAVE BASSEKLE	dcbassekle@yahoo.com	612-483-9500		Yes	No
INTEGRATED PAINTING SOLUTIONS LLC	FRED NEWELL	info@ips-mn.com	651-276-6783		Yes	No
LICO'S DRYWALL	FEDERICO FLORES	licodrywall@gmail.com	612-483-7646		Yes	No
LUMINOUS3 FINISHES LLC	MICHELLE CULLIGAN	mculligan@luminous3.com	612-308-0874	612-334-8888	No	Yes
MIDWEST SELECT CONTRACTING LLC	EDNA MCKENZIE	EDNA@MIDWESTSELECTCONTRACTING.COM	612-207-4986		Yes	Yes
MINNE-MEX CONSTRUCTION	IVAN BETANCOURT	mmjmpls@gmail.com	612-990-5435		Yes	No
PAINTING BY NAKASONE INC	JOHN NAKASONE	FRONTDESK@PAINTINGBYNAKASONE.COM	651-646-6999	651-646-6792	Yes	No
RELIABLE PROPERTY MAINT & HOME SVC LLC	WILLIAM WASHINGTON	rpmhs@hotmail.com	612-272-7618		Yes	No
SEASONS PROPERTY MAINTENANCE LLC	FRANK OLIVER	Oliverfrank_55@yahoo.com	612-227-0739		Yes	No
SHARPE PAINTING AND DRYWALL	JONATHAN SHARPE SR	SHARPEPAINTINGNDRYWALL@GMAIL.COM	651-755-9770		Yes	No
SHOW ME PAINTING LLC	TYRONE BLOCK	tyroneb@showme-painting.com	651-336-6472	651-340-7624	Yes	Yes
STERLING SYSTEMS	JILL JONES	jill@sterlingsystems.biz	952-697-1060	952-697-6055	No	Yes
SUNRISE PAINTING AND WALLCOVERING	KIM LARSON	kiml@sunrisepainting.biz	763-557-0100	763-557-0011	No	Yes
UNIQUE CONTRACTING SERVICES CORP	ANGEL PEREZ	angelpeppy1@izoom.net	763-218-9385	763-262-1151	Yes	No

ATTACHMENT B

SCOPE OF SERVICES

It is the intent of this document to outline a general description of the Project, the extent of services required, and the relationship of this Project to other work, and the agencies or other parties that will interact with the Consultant. The contents of this document are considered representative of the Project as a whole, but are by no means conclusive.

See Attachments:

Final Nicollet Mall Public Art Specs (Attachment 2)

01 25 13 Product Substitution Procedures (Attachment 3)

Images of Artworks and Maps of Locations (Attachment 4)

Draft Mall Art Installation Schedule (Attachment 5)

SECTION 09 91 13

NICOLLET MALL SCULPTURE CLOCK CASE, PROCEDURES FOR COATINGS APPLICATIONS

PART 1 GENERAL

1.01 SCOPE

- A. The following procedure shall be used to recoat and spot repair and apply a complete overcoat to the Nicollet Mall Sculpture Clock Case to upgrade appearance or to enhance atmospheric corrosion protection. The work will be executed as a part of the overall renovation and reinstallation of the Nicollet Mall Sculpture Clock.

1.02 REFERENCE STANDARDS

- A. The Society for Protective Coatings (SSPC)
- B. American Society of Testing Materials (ASTM)
- C. National Association of Corrosion Engineers (NACE)

1.03 FIELD TESTING OF EXISTING COATING SYSTEMS

- A. The following adhesion test procedures should be conducted to determine the integrity of the existing coatings.
 - 1. Standard Test Methods for Measuring Adhesion by Tape Test (ASTM D 3359)
 - a. Use test method ASTM D 3359. If the dry film thickness of the existing coating is less than 5 mils (125 microns), use Method "B", Crosshatch Adhesion Test. If the dry film thickness of the existing coating is 6 dry mils or more, use Method "A", which is the "X" - Cut Test. If the adhesion is "3A" or "3B" or better, proceed with surface preparation. If the adhesion is "2A" or "2B" or worse, there is a high probability of a peeling or delamination failure if additional coats are applied, and the existing coating should be removed.
 - b. Compatibility - The primers specified below contain solvents that generally have little, if any effect, on most existing coatings. However, a test patch should always be applied using or simulating the intended surface preparation method. The adhesion of the test patch should be tested and evaluated as described in "a" above. The stress of an additional coat on the existing coating may deteriorate the adhesion of the existing coating. Also, examine the test patch for evidence of wrinkling, cracking, delamination, blistering, or other signs of incompatibility.

1.04 SURFACE PREPARATION

- A. All surfaces:
 - 1. Pressure wash with potable water per SSPC-SP12: LP-WC/WJ-4 at minimum 3,500 psi. to 5,000 psi. to remove dirt, dust, loose paint, foreign materials and all other surface contaminants.
- B. All Structural Steel Surfaces (does not include Clock Frame Interface under copper overlay)
 - 1. SSPC-SP6/NACE 2 Commercial Blast Cleaning
 - a. Surface profile shall be in accordance with manufacturer's product recommendation
- C. Failed/Rusted Areas at Clock Frame Interface under copper overlay:
 - 1. Preferred Method is SSPC-SP16 Brush-Off Blast Cleaning of Coated and Uncoated Steel, Stainless Steel and Non-Ferrous Metals
 - 2. SSPC-SP3 Power Tool Cleaning / SSPC SP2 Hand Tool Cleaning Minimum. All surfaces must be clean, dry, abraded, and in sound condition before coating. Surface preparation shall be performed approximately two inches beyond the damaged areas in all directions or until tightly

- adhered coating is obtained. Exposed edges shall be feathered to provide a smooth transition to the existing tightly adhered coating.
3. Perform preparation in accordance to federal, state and local regulations. Insure that surrounding areas and miscellaneous items are protected from any damage or nuisance

1.05 MATERIALS

- A. Paint materials specified are based on proven performance for this type of application.
- B. Equivalent materials may be submitted at least 10 days prior to bid. Equivalent materials will be reviewed by the Engineer's Protective Coatings Specialist prior to acceptance. Do not apply any materials other than those mentioned here in Section 5.0 or preapproved by the Engineer.

1.06 APPLICATION

- A. Apply coating system in compliance with manufacturer's instructions and using application method best suited for obtaining full, uniform cover and hide of surfaces to be coated.
 1. Apply coatings by methods that will not create overspray or any damage or nuisance to surrounding areas.
 2. Apply primer and finish coats to comply with wet and dry film thicknesses and spreading rates for each type of material as recommended by the manufacturer.
 3. Closely adhere to recoat times recommended by manufacturer.
 4. Allow each coat to dry thoroughly before applying next coat.
 5. All corners, edges, welds and connections shall receive a brush stripe coat prior to applying the full recommended coat
 6. Finish coats shall be uniform in color and sheen without streaks, laps, runs, or missed areas.
- B. Spot Primer & Stripe Coat (All failed, rusted surfaces):
 1. Product: PPG Amerlock 2 High Solids Epoxy
 2. Number of Coats: One
 3. Dry Film Thickness: 3.0 – 5.0 mils dry
 4. Color: Selected colors
- C. Intermediate Coat (All surfaces to be coated):
 1. Product: PPG Amerlock 2 High Solids Epoxy
 2. Number of Coats: One
 3. Dry Film Thickness: 3.0 – 5.0 mils dry
 4. Color: Selected colors
- D. Finish Coat: (All surfaces to be coated)
 1. Product: PPG Amercoat 450HSG Acrylic Polyurethane
 2. Number of Coats: One
 3. Dry Film Thickness: 2.0 – 5.0 mils dry
 4. Color: TBD by Owner
- E. Finish Coat: (Optional Anti-Graffiti)
 1. Product: PPG PSX 700 Engineered Siloxane
 2. Number of Coats: One
 3. Dry Film Thickness: 3.0 – 7.0 mils dry
 4. Color: TBD by Owner
- F. Special Application Note:
 1. The interface of the steel where the copper sleeve is to be applied shall only receive a coat of Amerlock 2 High Solids Epoxy at 4.0 mils maximum unless it is determined that the required film thickness is too high for attachment of the copper sleeve. Applied coating shall provide full, even coverage to the interface.
 2. Sherwin-Williams Corothane I Mio Aluminum may also be used at this this interface if it is determined that a lower film is required.

1.07 FIELD QUALITY CONTROL

- A. Contractor shall provide all necessary equipment to monitor and record application and environmental information on a daily basis.
- B. Contractor shall check for lead based paint on the existing coatings. If lead based paint is present the contractor shall remove the existing lead based paint where it is required per this specification and any areas discussed during the prejob conference.
- C. Recorded data shall be made available to the engineer or owner if requested.
- D. Equipment shall be in good condition and operated within its design range.
- E. Calibration as required by the specified standard for use of each device.
- F. Clean up shall be performed according to good painting practices per SSPC.
- G. SSPC-PA2 shall be used and recorded for each phase of application by the contractor.
- H. Record Environmental Conditions
- I. Follow all procedures recommended by qualified manufacturer's representative and technical data sheets supplied by the manufacturer for each product used on the project.
- J. Owner's representatives will be on site to observe [and approve](#) the application of each coating, and the preparation of each substrate. Hold point inspections by the Owner's Representative will be mandatory.

1.08 QUALITY CONTROL & PREJOB CONFERENCE

- A. This recommendation and standards referred to by this document shall be read and understood by the coatings applicator. These documents shall be available at the site of the work for applicators, quality inspection, owner and/or third party inspection.
- B. A pre-job conference is recommended to include a "qualified" representative from the owner, contractor, manufacturer and third party inspector, if required to insure that all parties know and understand the methods suggested herein. Procedures shall be discussed and agreed upon by all parties prior to start of work.
- C. All areas and substrates will be discussed at this meeting as to the disposition and the application of the coatings listed above.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

This Page Left Blank Intentionally

SECTION 13 34 13

GLAZED STRUCTURES - SCULPTURE CLOCK CASE RENOVATION

PART 1 GENERAL

1.01 SUMMARY

- A. Work involves the renovation and reinstallation of the Nicollet Mall Sculpture Clock originally designed and fabricated in 1968 by Jack Nelson. The work includes coordination with conservator, Kristin Cheronis, and Rory DeMesey of Mechanical Watch Supply for reinstallation of a kinetic sculpture and four refurbished clocks.
- B. Provide
 - 1. Pedestrian traffic control / barricading for reinstallation
 - 2. Delivery
 - 3. Installation of sculpture clock case
 - 4. Renovated sculpture clock case
 - 5. Internal lighting systems
 - 6. Internal electrical wiring and connections
- C. Material furnished and installed by Owner:
 - 1. Electrical conduit in adjacent sidewalk
 - 2. Concrete sculpture clock base with conduit runs
 - 3. Electrical control panel and circuitry in adjacent street cabinet
 - 4. Electrical service
- D. Coordinate re-installation of the following salvaged by others:
 - 1. Decorative clocks (4), electric motors, controls and lighting
 - 2. Kinetic sculpture, electric motors, controls and lighting
- E. The following is not included in this Section:
 - 1. Concrete Paving (Section 32 13 13).
 - 2. Traffic Signage (Section 34 41 20).
- F. Related Sections:
 - 1. Section 05 50 00 - Metal Fabrications
 - 2. Section 07 00 00 - Thermal and Moisture Protection
 - 3. Section 07 61 19 Flat Seam Metal Roofing
 - 4. Section 07 62 00 - Sheet Metal Flashing and Trim
 - 5. Section 07 91 00 - Preformed Joint Seals
 - 6. Section 07 92 00 - Joint Sealants
 - 7. Section 08 80 00 - Glazing
 - 8. Section 8 12 13 - Hollow Metal Frames
 - 9. Section 09 91 00 - Exterior Painting
 - 10. Section 26 05 23 - Control-Voltage Electrical Power Cables
 - 11. Section 26 05 29 - Hangers And Supports For Electrical Systems
 - 12. Section 26 27 26 - Wiring Devices
 - 13. Section 26 05 33 - Raceways And Boxes For Electrical Systems
 - 14. Section 26 51 19 - Led Interior Lighting
 - 15. Section 10 74 13 - Exterior Clocks
 - 16. Section 12 14 00 - Sculptures

1.02 REFERENCES

- A. AAMA 605.2 - High Performance Organic Coatings on Architectural Extrusions and Panels

- B. AISC - Specifications for the Design, Fabrication and Erection of Structural Steel for Buildings
- C. AISI:
 1. Specification for the Design of Cold-Formed Steel Structural Members
- D. ASTM:
 1. A36 - Carbon Structural Steel
 2. A123 - Galvanized Coatings on Iron and Steel Products
 3. A325 - High Strength Bolts for Structural Steel Joints
 4. A500 - Cold-Formed Welded and Seamless Carbon Steel
 5. A525 - General Requirements for Steel Sheet, Zinc-coated (Galvanized) by the Hot Dip Process
 6. A1011 - Steel, Sheet, Strip, Hot Rolled, Carbon, Structural, High Strength, Low Alloy
 7. B370 – Copper Sheet
 8. C1036 - Flat Glass
- E. CPSC - Safety Standards for Architectural Glazing Materials

1.03 SYSTEM DESCRIPTION

- A. Design Requirements: Existing glass enclosure including hinged glass doors.
- B. Performance Requirements:
 1. Wind loading: Retain existing wind loading characteristics.
 2. Structural loading: Retain live load characteristics of existing frame components.

1.04 SUBMITTALS

- A. Product Data: Manufacturer's Product Data and installation instructions.
- B. Shop Drawings: Indicate sections of typical members, dimensioned elevations, anchors, fasteners and their spacing, including details of any accessories required:
 1. Show dimensions, installation, erection details, including all points of connection for new copper roofing.
- C. Samples:
 1. Submit sample of copper roofing.

1.05 QUALITY ASSURANCE

- A. Comply with provisions of codes, specifications, standards, except where more stringent requirements are indicated on Drawings or specified, of AA, AAMA, FGMA, ANSI Safety Glass (each piece to exhibit appropriate label), referenced CPSC standard, IGCC, and IGMA.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver sculpture clock case repair and renovation components to contractor's work shop clearly marked for proper identification of components.
- B. Deliver glazing materials to contractor's workshop in manufacturer's unopened containers, fully identified with trace name, color, size, and type.
- C. Storage: Store in accordance with manufacturer's instructions, above ground; protect from weather, construction activities, other possible causes of damage or loss.
- D. Handling: Handle materials at workshop and final job site in manner to prevent damage. Immediately remove damaged or otherwise unsuitable material, when so ascertained, from job site.

1.07 PROJECT CONDITIONS

- A. Drawings do not purport to show actual field dimensions, but are intended only to establish location and scope of Work. Field-verify dimensions and assume full responsibility for their accuracy.
- B. Wherever possible, check frame openings in construction work by accurate field measurements before fabrication; show recorded measurements on final Shop Drawings. Coordinate fabrication schedule with construction schedule to avoid delays. If necessary, proceed with fabrication without field measurements, and coordinate installation tolerances to ensure proper fit of solarium materials.

1.08 WARRANTY

- A. **Manufacturer's Warranty:** Provide manufacturer's written warranty to effect that sculpture clock case components shall be free of faults or defects in accordance with general conditions.
- B. **Contractor's Warranty:** warrant sculpture clock case against structural, electrical and moisture failure for 2-year period; and shall warrant installation of sculpture clock case to be free from defects in workmanship, including leaks, for period of 1 year.
- C. **Definition of Failure:** Failure of materials or workmanship includes leakage or excessive air infiltration, excessive deflection, electrical system shorts or malfunctions, deterioration of finish or construction in excess of normal weathering.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. **Acceptable Manufacturers:** Subject to compliance with specified requirements, acceptable manufacturers and products are:
 - 1. Manufacturer of comparable products submitted in compliance with Section 01 25 13.

2.02 MATERIALS

- A. **Fasteners:**
 - 1. Fasteners: Stainless steel austenitic 303 ASTM A276.
 - 2. Lag screws: Plated low carbon steel.
 - 3. Match finish on adjacent aluminum.
- B. **Copper Roof Sheeting and Flashing:** Smooth finish 0.0216, 24 gauge, 16 ounce.
- C. **Glass:**
 - 1. Existing Sealed Glass Panels:
 - a. Sealed with single seal 2-part polyurethane complying to ASTM E774 level CBA.
 - b. Contain 2 sides with spacers filled with desiccant.
 - c. Seated or continuous EPDM or Santoprene glazing gasket with minimum 1/2 inch bearing.
 - 2. Glass shall not come into contact with framework or fasteners.
- D. **Weatherstrip:** Glazing gasket to be continuous neoprene, resistant to deterioration by sunlight, weathering, oxidation, and permanent deformation under load.
- E. **Sealant:**
 - 1. At metal joints.
 - 2. 1 part low modulus silicone with minimum plus or minus 50 percent joint movement capability.

2.03 FABRICATION

- A. Fabricate roof framing and sheeting including cuts and notches.

- B. Use concealed fasteners wherever possible.
- C. Use copper sheeting for exterior surface.
- D. Protect components that come into contact with dissimilar materials by continuous layer of PVC or similar material.
- E. Coordinate and accommodate installation of kinetic sculpture motors with Clock Technician and Conservator at contractor's workshop.
- F. Reseat glass panels within existing, refinished bronze clad frames.
- G. Adjust alignment and seating of tall glass doors to provide smooth, damage free closure.
- H. Reinstall bronze door handles and locks as needed.
- I. Modify openings in ceiling panel to accommodate updated recessed can light fixtures.

PART 3 EXECUTION

3.01 INSPECTION

- A. Contractor must examine surrounding conditions under which work is to be performed, and notify Landscape Architect and Conservator via email, of any conditions detrimental to proper, timely completion of work. Do not proceed with solarium erection until unsatisfactory conditions have been corrected in manner acceptable to the contractor.

3.02 NOTIFICATION AND DOCUMENTATION

- A. Prior to commencing installation work, obtain, complete, and file required permits and forms.
- B. Notify the appropriate authorities, in the required time, prior to installation:
 1. City of Minneapolis Nicollet Mall Construction Manager.
 2. LA/C

3.03 INSTALLATION

- A. Coordinate activities with LA/C.
- B. Existing Piping or Utilities:
 1. Contact Gopher State One Call (1.800.252.1166) for location of underground utilities.
 2. Determine if utilities require disconnecting, capping or protection.
 3. Alert LA/C if disconnecting, capping or protection are required.
- C. Uncharted or Incorrectly Charted Existing Piping or Utilities:
 1. Consult utility and Owner immediately for directions.
 2. Cooperate with Owner and utility companies to keep services and facilities in operation.
- D. Existing Foundation:
 1. Set sculpture clock cabinet upon the concrete foundation, as provided by others.
- E. Location:
 1. Along the Nicollet Mall, at southeast corner of 11th Street S.
- F. Site Access:
 1. Conduct installation operations between the hours of 7: AM and 4: PM Central Time, Monday through Saturday.

2. Conduct installation operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- G. Schedule to have LA/C present on Site at the start of and for the duration of installation.
- H. Use clean straps to rig sculpture clock case during all moving operations.
- I. Secure and protect cabinet, glass panels and glass doors from movement with padding and strapping for shipping.
- J. Set sculpture clock case plumb, level, square to prevent warp or rack.
- K. Anchor securely in place with stainless steel anchor bolts.
- L. Extend and secure electrical wiring through vertical tubular steel case framing member to provide electrical service for clock motors and lighting located in the upper case compartment.
- M. Coordinate and accommodate installation of clock faces, motors, supportive equipment, lighting, electrical connections and energizing at sculpture clock case installation site.
- N. Coordinate and accommodate electrical connections and energizing of kinetic sculpture motors at sculpture clock case installation site.
- O. Coordinate and accommodate electrical connections, installation and energizing of ceiling lighting elements (luminaires) at sculpture clock case installation site.
- P. Reattach framed glass panels and doors.

3.04 CLEANING

- A. Remove excess glazing and sealant compounds, dirt, and any foreign substances from bronze cladding, copper, painted steel and glass surfaces.

END OF SECTION

This Page Left Blank Intentionally

SECTION 26 00 00

ELECTRICAL WORK FOR NICOLLET MALL SCULPTURE CLOCK CASE

PART 1 GENERAL

1.01 SUMMARY

- A. Scope of Work:
1. Conduit and power and communications cables supplying the clock cabinet: Provided under separate contract and terminated in junction box in base of cabinet.
 2. 24 volt clock power and communications cables:
 - a. Supply cables: Of sufficient length to reach final destination in cabinet without splicing.
 - b. Cables: Extended from junction box to final destinations in cabinet under separate contract.
 3. 120 volt wiring:
 - a. Provide required wiring, connections, conduit, boxes, accessories and equipment required for lighting and power within cabinet in accordance with applicable codes. Provide a complete and operational electrical system.
 - b. Three 20 amp, 120 volt circuits will be provided at cabinet junction box: One for lighting, one for motors, and one for convenience receptacle. Extend circuits to final destinations within cabinet as required.
 - c. Conceal wiring from public view. Wiring shall be concealed within cabinet base or top chamber, or within existing raceways in corners of cabinet.
 4. Clock face illumination:
 - a. Provide LED ribbon lights mounted on each of 4 back plates to provide backlighting of clock faces. Spacing of the ribbon shall be established for sufficient intensity and to provide a smooth and visually uniform lighting of the clock face. Demonstrate layout and performance to be approved by Conservator via a mock up prior to order placement.
 - b. Provide power supplies as required, with cord and plug 120 volt connections.
 - c. Provide accessible, 20 amp, GFCI, duplex receptacle in top chamber of cabinet for power supply connection. Connect to 20 amp, 120 volt, lighting circuit.
 5. Downlights:
 - a. Provide four downlights as specified to be recessed in existing openings in plywood ceiling of main clock chamber. Verify that specified downlights will fit within openings and that downlight trims will cover openings sufficiently. Provide adapter plates to cover the openings as required.
 - b. Connect to 20 amp, 120 volt, lighting circuit.
 - c. Wire downlights complete to combination on-off light switch and 0-10 volt dimmer located in an accessible location within clock cabinet base. Wiring includes 120 volt wiring and 0-10 dimming control wiring.
 6. Motor Connections:
 - a. 24 volt clock motors: Wired and connected under separate contract.
 - b. 120 volt motors:
 - 1) Provide wiring and connections for five fractional horsepower motors.
 - 2) Provide accessible, 20 amp, GFCI, duplex receptacle in base of cabinet for each motor (5 receptacles total).
 - 3) Connect all receptacles to one 120 volt, 20 amp circuit.
 - 4) Each motor will be furnished with cord, plug, and fuse.
 7. Convenience Receptacle:
 - a. Provide weatherproof in use, 20 amp, GFCI, duplex receptacle in cabinet. Connect to dedicated 20 amp, 120 volt circuit. Locate as directed by Conservator.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 26 04 19

LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES FOR NICOLLET MALL SCULPTURE CLOCK CASE

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Copper building wire rated 600 V or less.
 - 2. Connectors, splices, and terminations rated 600 V and less.
- B. Related Requirements:
 - 1. Section 26 05 23 "Control-Voltage Electrical Power Cables" for control systems communications cables and Classes 1, 2, and 3 control cables.

1.02 DEFINITIONS

- A. RoHS: Restriction of Hazardous Substances.

1.03 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Product Schedule: Indicate type, use, location, and termination locations.

1.04 INFORMATIONAL SUBMITTALS

- A. Field quality-control reports.

PART 2 PRODUCTS

2.01 COPPER BUILDING WIRE

- A. Description: Flexible, insulated and uninsulated, drawn copper current-carrying conductor with an overall insulation layer or jacket, or both, rated 600 V or less.
- B. Standards:
 - 1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.
 - 2. RoHS compliant.
 - 3. Conductor and Cable Marking: Comply with wire and cable marking according to UL's "Wire and Cable Marking and Application Guide."
- C. Conductors: Copper, complying with ASTM B 3 for bare annealed copper and with ASTM B 8 for stranded conductors.
- D. Conductor Insulation:
 - 1. Type THWN-2: Comply with UL 83.
 - 2. Type XHHW-2: Comply with UL 44.

2.02 CONNECTORS AND SPLICES

- A. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated; listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.

PART 3 EXECUTION

3.01 CONDUCTOR MATERIAL APPLICATIONS.

- A. Branch Circuits: Copper. Solid for No. 12 AWG and smaller; stranded for No. 10 AWG and larger.

3.02 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

- A. Branch Circuits Concealed: Type THHN/THWN-2, single conductors in raceway.
- B. Cord Drops and Portable Appliance Connections: Type SO, hard service cord with stainless-steel, wire-mesh, strain relief device at terminations to suit application.

3.03 INSTALLATION OF CONDUCTORS AND CABLES

- A. Conceal cables from public view, in existing raceways/chases or within opaque cabinet compartments.
- B. Complete raceway installation between conductor and cable termination points according to Section 260533 "Raceways and Boxes for Electrical Systems" prior to pulling conductors and cables.
- C. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.
- D. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips that will not damage cables or raceway.
- E. Support cables according to Section 26 05 29 "Hangers and Supports for Electrical Systems."

3.04 CONNECTIONS

- A. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A-486B.
- B. Make splices, terminations, and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.
- C. Wiring at Outlets: Install conductor at each outlet, with at least 12 inches (300 mm) of slack.

3.05 FIELD QUALITY CONTROL

- A. Perform tests and inspections.
 - 1. After installing conductors and cables and before electrical circuitry has been energized, test conductors for compliance with requirements:
 - 2. Perform each of the following visual and electrical tests:
 - a. Inspect exposed sections of conductor and cable for physical damage and correct connection according to the single-line diagram.
 - b. Test bolted connections for high resistance using one of the following:
 - 1) A low-resistance ohmmeter.
 - 2) Calibrated torque wrench.

- 3) Thermographic survey.
 3. Inspect for correct identification.
 4. Inspect cable jacket and condition.
 5. Continuity test on each conductor and cable.
- B. Cables will be considered defective if they do not pass tests and inspections.
- C. Prepare test and inspection reports to record the following:
1. Procedures used.
 2. Results that comply with requirements.
 3. Results that do not comply with requirements, and corrective action taken to achieve compliance with requirements.

END OF SECTION

This Page Left Blank Intentionally

SECTION 26 05 23

CONTROL - VOLTAGE ELECTRICAL POWER CABLES FOR NICOLLET MALL SCULPTURE CLOCK CASE

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 1. Low-voltage control cabling.
 2. Control-circuit conductors.

1.02 DEFINITIONS

- A. EMI: Electromagnetic interference.
- B. Low Voltage: As defined in NFPA 70 for circuits and equipment operating at less than 50 V or for remote-control and signaling power-limited circuits.

1.03 ACTION SUBMITTALS

- A. Product Data: For each type of product.

PART 2 PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Flame Travel and Smoke Density for Cables in Non-Riser Applications and Non-Plenum Building Spaces: As determined by testing identical products according to UL 1685.
- C. RoHS compliant.

2.02 LOW-VOLTAGE CONTROL CABLE

- A. Paired Cable: NFPA 70, Type CMG.
 1. One-pair, twisted, No. 16 AWG, stranded (19x29) tinned-copper conductors.
 2. PVC insulation.
 3. Unshielded.
 4. PVC jacket.
 5. Flame Resistance: Comply with UL 1685.
- B. Type TW or Type TF, complying with UL 83, in raceway.

2.03 CONTROL-CIRCUIT CONDUCTORS

- A. Class 2 Control Circuits: Stranded copper, Type THHN/THWN-2, complying with UL 83 in raceway
Type XHHW-2, complying with UL 44 in raceway.

2.04 SOURCE QUALITY CONTROL

- A. Factory test twisted pair cables according to TIA-568-C.2.

- B. Cable will be considered defective if it does not pass tests and inspections.

PART 3 EXECUTION

3.01 EXAMINATION

3.02 INSTALLATION OF RACEWAYS AND BOXES

- A. Comply with requirements in Section 26 05 33 "Raceways and Boxes for Electrical Systems" for raceway selection and installation requirements for boxes and conduits, as supplemented or modified in this Section.
 - 1. Outlet boxes shall be no smaller than 2 inches (50 mm) wide, 3 inches (75 mm) high, and 2-1/2 inches (64 mm) deep.
- B. Comply with TIA-569-D for pull-box sizing and length of conduit and number of bends between pull points.
- C. Install manufactured conduit sweeps and long-radius elbows if possible.
- D. Raceway Installation:
 - 1. Install metal conduits with grounding bushings and connect with grounding conductor to grounding system.

3.03 INSTALLATION OF CONDUCTORS AND CABLES

- A. Comply with NECA 1.
- B. General Requirements for Cabling:
 - 1. Comply with TIA-568-C Series of standards.
 - 2. Comply with BICSI ITSIMM, Ch. 5, "Copper Structured Cabling Systems."
 - 3. Terminate all conductors; no cable shall contain unterminated elements. Make terminations only at indicated outlets, terminals, and cross-connect and patch panels.
 - 4. Cables may not be spliced.
 - 5. Secure and support cables at intervals not exceeding 30 inches (760 mm) and not more than 6 inches (150 mm) from cabinets, boxes, fittings, outlets, racks, frames, and terminals.
 - 6. Bundle, lace, and train conductors to terminal points without exceeding manufacturer's limitations on bending radii, but not less than radii specified in BICSI ITSIMM, Ch. 5, "Copper Structured Cabling Systems." Install lacing bars and distribution spools.
 - 7. Do not install bruised, kinked, scored, deformed, or abraded cable. Do not splice cable between termination, tap, or junction points. Remove and discard cable if damaged during installation and replace it with new cable.
 - 8. Cold-Weather Installation: Bring cable to room temperature before dereeling. Do not use heat lamps for heating.
 - 9. Pulling Cable: Comply with BICSI ITSIMM, Ch. 5, "Copper Structured Cabling Systems." Monitor cable pull tensions.
 - 10. Secure: Fasten securely in place with hardware specifically designed and installed so as to not damage cables.
- C. Twisted Pair Cable Installation:
 - 1. Comply with TIA-568-C.2.
 - 2. Do not untwist UTP cables more than 1/2 inch (12 mm) at the point of termination to maintain cable geometry.
- D. Installation of Control-Circuit Conductors:
 - 1. Install wiring in raceways. Comply with requirements specified in Section 26 05 33 "Raceways and Boxes for Electrical Systems."

- E. Open-Cable Installation:
 - 1. Install cabling with horizontal and vertical cable guides in telecommunications spaces with terminating hardware and interconnection equipment.
 - 2. Suspend copper cable not in a pathway by cable supports not more than 30 inches (760 mm) apart.
 - 3. Cable shall not be run through or on structural members or in contact with pipes, ducts, or other potentially damaging items. Do not run cables between structural members and corrugated panels.

3.04 CONTROL-CIRCUIT CONDUCTORS

- A. Minimum Conductor Sizes:
 - 1. Class 2 low-energy, remote-control, and signal circuits; No. 16 AWG.

3.05 GROUNDING

- A. For low-voltage control wiring and cabling, comply with requirements in Section 26 05 26 "Grounding and Bonding for Electrical Systems."

3.06 IDENTIFICATION

- A. Comply with requirements for identification specified in Section 26 05 53 "Identification for Electrical Systems."
- B. Identify data and communications system components, wiring, and cabling according to TIA-606-B; label printers shall use label stocks, laminating adhesives, and inks complying with UL 969.

3.07 FIELD QUALITY CONTROL

- A. Perform tests and inspections.
- B. Tests and Inspections:
 - 1. Visually inspect cable jacket materials for UL or third-party certification markings. Inspect cabling terminations to confirm color-coding for pin assignments, and inspect cabling connections to confirm compliance with TIA-568-C.1.
 - 2. Visually inspect cable placement, cable termination, grounding and bonding, equipment and patch cords, and labeling of all components.
 - 3. Test cabling for direct-current loop resistance, shorts, opens, intermittent faults, and polarity between conductors. Test operation of shorting bars in connection blocks. Test cables after termination, but not after cross-connection.
 - a. Test instruments shall meet or exceed applicable requirements in TIA-568-C.2. Perform tests with a tester that complies with performance requirements in its "Test Instruments (Normative)" Annex, complying with measurement accuracy specified in its "Measurement Accuracy (Informative)" Annex. Use only test cords and adapters that are qualified by test equipment manufacturer for channel or link test configuration.
- C. End-to-end cabling will be considered defective if it does not pass tests and inspections.

END OF SECTION

This Page Left Blank Intentionally

SECTION 26 05 26

GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS FOR NICOLLET MALL SCULPTURE CLOCK CASE

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes grounding and bonding systems and equipment.

PART 2 PRODUCTS

2.01 SYSTEM DESCRIPTION

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Comply with UL 467 for grounding and bonding materials and equipment.

2.02 CONDUCTORS

- A. Insulated Conductors: Copper or tinned-copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.
- B. Bare Copper Conductors:
 - 1. Solid Conductors: ASTM B 3.
 - 2. Stranded Conductors: ASTM B 8.
 - 3. Tinned Conductors: ASTM B 33.
 - 4. Bonding Cable: 28 kcmil, 14 strands of No. 17 AWG conductor, 1/4 inch (6 mm) in diameter.
 - 5. Bonding Conductor: No. 4 or No. 6 AWG, stranded conductor.

2.03 CONNECTORS

- A. Listed and labeled by an NRTL acceptable to authorities having jurisdiction for applications in which used and for specific types, sizes, and combinations of conductors and other items connected.
- B. Welded Connectors: Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions.
- C. Beam Clamps: Mechanical type, terminal, ground wire access from four directions, with dual, tin-plated or silicon bronze bolts.
- D. Cable-to-Cable Connectors: Compression type, copper or copper alloy.
- E. Conduit Hubs: Mechanical type, terminal with threaded hub.
- F. Straps: Solid copper lugs. Rated for 600 A.

PART 3 EXECUTION

3.01 APPLICATIONS

- A. Conductors: Install solid conductor for No. 8 AWG and smaller, and stranded conductors for No. 6 AWG and larger unless otherwise indicated.

- B. Conductor Terminations and Connections:
 - 1. Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.
 - 2. Connections to Structural Steel: Welded connectors.

3.02 EQUIPMENT GROUNDING

- A. Install insulated equipment grounding conductors with all branch circuits.
- B. Install insulated equipment grounding conductors with the following items, in addition to those required by NFPA 70:
 - 1. Branch circuits.
 - 2. Lighting circuits.
 - 3. Receptacle circuits.
 - 4. Single-phase motor and appliance branch circuits.
 - 5. Flexible raceway runs.

3.03 INSTALLATION

- A. Grounding Conductors: Route along shortest and straightest paths possible unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.
- B. Bonding Straps and Jumpers: Install in locations accessible for inspection and maintenance except where routed through short lengths of conduit.
 - 1. Bonding to Structure: Bond straps directly to basic structure, taking care not to penetrate any adjacent parts.
 - 2. Bonding to Equipment Mounted on Vibration Isolation Hangers and Supports: Install bonding so vibration is not transmitted to rigidly mounted equipment.
 - 3. Use exothermic-welded connectors for outdoor locations; if a disconnect-type connection is required, use a bolted clamp.
- C. Grounding for Steel Structure: Install a driven ground rod at base.

3.04 FIELD QUALITY CONTROL

- A. Perform tests and inspections.
- B. Tests and Inspections:
 - 1. After installing grounding system but before permanent electrical circuits have been energized, test for compliance with requirements.
 - 2. Inspect physical and mechanical condition. Verify tightness of accessible, bolted, electrical connections with a calibrated torque wrench according to manufacturer's written instructions.
 - 3. Prepare dimensioned Drawings locating each ground rod and ground-rod assembly, and other grounding electrodes. Include the number of rods driven and their depth at each location, and include observations of weather and other phenomena that may affect test results. Describe measures taken to improve test results.
- C. Grounding system will be considered defective if it does not pass tests and inspections.

END OF SECTION

SECTION 26 05 29

HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS FOR NICOLLET MALL SCULPTURE CLOCK CASE

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Steel slotted support systems.
 - 2. Conduit and cable support devices.
 - 3. Support for conductors in vertical conduit.
 - 4. Mounting, anchoring, and attachment components, including, clamps, through bolts, toggle bolts, and hanger rods.
 - 5. Fabricated metal equipment support assemblies.

PART 2 PRODUCTS

2.01 SUPPORT, ANCHORAGE, AND ATTACHMENT COMPONENTS

- A. Steel Slotted Support Systems: Preformed steel channels and angles with minimum 13/32-inch- (10-mm-) diameter holes at a maximum of 8 inches (200 mm) o.c. in at least one surface.
 - 1. Standard: Comply with MFMA-4 factory-fabricated components for field assembly.
 - 2. Material for Channel, Fittings, and Accessories: Galvanized steel.
 - 3. Channel Width: Selected for applicable load criteria.
 - 4. Metallic Coatings: Hot-dip galvanized after fabrication and applied according to MFMA-4.
- B. Conduit and Cable Support Devices: Steel hangers, clamps, and associated fittings, designed for types and sizes of raceway or cable to be supported.
- C. Support for Conductors in Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug or plugs for nonarmored electrical conductors or cables in riser conduits. Plugs shall have number, size, and shape of conductor gripping pieces as required to suit individual conductors or cables supported. Body shall be made of malleable iron.
- D. Mounting, Anchoring, and Attachment Components: Items for fastening electrical items or their supports to enclosure structure or surfaces include the following:
 - 1. Clamps for Attachment to Steel Structural Elements: MSS SP-58 units are suitable for attached structural element.
 - 2. Through Bolts: Structural type, hex head, and high strength. Comply with ASTM A 325.
 - 3. Toggle Bolts Stainless-steel springhead type.
 - 4. Hanger Rods: Threaded steel.
- E. Modify existing clock face backlighting frames as required to support new clock face backlighting.

PART 3 EXECUTION

3.01 APPLICATION

- A. Comply with the following standards for application and installation requirements of hangers and supports, except where requirements on Drawings or in this Section are stricter:
 - 1. NECA 1.
 - 2. NECA 101

- B. Comply with requirements for raceways and boxes specified in Section 26 05 33 "Raceways and Boxes for Electrical Systems."
- C. Maximum Support Spacing and Minimum Hanger Rod Size for Raceways: Space supports for EMT, IMC, and RMC as required by NFPA 70. Minimum rod size shall be 1/4 inch (6 mm) in diameter.
- D. Multiple Raceways or Cables: Install trapeze-type supports fabricated with steel slotted or other support system, sized so capacity can be increased by at least 25 percent in future without exceeding specified design load limits.
 - 1. Secure raceways and cables to these supports with two-bolt conduit clamps, single-bolt conduit clamps, or single-bolt conduit clamps using spring friction action for retention in support channel.
- E. Spring-steel clamps designed for supporting single conduits without bolts may be used for 1-1/2-inch (38-mm) and smaller raceways serving branch circuits and communication systems above suspended ceilings, and for fastening raceways to trapeze supports.

3.02 SUPPORT INSTALLATION

- A. Comply with NECA 1 and NECA 101 for installation requirements except as specified in this article.
- B. Raceway Support Methods: In addition to methods described in NECA 1, EMT IMC and RMC may be supported by openings through structure members, according to NFPA 70.
- C. Strength of Support Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination shall be weight of supported components plus 200 lb (90 kg).
 - 1. To Steel: Welded threaded studs complying with AWS D1.1/D1.1M, with lock washers and nuts Beam clamps (MSS SP-58, Type 19, 21, 23, 25, or 27), complying with MSS SP-69 Spring-tension clamps.
 - 2. To Light Steel: Sheet metal screws.

3.03 INSTALLATION OF FABRICATED METAL SUPPORTS

- A. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor electrical materials and equipment.

3.04 PAINTING

- A. Touchup: Clean field welds and abraded areas of shop paint. Paint exposed areas immediately after erecting hangers and supports. Use same materials as used for shop painting. Comply with SSPC-PA 1 requirements for touching up field-painted surfaces.
 - 1. Apply paint by brush or spray to provide minimum dry film thickness of 2.0 mils (0.05 mm).
- B. Galvanized Surfaces: Clean welds, bolted connections, and abraded areas and apply galvanizing-repair paint to comply with ASTM A 780.

END OF SECTION

SECTION 26 05 33

RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS FOR NICOLLET MALL SCULPTURE CLOCK CASE

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Metal conduits, tubing, and fittings.
 - 2. Boxes, enclosures, and cabinets.

1.02 DEFINITIONS

- A. EMT: Electrical Metallic Tubing.
- B. GRC: Galvanized rigid steel conduit.
- C. IMC: Intermediate metal conduit.
- D. LFMC: Liquidtight flexible Metal Conduit

PART 2 PRODUCTS

2.01 METAL CONDUITS, TUBING, AND FITTINGS

- A. Listing and Labeling: Metal conduits, tubing, and fittings shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. GRC: Comply with ANSI C80.1 and UL 6.
- C. IMC: Comply with ANSI C80.6 and UL 1242.
- D. EMT: Comply with ANSI C80.3 and UL 797.
- E. LFMC: Flexible steel conduit with PVC jacket and complying with UL 360.
- F. Fittings for Metal Conduit: Comply with NEMA FB 1 and UL 514B.
 - 1. Fittings for EMT:
 - a. Material: Steel.
 - b. Type: compression.
- G. Joint Compound for IMC, GRC, or ARC: Approved, as defined in NFPA 70, by authorities having jurisdiction for use in conduit assemblies, and compounded for use to lubricate and protect threaded conduit joints from corrosion and to enhance their conductivity.

2.02 BOXES, ENCLOSURES, AND CABINETS

- A. General Requirements for Boxes, Enclosures, and Cabinets: Boxes, enclosures, and cabinets shall be listed for use in wet locations.
- B. Cast-Metal Outlet and Device Boxes: Comply with NEMA FB 1, ferrous alloy or aluminum Type FD, with gasketed cover.

- C. Cast-Metal Access, Pull, and Junction Boxes: Comply with NEMA FB 1 and UL 1773, cast aluminum or galvanized, cast iron with gasketed cover.
- D. Device Box Dimensions: 4 inches square by 2-1/8 inches deep (100 mm square by 60 mm deep) or 4 inches by 2-1/8 inches by 2-1/8 inches deep (100 mm by 60 mm by 60 mm deep)
- E. Gangable boxes are prohibited.

PART 3 EXECUTION

3.01 RACEWAY APPLICATION

- A. Apply raceway products as specified below unless otherwise indicated:
 - 1. Concealed Conduit, Aboveground: GRC, IMC, EMT, or LFMC.
 - 2. Connection to Vibrating Equipment Including Transformers and Motor-Driven Equipment): LFMC.
 - 3. Boxes and Enclosures, Aboveground: NEMA 250, Type 4.
- B. Minimum Raceway Size: 1/2-inch (16-mm) trade size.
- C. Raceway Fittings: Compatible with raceways and suitable for use and location.
 - 1. Rigid and Intermediate Steel Conduit: Use threaded rigid steel conduit fittings unless otherwise indicated. Comply with NEMA FB 2.10.
 - 2. EMT: Use compression, steel fittings. Comply with NEMA FB 2.10.
 - 3. Flexible Conduit: Use only fittings listed for use with flexible conduit. Comply with NEMA FB 2.20.

3.02 INSTALLATION

- A. Comply with NECA 1 and NECA 101 for installation requirements except where requirements on Drawings or in this article are stricter. Comply with NFPA 70 limitations for types of raceways allowed in specific occupancies.
- B. Complete raceway installation before starting conductor installation.
- C. Comply with requirements in Section 26 05 29 "Hangers and Supports for Electrical Systems" for hangers and supports..
- D. Install no more than the equivalent of three 90-degree bends in any conduit run except for control wiring conduits, for which fewer bends are allowed. Support within 12 inches (300 mm) of changes in direction.
- E. Conceal conduit and boxes from public view. Install conduits parallel or perpendicular to enclosure lines.
- F. Support conduit within 12 inches ((300 mm)) of enclosures to which attached.
- G. Threaded Conduit Joints, Exposed to Wet, Damp, Corrosive, or Outdoor Conditions: Apply listed compound to threads of raceway and fittings before making up joints. Follow compound manufacturer's written instructions.
- H. Raceway Terminations at Locations Subject to Moisture or Vibration: Use insulating bushings to protect conductors including conductors smaller than No. 4 AWG.
- I. Terminate threaded conduits into threaded hubs or with locknuts on inside and outside of boxes or cabinets. Install bushings on conduits up to 1-1/4-inch (35mm) trade size and insulated throat metal bushings on 1-1/2-inch (41-mm) trade size and larger conduits terminated with locknuts. Install insulated throat metal grounding bushings on service conduits.

- J. Install raceways square to the enclosure and terminate at enclosures with locknuts. Install locknuts hand tight plus 1/4 turn more.
- K. Do not rely on locknuts to penetrate nonconductive coatings on enclosures. Remove coatings in the locknut area prior to assembling conduit to enclosure to assure a continuous ground path.
- L. Cut conduit perpendicular to the length. For conduits 2-inch (53-mm) trade size and larger, use roll cutter or a guide to make cut straight and perpendicular to the length.
- M. Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb (90-kg) tensile strength. Leave at least 12 inches (300 mm) of slack at each end of pull wire. Cap underground raceways designated as spare above grade alongside raceways in use.
- N. Install raceway sealing fittings at accessible locations according to NFPA 70 and fill them with listed sealing compound. For concealed raceways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces. Install raceway sealing fittings according to NFPA 70.
- O. Install devices to seal raceway interiors at accessible locations. Locate seals so no fittings or boxes are between the seal and the following changes of environments. Seal the interior of all raceways at the following points:
 - 1. Where an underground raceway enters a structure.
 - 2. Where otherwise required by NFPA 70.
- P. Flexible Conduit Connections: Comply with NEMA RV 3. Use a maximum of 72 inches (1830 mm) of flexible conduit for recessed luminaires, equipment subject to vibration, noise transmission, or movement; and for transformers and motors.
 - 1. Use LFMC in damp or wet locations.
- Q. Locate boxes so that cover or plate will not span different building finishes.
- R. Fasten junction and pull boxes to or support from building structure. Do not support boxes by conduits.

3.03 PROTECTION

- A. Protect coatings, finishes, and cabinets from damage and deterioration.
 - 1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.

END OF SECTION

This Page Left Blank Intentionally

SECTION 26 27 26

WIRING DEVICES FOR NICOLLET MALL SCULPTURE CLOCK CASE

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. GFCI receptacles.
 - 2. Cord and plug sets.
 - 3. Toggle switches.
 - 4. Wall-box dimmers.
 - 5. Wall plates.

1.02 DEFINITIONS

- A. Abbreviations of Manufacturers' Names:
 - 1. Cooper: Cooper Wiring Devices; Division of Cooper Industries, Inc.
 - 2. Hubbell: Hubbell Incorporated: Wiring Devices-Kellems.
 - 3. Leviton: Leviton Mfg. Company, Inc.
 - 4. Pass & Seymour: Pass& Seymour/Legrand.
- B. Pigtail: Short lead used to connect a device to a branch-circuit conductor.
- C. UTP: Unshielded twisted pair.

PART 2 PRODUCTS

2.01 GENERAL WIRING-DEVICE REQUIREMENTS

- A. Wiring Devices, Components, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Comply with NFPA 70.
- C. Source Limitations: Obtain each type of wiring device and associated wall plate from single source from single manufacturer.

2.02 GFCI RECEPTACLES

- A. General Description:
 - 1. 125 V, 20 A, straight blade, non-feed-through type.
 - 2. Comply with NEMA WD 1, NEMA WD 6 Configuration 5-20R, UL 498, UL 943 Class A, and FS W-C-596.
 - 3. Include indicator light that shows when the GFCI has malfunctioned and no longer provides proper GFCI protection.

2.03 CORD AND PLUG SETS

- A. Description:
 - 1. Match voltage and current ratings and number of conductors to requirements of equipment being connected.
 - 2. Cord: Rubber-insulated, stranded-copper conductors, with Type SOW-A jacket; with green-insulated grounding conductor and ampacity of at least 130 percent of the equipment rating.

3. Plug: Nylon body and integral cable-clamping jaws. Match cord and receptacle type for connection.

2.04 TOGGLE SWITCHES

- A. Comply with NEMA WD 1, UL 20, and FS W-S-896.
- B. Switches, 120/277 V, 20 A:
 1. Single Pole, or as indicated.

2.05 WALL-BOX DIMMERS

- A. Dimmer Switches: 0-10 volt.
- B. Control: Continuously adjustable slider with single-pole switching. Comply with UL 1472.

2.06 WALL PLATES

- A. Single and combination types shall match corresponding wiring devices.
 1. Plate-Securing Screws: Metal with head color to match plate finish.
 2. Material for Damp Locations: Cast aluminum with spring-loaded lift cover, and listed and labeled for use in wet and damp locations.

2.07 FINISHES

- A. Device Color:
 1. Wiring Devices Connected to Normal Power System: White unless otherwise indicated or required by NFPA 70 or device listing.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Comply with NECA 1.
- B. Coordination with Other Trades:
 1. Protect installed devices and their boxes. Do not place wall finish materials over device boxes and do not cut holes for boxes with routers that are guided by riding against outside of boxes.
 2. Keep outlet boxes free of plaster, drywall joint compound, mortar, cement, concrete, dust, paint, and other material that may contaminate the raceway system, conductors, and cables.
 3. Install wiring devices after all wall preparation, including painting, is complete.
- C. Conductors:
 1. Do not strip insulation from conductors until right before they are spliced or terminated on devices.
 2. Strip insulation evenly around the conductor using tools designed for the purpose. Avoid scoring or nicking of solid wire or cutting strands from stranded wire.
 3. The length of free conductors at outlets for devices shall meet provisions of NFPA 70, Article 300, without pigtails.
- D. Device Installation:
 1. Keep each wiring device in its package or otherwise protected until it is time to connect conductors.
 2. Do not remove surface protection, such as plastic film and smudge covers, until the last possible moment.
 3. Connect devices to branch circuits using pigtails that are not less than 6 inches (152 mm) in length.

4. When there is a choice, use side wiring with binding-head screw terminals. Wrap solid conductor tightly clockwise, two-thirds to three-fourths of the way around terminal screw.
5. Use a torque screwdriver when a torque is recommended or required by manufacturer.
6. When conductors larger than No. 12 AWG are installed on 15- or 20-A circuits, splice No. 12 AWG pigtails for device connections.
7. Tighten unused terminal screws on the device.
8. When mounting into metal boxes, remove the fiber or plastic washers used to hold device-mounting screws in yokes, allowing metal-to-metal contact.

E. Receptacle Orientation:

1. Install ground pin of vertically mounted receptacles down, and on horizontally mounted receptacles to the right.

F. Device Plates: Do not use oversized or extra-deep plates.

G. Dimmers:

1. Install dimmers within terms of their listing.

3.02 GFCI RECEPTACLES

- A. Install non-feed-through-type GFCI receptacles.

3.03 FIELD QUALITY CONTROL

- A. Test Instruments: Use instruments that comply with UL 1436.

- B. Test Instrument for Convenience Receptacles: Digital wiring analyzer with digital readout or illuminated digital-display indicators of measurement.

- C. Perform the following tests and inspections with the assistance of a factory-authorized service representative:

1. Test Instruments: Use instruments that comply with UL 1436.
2. Test Instrument for Convenience Receptacles: Digital wiring analyzer with digital readout or illuminated digital-display indicators of measurement.

- D. Tests for Convenience Receptacles:

1. Line Voltage: Acceptable range is 105 to 132 V.
2. Percent Voltage Drop under 15-A Load: A value of 6 percent or higher is unacceptable.
3. Ground Impedance: Values of up to 2 ohms are acceptable.
4. GFCI Trip: Test for tripping values specified in UL 1436 and UL 943.
5. Using the test plug, verify that the device and its outlet box are securely mounted.
6. Tests shall be diagnostic, indicating damaged conductors, high resistance at the circuit breaker, poor connections, inadequate fault current path, defective devices, or similar problems. Correct circuit conditions, remove malfunctioning units and replace with new ones, and retest as specified above.

- E. Wiring device will be considered defective if it does not pass tests and inspections.

END OF SECTION

This Page Left Blank Intentionally

SECTION 26 51 19

LED INTERIOR LIGHTING FOR NICOLLET MALL SCULPTURE CLOCK CASE

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes the following types of LED luminaires:
 - 1. Downlight for kinetic sculpture.
 - 2. Ribbon light for clock faces.
 - 3. Materials.
 - 4. Finishes.
 - 5. Luminaire support.

1.02 DEFINITIONS

- A. CCT: Correlated color temperature.
- B. CRI: Color Rendering Index.
- C. Fixture: See "Luminaire."
- D. LED: Light-emitting diode.
- E. Lumen: Measured output of lamp and luminaire, or both.
- F. Luminaire: Complete lighting unit, including lamp, reflector, and housing.

1.03 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Arrange in order of luminaire designation.
 - 2. Include data on features, accessories, and finishes.
 - 3. Include physical description and dimensions of luminaires.
 - 4. Include life, output (lumens, CCT, and CRI), and energy efficiency data.
 - 5. Photometric data and adjustment factors based on laboratory tests, complying with IES Lighting Measurements Testing and Calculation Guides, of each luminaire type. The adjustment factors shall be for lamps and accessories identical to those indicated for the luminaire as applied in this Project, IES LM-79, and IES LM-80.
 - a. Manufacturers' Certified Data: Photometric data certified by manufacturer's laboratory with a current accreditation under the National Voluntary Laboratory Accreditation Program for Energy Efficient Lighting Products.
 - b. Testing Agency Certified Data: For indicated luminaires, photometric data certified by a qualified independent testing agency. Photometric data for remaining luminaires shall be certified by manufacturer.
- B. Shop Drawings: For nonstandard or custom luminaires.
 - 1. Include plans, elevations, sections, and mounting and attachment details.
 - 2. Include details of luminaire assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
 - 3. Include diagrams for power, signal, and control wiring.

1.04 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For testing laboratory providing photometric data for luminaires.

- B. Detailed description of equipment anchorage devices on which the certification is based and their installation requirements.
- C. Product Certificates: For each type of luminaire.
- D. Product Test Reports: For each luminaire, for tests performed by manufacturer and witnessed by a qualified testing agency or a qualified testing agency.
- E. Sample warranty.

1.05 QUALITY ASSURANCE

- A. Luminaire Photometric Data Testing Laboratory Qualifications: Luminaire manufacturer's laboratory that is accredited under the NVLAP for Energy Efficient Lighting Products.
- B. Luminaire Photometric Data Testing Laboratory Qualifications: Provided by an independent agency, with the experience and capability to conduct the testing indicated, that is an NRTL as defined by OSHA in 29 CFR 1910.7, accredited under the NVLAP for Energy Efficient Lighting Products, and complying with the applicable IES testing standards.
- C. Provide luminaires from a single manufacturer for each luminaire type.
- D. Each luminaire type shall be binned within a three-step MacAdam Ellipse to ensure color consistency among luminaires.
- E. Mockups: For interior luminaires in room or module mockups, complete with power and control connections.
 - 1. Obtain Architect's approval of luminaires in mockups before starting installations.
 - 2. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
 - 3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 - 4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Protect finishes of exposed surfaces by applying a strippable, temporary protective covering before shipping.

1.07 WARRANTY

- A. Warranty: Manufacturer and Installer agree to repair or replace components of luminaires that fail in materials or workmanship within specified warranty period.
- B. Warranty Period: Five year(s) from date of Substantial Completion.

PART 2 PRODUCTS

2.01 LUMINAIRE REQUIREMENTS

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Standards:
 - 1. ENERGY STAR certified.
 - 2. NRTL Compliance: Luminaires for hazardous locations shall be listed and labeled for indicated class and division of hazard by an NRTL.

3. FM Global Compliance: Luminaires for hazardous locations shall be listed and labeled for indicated class and division of hazard by FM Global.
 4. UL Listing: Listed for damp location.
 5. Recessed luminaires shall comply with NEMA LE 4.
- C. CRI of minimum 80 CCT.
- D. Color Temperature: 2700 K
- E. Rated lamp life 50,000 hours to L70.
- F. Lamps dimmable from 100 percent to 10 percent of maximum light output.
- G. Nominal Operating Voltage: 120 V ac.

2.02 DOWNLIGHT

- A. Wila 621 3 XTM19 13LM 27 83 SA20 120 10V RET or approved equal, with round plate to cover ceiling opening. Color of plate: to match ceiling color.
- B. Universal mounting bracket.
- C. Integral junction box with conduit fittings.
- D. Optics: 20 degree distribution.
- E. Compatible 0-10V dimmer switch.

2.01 RIBBON LIGHTS

- A. Omnilight High Output Helix Series or approved equal.
- B. Suitable for exterior use.
- C. Provide 6" spacing between rows of ribbon for initial mockup. Cut to length required.
- D. Power Supply:
 1. Omnilight Omnipower series or approved equal. .
 2. Cord and Plug connection to 120 volt circuit.
 3. 24 VDC.
 4. Electronic.
 5. Dimmable from 0-100%
 6. Size as required to accommodate load of approved design.

2.02 MATERIALS

- A. Metal Parts:
 1. Free of burrs and sharp corners and edges.
 2. Sheet metal components shall be steel unless otherwise indicated.
 3. Form and support to prevent warping and sagging.
- B. Housings:
 1. Extruded-aluminum housing and heat sink.
 2. Anodized finish.
- C. Factory-Applied Labels: Comply with UL 1598. Include recommended lamps. Locate labels where they will be readily visible to service personnel, but not seen from normal viewing angles when lamps are in place.

1. Label shall include the following lamp characteristics:
 - a. CCT and CRI for all luminaires.

2.03 METAL FINISHES

- A. Variations in finishes are unacceptable in the same piece.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine roughing-in for luminaire to verify actual locations of luminaire and electrical connections before luminaire installation. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. Comply with NECA 1.
- B. Install luminaires level, plumb, and square with ceilings and walls unless otherwise indicated.
- C. Install lamps in each luminaire.
- D. Supports:
 1. Sized and rated for luminaire weight.
 2. Able to maintain luminaire position after cleaning and relamping.
 3. Provide support for luminaire without causing deflection of ceiling or wall.
 4. Luminaire mounting devices shall be capable of supporting a horizontal force of 100 percent of luminaire weight and vertical force of 400 percent of luminaire weight.
- E. Ceiling-Mounted Luminaire Support:
 1. Ceiling mount with two <Insert number> 5/32-inch- (4-mm-) <Insert value> diameter aircraft cable supports [adjustable to] [120 inches (6 m) in length] <Insert length>.
 2. Ceiling mount with [pendant mount] [four-point pendant mount] with [5/32-inch- (4-mm-)] <Insert value> diameter aircraft cable supports [adjustable to] [120 inches (6 m) in length] <Insert length>.
 3. Ceiling mount with hook mount.
- F. Comply with requirements in Section 260519 "Low-Voltage Electrical Power Conductors and Cables" for wiring connections.

3.03 IDENTIFICATION

- A. Identify system components, wiring, cabling, and terminals. Comply with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

3.04 FIELD QUALITY CONTROL

- A. Perform the following tests and inspections:
 1. Operational Test: After installing luminaires, switches, and accessories, and after electrical circuitry has been energized, test units to confirm proper operation.
- B. Luminaire will be considered defective if it does not pass operation tests and inspections.

3.05 ADJUSTING

- A. Adjusting of light levels for down lights is desired.

END OF SECTION

This Page Left Blank Intentionally

SECTION 12 14 00 (MODIFIED)

INSTALLATION OF EXTERIOR PUBLIC SCULPTURE

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Transportation and installation of cast bronze bas reliefs, large to medium sized granite, mixed bronze, wood and stone art works and small protection boulders from multiple local storage sites to the Nicollet Mall in downtown Minneapolis, MN. Work also includes providing temporary barricades and traffic control of pedestrians, bikes and vehicles in the vicinity of the installations. It's assumed that the Nicollet Mall will not be open to public vehicular traffic during this period of work.
- B. Work to be performed by others:
 - 1. Production of setting templates for Shadows of Spirit bronze bas reliefs.
- C. Related Sections:
 - 1. Section 12 14 13 – Carved Sculpture
 - 2. Section 12 14 16 – Cast Sculpture
 - 3. Section 12 19 19 – Constructed Sculpture

1.02 REFERENCES

- A. Industry Standard - [Compliance Directive for the Cranes and Derricks in Construction Standard](#) OSHA Directive CPL 02-01-057, (2014, October 17); [Cranes and Derricks in Construction: Operator Certification](#). Final Rule 79: 57785-57798, (2014, September 26).
- B. LA/C refers to the Landscape Architect and Conservator designated as project representatives by the City of Minneapolis (owner) for the purposes of administering, observing and directing work described herein.

1.03 SUBMITTALS

- A. Qualification Data: For moving and installation contractor and crew members.
 - 1. Minimum of five years successful experience moving and installing at least ten (10) large objects and at least five (5) in excess of five tons.
 - 2. Minimum of five years successful experience moving and installing at least four (4) large, exterior art works in public settings.
 - 3. Experience working in urban settings including downtown business districts.
- B. Schedule of moving and installation activities, indicating:
 - 1. Detailed sequence of selective moving and installation of art work with starting and ending dates for each activity.
 - 2. Coordination of Owner's continuing use / occupancy of portions of existing sidewalk.

1.04 QUALITY ASSURANCE

- A. Installation Contractor Qualifications: An experienced firm that has specialized in lifting, moving large (over 5 tons) work similar in material and extent to that indicated for this Project.
- B. Be familiar with and comply with all pertinent federal, state and local regulations for moving and installation of large objects by truck crane.
- C. Obtain and File Required Documentation:

1. The contractor shall obtain and pay for all permits required for this work from the City of Minneapolis including but not limited to the following:
 - a. Lane Use/Obstruction Permit - www.minneapolis.mn.roway.net/
 - b. Sidewalk Construction Permit" - www.minneapolis.mn.roway.net/
- D. Preinstallation Conference: Conduct conference at Site with LA/C (Landscape Architect and Conservator) to review methods and procedures related to moving and installation of art works.
 1. Mock Up: Prepare a mock up for mounting Shadows of Spirit demonstrating adequacy of bonding between concrete treated with penetrating sealer, silicone adhesive and clean, non-ferrous metal panel. Mock up may be constructed either at project site or at contractor's shop. If mock up is constructed at contractor's shop it should include materials and conditions similar to final site conditions.
 2. Mock up shall be at least 2 square feet in area.
 3. See 3.05 INSTALLATION for procedures to be followed when building mock up.
 4. Successful mock up procedures and results may be incorporated into the final construction upon LA/C's approval.

1.05 PROJECT/SITE CONDITIONS

- A. Existing Piping or Utilities: Not Applicable
- B. Locations: Along the Nicollet Mall
 1. Enjoyment of Nature large and small granite boulders, stone, wood and cast bronze and iron benches on Nicollet Mall between 3rd Street S. and Washington Ave as depicted in the plans.
 2. Stone Boat 1 on the east side of Nicollet Mall between 6th Street S. and 5th Street S. within Grove 9-1 planting areas as depicted in the plans.
 3. Stone Boat 2 on the East side of Nicollet Mall between 6th Street S. and 5th Street S. north of Grove 9-3 planting area.
 4. 7, Shadows of Spirit cast bronze bas reliefs set within sidewalks on the west and east sides of the Nicollet Mall between Grant Street and 11th Street as depicted in the plans.
- C. Site Access:
 1. Conduct installation operations between the hours of 7:AM and 4:PM Central Time, Monday through Saturday.
 2. Conduct installation operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Wood cribbing
- B. Wood pallets
- C. Polyethylene sheeting minimum 10 mil thick
- D. Packing blankets
- E. Joint Sealant: Latasil 100% silicone by Laticrete, or approved equal, color to be determined.
 1. Concrete Sealant: TK TRI-Siloxane 290 by TK products or SX5000 Penetrating Solvent Based Siloxane Water Repellent Concrete and Masonry Sealer with Salt Guard
- F. Adhesive:
 1. 3/8 diameter x 4" L stainless steel setting pins

- G. Loctite Anchor Bolt Grout HP, 2 Part, High Performance, Solvent-Free, No Odor, Non-Sag, Gray, 20.7 Oz, Dual Cartridge, Mixing Ratio 1:1, For Use With Applicator 1093981 (G3377796) And Mix Nozzle 1100963 (G3497837), or approved equal
- H. Type N mortar mix

2.02 MATERIALS FOR PROTECTION DURING TRANSPORT AND INSTALLATION

- A. Materials not specifically described but required for complete and proper protection of art works shall be selected by Contractor, subject to acceptance of LA/C.
- B. “Stone Boat” granite art benches: Each of the two “Stone Boat” carved granite benches are approximately 15’ 6” L x 37” W x 4’ H and each weigh approximately 23,000 lbs
- C. “Enjoyment of Nature” components:
 - 1. Big Bread Loaf Boulder: Made from flame-spalled and honed granite. Size: 139” L x 54” W x 35” H
 - 2. Mountain/Hill Boulder: It is made from flame-spalled granite. Size: 64” L x 51” W x 47” H
 - 3. Bird Bath Boulder: It is made from flame-spalled granite. One face has been ground and minimally polished. The rising moon circles were ground into the flat face. The birdbath concavity was spalled out with heat and then polished. A cast bronze branch arcs over the small basin. Size: 53” L x 48” W x 41” H
 - 4. Pebble Splash: It is made from several circular, stacked slabs of ground, cut and polished granite (Lake Placid Blue). Size: 72” diam. x 16 ½” H
 - 5. Fifteen (15) small granite non-art boulders; five (8) approximately 2’ L x 2’ W x 2’ H and five (7) approximately 1’ L x 1’ W x 1’ H.
 - 6. Bench 1: Bronze Top: The top is cast and patinated bronze, originally a warm brown color. The base is polished granite with masked and sandblasted characters. Size: 36” square x 17” H
 - 7. Benches 2,3,4: Half Bronze and Half Wood Tops: The top is half Ipe wood board-joinery and half cast and patinated bronze. The base is polished granite with masked and sandblasted characters. Size: 36” square x 14”-17” H
 - 8. Bench 5: Cast Iron Top: The top is cast iron, originally patinated to a tannic acid black/brown. The base is polished granite with masked and sandblasted characters. Size: 36” square x 13” H
 - 9. Bench 6: Half cast iron and half wood top: The top is half cast iron, originally patinated to a tannic acid black/brown, and half Ipe wood board-joinery. The base is polished granite with masked and sandblasted characters. Size: 36” square x 20” H
 - 10. Bench 7: Wood: The top is all Ipe wood joinery. The base is polished granite with masked and sandblasted characters. Size: 36” square x 15 ½” H

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verification of Conditions:
 - 1. Before beginning Work, conduct visits to sculpture storage sites and Nicollet Mal final setting locations with LA/C to verify existing conditions.
 - 2. Verify that transport and installation may be performed in accordance with design, pertinent codes and regulations.
 - 3. Bring questions regarding alterations to attention of LA/C.
 - 4. Coordinate work with LA/C to minimize inconvenience to Owner and occupants of adjacent buildings, if any.
- B. Discrepancies: Immediately notify LA/C. Do not proceed with Work in areas of discrepancy until fully resolved.

3.02 NOTIFICATION AND DOCUMENTATION

- A. Prior to commencing Work, obtain, complete, and file required permits and forms.

- B. Notify the appropriate authorities, in the required time, prior to transport and installation.
 - 1. City of Minneapolis Nicollet Mall Construction Manager.
 - 2. LA/C

3.03 PREPARATION

- A. Erect temporary barricades and other protective devices as required to protect:
 - 1. Existing street and sidewalk pavements, lighting, signs, furnishings, plantings and related streetscape elements within the installation site areas.
 - 2. Materials and finishes on areas adjacent to art work installation area.
 - 3. Workers, passersby, occupants of adjoining space and/or adjacent property.
 - 4. Access and egress from existing buildings, if necessary. Ensure that functionally and legally required exits and exitways remain free, unobstructed during entire course of Project.
- B. All of the art works have been recently restored, and it is imperative to prevent any damage and keep them in perfect condition.

3.04 TRANSPORT

- A. Location of Sculpture:
 - 1. Stone Boats are stored at 708 Vandalia St. Saint Paul, Minnesota 55114 care of sculptor, Peter Morales.
 - 2. Enjoyment of Nature is stored in two locations:
 - a. 46th Avenue NE, Columbia Heights, MN. (Minneapolis Water Filtration Plant yard) for large and small natural stone boulders and 4 art stone boulders.
 - b. 318 2nd Ave N, Minneapolis, MN 55401, C Ramp downtown parking garage storage room for mixed material benches.
 - 3. Shadows of Spirit bronzes are stored at IDS Tower, storage room D-088
- B. Transporting Sculpture:
 - 1. Coordinate and schedule activities to have LA/C present at storage site during loading procedures
 - 2. Notify LA/C at least one (1) day prior to retrieval from storage sites so they can alert the owner and storage site manager.
 - 3. Move during dry weather to prevent slipping and shifting of boulders during loading for transport.
 - 4. Using a clean broom, thoroughly broom off all debris from all surfaces of sculpture and art boulders stored outdoors prior to loading.
 - 5. For Pebble Splash, Bread Loaf Boulder, Bird Bath Boulder, Mountain/Hill Boulder, and Bench pieces, use adequate padding and cribbing at every stage. For the bronze part of the Bird Bath Boulder, use: Layer 1 against the surface of the metal: Soft Tyvek (will be provided by the City). Layer 2: Packing blankets.
 - 6. For Enjoyment of Nature benches, use wood pallets and protect sculptures with adequate padding at every stage. Bench tops and bases cannot be separated and must be moved intact as complete units.
 - 7. For STONEBOAT benches: Use clean straps, or clean barrier layer between straps and granite.
 - 8. Note proportions and shapes of art works, convex and concave surfaces as well any stable crack(s) or and place protective/padded lifting straps accordingly.
 - 9. No metal chains, metal tools, or metal pry-bars can be used against art work surfaces unless they are padded with Teflon, leather or wood.
 - 10. Carefully load sculpture and secure with cribbing and clean strapping to prevent movement during transport.
 - 11. Place Stone Boat benches and all other art boulders on shims on the flat bed, so that straps can be reinserted at the storage site or leave straps in place, pinned under them for the trip.

3.05 INSTALLATION

- A. Coordinate activities to have LA/C present at Nicollet Mall sculpture siting locations.

- B. Artists may be present to advise on installation of “Stone Boats” granite benches and “Enjoyment of Nature” components.
- C. Surfaces of art works must be protected to prevent scratching, gouging and abrasions during all operations.
- D. Note proportions and shapes of art works, convex and concave surfaces as well any stable crack(s) or and place protective/padded lifting straps accordingly.
- E. Steel pry bars are not to be used against artwork or boulders. Exceptions can be made on a case by case basis after approval by LA/C. In these instances, wood barrier must be used between pry bar and artwork.
- F. No metal chains or metal tools, can be used against art work surfaces unless they are padded with Teflon, leather or wood. Can use high density plastic wedges.
- G. Using a clean broom, thoroughly broom clean all dust and debris from pavement surfaces, prior to installing sculpture.
- H. Set STONE BOATS upon Teflon shims to create a space under the stone of at 1/2 to ¾ inch in height. Place shims along both sides at approximate 1/3 positions relative to the length of the sculpture to create an overhang at each end to allow for positioning of lifting straps. This should establish four locations for the shim stacks. Once the stone and shims are in place and the lift straps are removed, pack a band of soft mortar all the way around the perimeter of the stone to prevent rocking / movement and to facilitate ease in future moving or deinstallation.
- I. ENJOYMENT OF NATURE is comprised of 11 sculptures and up to 15 small (1 ft.x2ft.) boulders to aid in skateboard deterrence (as described in 2.02):
 - 1. Big Bread Loaf Boulder, Mountain/Hill Boulder and Pebble Splash: Set the 4 sculptural boulders and carved stone upon Teflon shims to create a space under the stone of at least 1/2 inch in height. Place shims along both sides at 1/3 positions relative to the length of the sculpture to create an overhang at each end allowing for positioning of the lifting straps and softeners. This should establish four locations for the shim stacks. Once the stone is in place and the straps pulled out pack a band of soft mortar all the way around the perimeter of the piece to facilitate ease in future moving and deinstallation. Apply a modest bead of sealant along the bottom perimeter of the boulder where it meets the concrete pavement.
 - 2. All Benches: Drill concrete sidewalk and grout set a 3/8” diameter x 4” L stainless steel setting pin (provide approximately 2 inches exposed) at the center point of each bench base. Ensure excess grout is removed providing a clean, smooth paved area around the pin. Inspect the setting hole at the bottoms of each bench to ensure a clean and proper pin fit. If necessary redrill the pin setting hole.
 - a. Apply a modest bead of sealant along the bottom perimeter of the bench where it meets the concrete pavement. Bench1: Bronze Top: The top is cast and patinated bronze, originally a warm brown color. The base is polished granite with masked and sandblasted characters. Size: 36” square x 17” H
 - b. Benches 2,3,4: Half Bronze and Half Wood Tops: The top is half lpe wood board-joinery and half cast and patinated bronze. The base is polished granite with masked and sandblasted characters. Size: 36” square x 14”-17” H
 - c. Bench 5: Cast Iron Top: The top is cast iron, originally patinated to a tannic acid black/brown. The base is polished granite with masked and sandblasted characters. Size: 36” square x 13” H
 - d. Bench 6: Half cast iron and half wood top: The top is half cast iron, originally patinated to a tannic acid black/brown, and half lpe wood board-joinery. The base is polished granite with masked and sandblasted characters. Size: 36” square x 20” H
 - e. Bench 7: Wood: The top is all lpe wood joinery. The base is polished granite with masked and sandblasted characters. Size: 36” square x 15 ½” H

3. Fifteen (15) small granite non-art boulders; eight (8) approximately 2' L x 2' W x 2' H and seven (7) approximately 1' L x 1' W x 1' H, most have small, stainless steel mounting pins attached at their bottoms. Mounting pins should be reused where possible.
- J. SHADOWS OF SPIRIT bronze bas relief sculptures shall be set into the concrete sidewalk areas as shown in the drawings.
1. Use templates as provided by others and set templates onto the concrete surface and transfer the shape to define the area to be ground out for receiving each of the sculptures.
 2. Grind down the surface of the concrete sidewalk (approximately $\frac{3}{4}$ ") to allow the sculptures to sit flush with the surrounding sidewalk grade. Insert bronze sculptures to determine proper fit and adjust depth as needed for establishing a tight and flush fit.
 3. Apply penetrating concrete sealer to the ground out areas per manufacturer's instructions.
 4. Once penetrating sealer has adequately cured, apply a generous amount of silicone adhesive and set the bronze sculptures tight and flush.

END OF SECTION

SECTION 01 25 13

PRODUCT SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

- A. Administrative and procedural requirements for handling requests for substitutions.
- B. The following is not included in this Section:
 - 1. Procedural requirements governing Contractor's selection of product options (Section 01 60 00).

1.02 DEFINITIONS

- A. Definitions used in this Article are not intended to change or modify the meaning of other terms used in the Contract Documents.
- B. Substitutions: Requests for changes in products, materials, equipment and methods of construction required by Contract Documents proposed by Contractor.
- C. The following are not considered substitutions:
 - 1. Revisions to Contract Documents requested by Owner or LA.
 - 2. Specified options of products and construction methods included in Contract Documents.
 - 3. Contractor's determination of and compliance with governing regulations and orders issued by governing authorities.

1.03 SUBMITTALS

- A. Substitution Request Prior to Bid: For a Product Substitution to be considered, the following conditions must be met:
 - 1. All requests must be submitted in writing no later than 7 calendar days prior to the date for receipt of the bids.
 - 2. Faxed submittals will not be considered.
 - 3. Submit each request for substitution (one material or product per form) on the attached "Substitution Request Form" attached at the end of this section (either duplicated from the Project Manual or available from E/A's office) together with a self-addressed, stamped envelope. Submittals not accompanied by this form properly filled in and endorsed will be discarded without review. NO EXCEPTIONS.
 - 4. Identify any impact of the substituted product on related items.
 - 5. Approved items will be listed in addenda. Requests for substitution will be returned in the self-addressed, stamped envelope provided by bidder at LA's earliest convenience.
- B. All substitutions permitted on addenda must meet or exceed requirements of the specifications including, but not limited to:
 - 1. Warranty.
- C. Substitution Request After Bid: Requests for substitution will be considered if received within 60 days after commencement of the work. Requests received more than 60 days after commencement of the work may be considered or rejected at the discretion of LA.
 - 1. Submit 3 copies of each request for substitution for consideration. Submit requests in the form and in accordance with procedures required for change order proposals.
 - 2. Identify the product, or the fabrication or installation method to be replaced in each request. Include related specification section and Drawing numbers.

3. Provide complete documentation showing compliance with the requirements for substitutions, and the following information, as appropriate:
 - a. Product data, including drawings and descriptions of products, fabrication and installation procedures.
 - b. Samples, where applicable or requested.
 - c. A detailed comparison of significant qualities of the proposed substitution with those of the work specified. Significant qualities may include elements such as size, weight, durability, performance and visual effect.
 - d. Coordination information, including a list of changes or modifications needed to other parts of the work and to construction performed by Owner and separate contractors, that will become necessary to accommodate the proposed substitution.
 - e. A statement indicating the substitution's effect on Contractor's construction schedule compared to the schedule without approval of the substitution. Indicate the effect of the proposed substitution on overall contract time.
 - f. Cost information, including a proposal of the net change, if any in the contract sum.
 - g. Certification by Contractor that the substitution proposed is equal-to or better in every significant respect to that required by the Contract Documents, and that it will perform adequately in the application indicated.
 - h. Include Contractor's waiver of rights to additional payment or time, which may subsequently become necessary because of the failure of the substitution to perform adequately.
- D. Substitution Conditions:
 1. Contractor's substitution request will be received and considered by LA when one or more of the following conditions are satisfied, as determined by LA, otherwise requests will be returned without action except to record noncompliance with these requirements:
 - a. Extensive revisions to Contract Documents are not required.
 - b. Proposed changes are in keeping with the general intent of Contract Documents.
 - c. The request is timely, fully documented and properly submitted.
 - d. Contractors and suppliers will be expected to provide the specified product unless prior approval is received from LA's office in sufficient time so that all bidders can be notified through an addendum.
 - e. The specified product or method of construction cannot be provided within the contract time. The request will not be considered if the product or method cannot be provided as a result of failure to pursue the work promptly or coordinate activities properly.
 - f. The specified product or method of construction cannot receive necessary approval by a governing authority, and the requested substitution can be approved.
 - g. A substantial advantage is offered to Owner, in terms of cost, time, energy conservation, or other considerations of merit, after deducting offsetting responsibilities Owner may be required to bear. Additional responsibilities for Owner may include additional compensation to LA for redesign and evaluation services, increased cost of other construction by Owner, or separate contractors, and similar considerations.
 - h. The specified product or method of construction cannot be provided in a manner that is compatible with other materials, and where Contractor certifies that the substitution will overcome the incompatibility.
 - i. The specified product or method of construction cannot be coordinated with other materials, and where Contractor certifies that the proposed substitution can be coordinated.
 - j. The specified product or method of construction cannot provide a warranty required by the Contract Documents and where Contractor certifies that the proposed substitution provides the required warranty.
 - k. Where a proposed substitution involves more than one prime contractor, each contractor shall cooperate with the other contractors involved to coordinate the work, provide uniformity and consistency, and to assure compatibility of products.
- E. Limitations: Contractor's submittal and LA's acceptance of Shop Drawings, Product Data, or Samples that relate to construction activities not complying with the Contract Documents does not constitute an acceptable or valid request for substitution, nor does it constitute approval.
- F. Substitution Causing Redesign: LA time for redesign as a result of substitution, will be charged to Owner, then deducted by Construction Change Directive from Contract Amount.

- G. LA's Action:
1. Request Prior to Bid: If approved, substitution will be included in an addendum.
 2. Request After Bid:
 - a. If necessary, within one week of receipt of the request for substitution, LA will request additional information or documentation necessary for evaluation of the request.
 - b. Within two weeks of receipt of the request, or one week of receipt of the additional information or documentation, whichever is later, LA will notify Contractor of acceptance or rejection of the proposed substitution.
 - c. If a decision on use of a proposed substitute cannot be made or obtained within the time allocated, use the product specified by name.
 - d. Acceptance will be in the form of a change order.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SUBSTITUTION REQUEST FORM

TO: Attn: Bob Kost _____
 Short Elliott Hendrickson Inc.
 3535 Vadnais Center Drive
 St. Paul, MN 55110-5196
 651.490.2000

PROJECT: Nicollet Mall Public Art, No. 130274 _____

SECTION NO.	ARTICLE NO.	SPECIFIED PRODUCT	PROPOSED SUBSTITUTION
-------------	-------------	-------------------	-----------------------

- A. Does the substitution affect dimensions shown on Drawings? Yes No
- B. Does the substitution affect other trades? Yes No
- C. Does the manufacturer's guarantee differ from that specified? Yes No
- D. If you indicated "Yes" to Items A, B, or C above, attach a thorough explanation on your company letterhead.
- E. If there are other differences between proposed substitution and specified product, attach a thorough explanation on your company letterhead. If differences are not noted and acknowledged in writing by LA, product must comply with specification requirements.
- F. The proposed substitution was used within the last 24 months on the following project:
 Project Name _____
 Location _____
 LA _____
 Telephone No. _____
- G. Has the proposed substitution been used on an SEH project within the last 12 months? Yes No
 If yes, which project? _____

**All questions must be answered. Incomplete forms will not be reviewed.
 Include a self-addressed, stamped envelope for reply.**

Submitted By: _____

 Signature

 Firm

 Address

 Date

 Phone

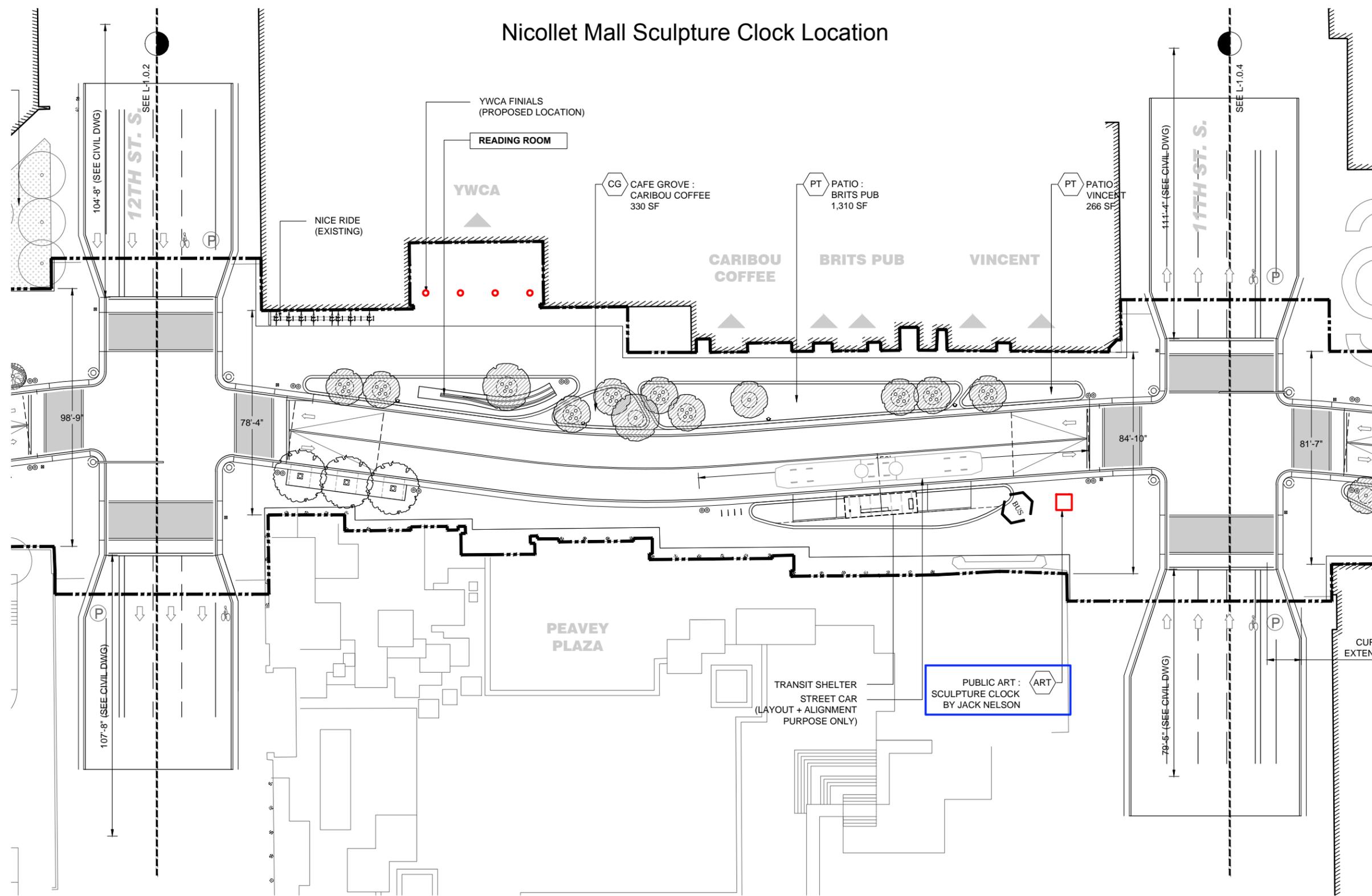
 E-mail

For Use by Design Consultant	
<input type="checkbox"/>	Not Accepted, Not Enough Information
<input type="checkbox"/>	Not Accepted, Does Not Appear to be Equal
<input type="checkbox"/>	Accepted <input type="checkbox"/> Accepted as Noted
<input type="checkbox"/>	Received Too Late
By _____	
Date _____	
Remarks _____	

Nicollet Mall Sculpture Clock



Nicollet Mall Sculpture Clock Location



- ART: EXISTING LOCATION
- ART: FAIRLY EASY SITING
- ART: NOT EASY SITING

- LEGEND**
- PROJECT LIMIT LINE
 - R.O.W LINE
 - WOOD # WOODS PLANTING NUMBER
 - GROVE # TREE GROVE NUMBER
 - TRANSIT # TRANSIT STOP NUMBER
 - ART ART
 - CG CAFE GROVE AREA (SF)
 - PT PATIO AREA (SF)
 - TRANSIT SHELTER TYP.
 - LIGHT MAST TYP.
 - TRAFFIC SIGNAL TYP.
 - APS TYP.
 - TRASH / RECEPTACLE TYP.
 - BIKE RACK
 - PATIO TABLE AND CHAIRS
 - MOVABLE FURNITURE
 - LIGHT MAST AND LANTERN

DATE PRINTED = \$Date\$

FILE NAME = FILE NAME.dgn

SCALE:	NO.	DATE	BY	REVISION	STAMP:
 1" = 40'-0"	1	12.05.14		100% SCHEMATIC DESIGN	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> <p style="margin: 0;">FOR REVIEW & FILING</p> <p style="margin: 0;">NOT FOR CONSTRUCTION</p> </div>

 MINNEAPOLIS DEPARTMENT OF PUBLIC WORKS	SITE PLAN _ 12TH ST. TO 11TH ST.	NICOLLET MALL REDESIGN 100% DESIGN DEVELOPMENT	L-1.0.3 NUMBER
	DRAWN DS CHECKED MB DATE 04.24.2015	All Rights Reserved These drawing, concepts, designs and ideas are the property of James Corner Field Operations. They may not be copied, reproduced, disclosed to others or used in connection with any work other than the specified project for which they were prepared, in whole or in part, without the prior written authorization of James Corner Field Operations.	X OF X

Stone Boat #1



YOUR PHONE CAN PROTECT ITSELF

KEEP YOUR PHOTOS CONTACTS & MUSIC

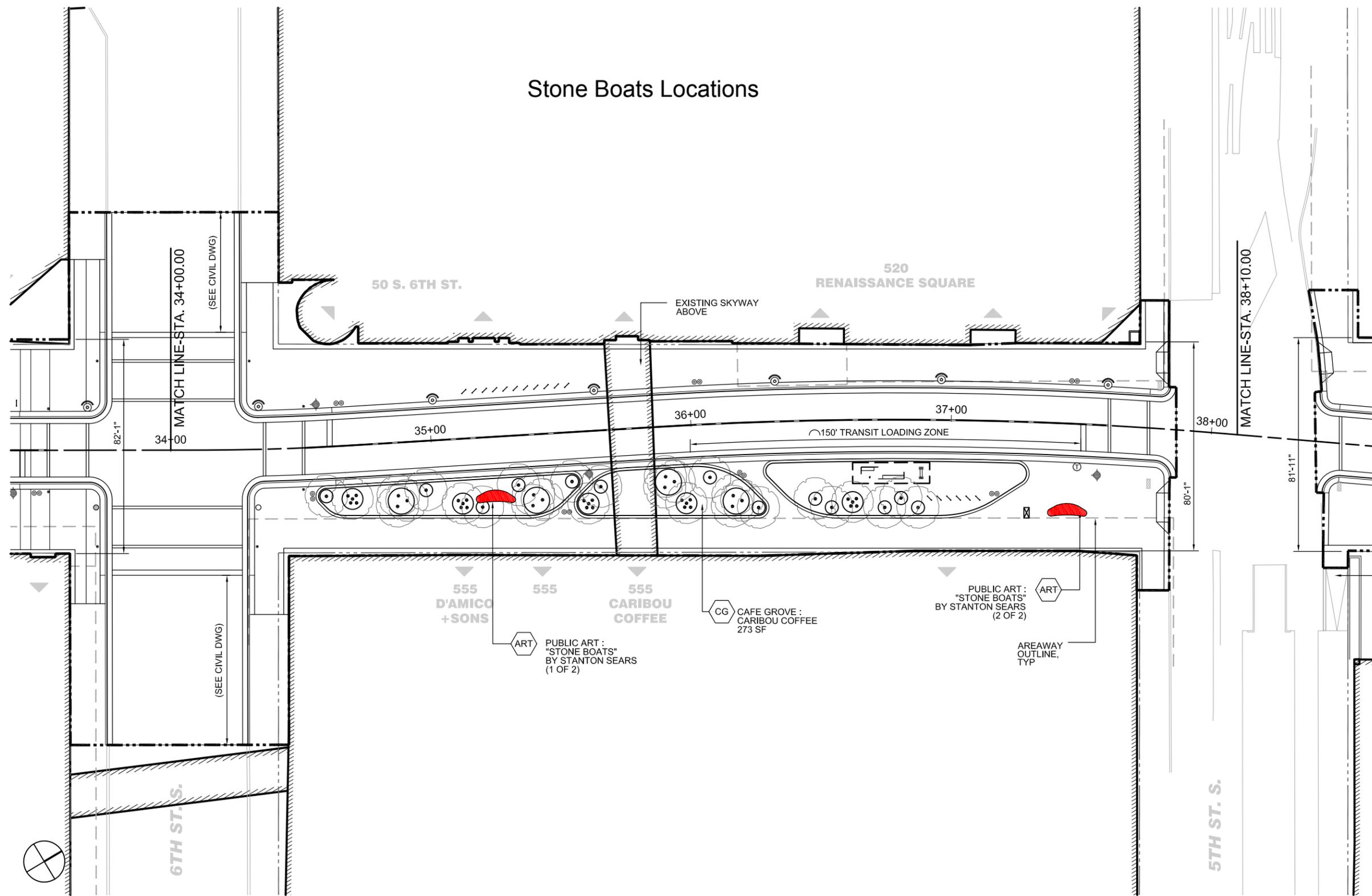
DON'T GET DISCONNECTED

BE

Stone Boat #2



Stone Boats Locations



- NOTES:**
1. SITE PLANS ARE FOR REFERENCE ONLY.
 2. REFER TO C-SERIES FOR CENTERLINE AND CURB ROADWAY ALIGNMENTS.
 3. REFER TO LAYOUT PLANS L-1.1.01 FOR ALL SIDEWALK, CURB AND PLANTER ALIGNMENTS.
 4. REFER TO PAVING MATERIAL, FURNISHING, LIGHTING, SOILS, AND PLANTING PLANS FOR DETAILS AND LOCATIONS OF ALL LANDSCAPE PROJECT LAYERS.
 5. CAFE AND PATIO AREA QUANTITIES ARE FOR REFERENCE ONLY.
 6. PUBLIC ART LOCATIONS ARE APPROXIMATE AND SUBJECT TO REVIEW BY PUBLIC ART ADMINISTRATOR.

LEGEND

- PROJECT LIMIT LINE
- R.O.W LINE
- WOOD # WOODS PLANTING NUMBER
- GROVE # TREE GROVE NUMBER
- ROW # TREE ROW NUMBER
- TRANSIT # TRANSIT STOP NUMBER
- ART PUBLIC ART, N.I.C
- CG CAFE GROVE AREA (SF)
- PT PATIO AREA (SF)
- TRANSIT SHELTER TYP.
- TRAFFIC SIGNAL TYP. (K160)
- TRAFFIC SIGNAL W/ ARM (K300)
- APS TYP.
- \\ BICK RACK
- TRASH / RECYCLE RECEPTACLE
- LIGHT MAST POLE
- ◆ HYDRANT
- ⊕ BUS SIGN
- ⊗ TOTUM
- HYDRANT (EXISTING)

DATE PRINTED = \$Date\$

FILE NAME = FILE NAME.dgn

NO.	DATE	BY	REVISION
△	XX/XX/XX	XXX	-
△			
△			
△			
△			

LANDSCAPE ARCHITECT :
**James Corner
 Field Operations**
 475 Tenth Ave, 9th Floor New York, NY 10018

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 SIGNATURE: _____ LIC. NO. _____
 PRINTED NAME: _____ DATE _____

SITE PLAN _ 6TH ST. TO 5TH ST.

DRAWN **DS**

CHECKED **MB**

DATE **10.23.2015**

NICOLLET MALL REDESIGN

100% CONSTRUCTION DOCUMENTS

All Rights Reserved
 These drawing, concepts, designs and ideas are the property of James Corner Field Operations. They may not be copied, reproduced, disclosed to others or used in connection with any work other than the specified project for which they were prepared, in whole or in part, without the prior written authorization of James Corner Field Operations.

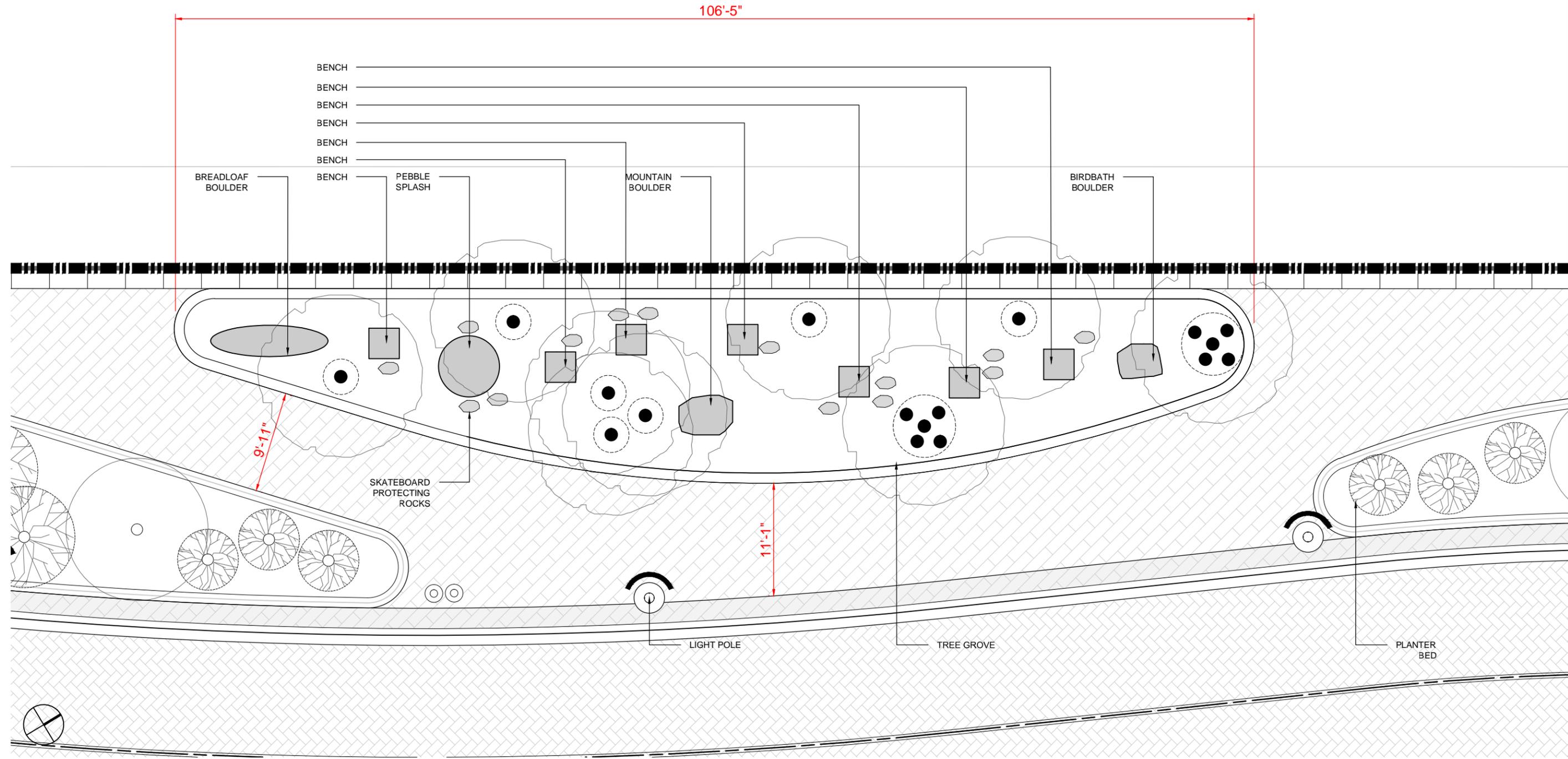
L-1.0.09

SCALE
1" = 40'-0"



Enjoyment of Nature

Enjoyment of Nature Location



DATE PRINTED = \$Date\$

FILE NAME = FILE NAME.dgn

NO.	DATE	BY	REVISION
△	XX/XX/XX	XXX	-
△			
△			
△			
△			

LANDSCAPE ARCHITECT :
**James Corner
 Field Operations**
 475 Tenth Ave, 9th Floor New York, NY 10018

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 SIGNATURE: _____ LIC. NO. _____
 PRINTED NAME: _____ DATE _____

SITE PLAN _ 3RD ST. TO WASH. AVE.

MINNEAPOLIS

DEPARTMENT OF
PUBLIC WORKS

DRAWN	DS
CHECKED	MB
DATE	08.28.2015

NICOLLET MALL REDESIGN

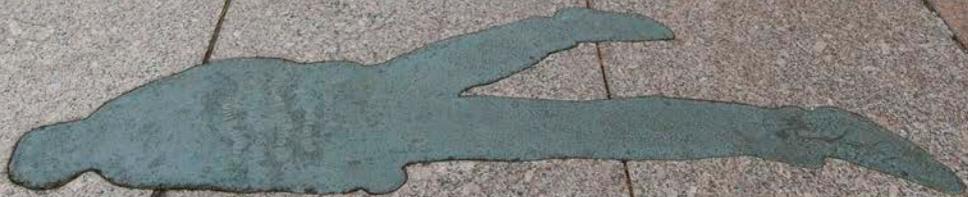
75% CONSTRUCTION DOCUMENTS

All Rights Reserved
 These drawing, concepts, designs and ideas are the property of James Corner Field Operations. They may not be copied, reproduced, disclosed to others or used in connection with any work other than the specified project for which they were prepared, in whole or in part, without the prior written authorization of James Corner Field Operations.

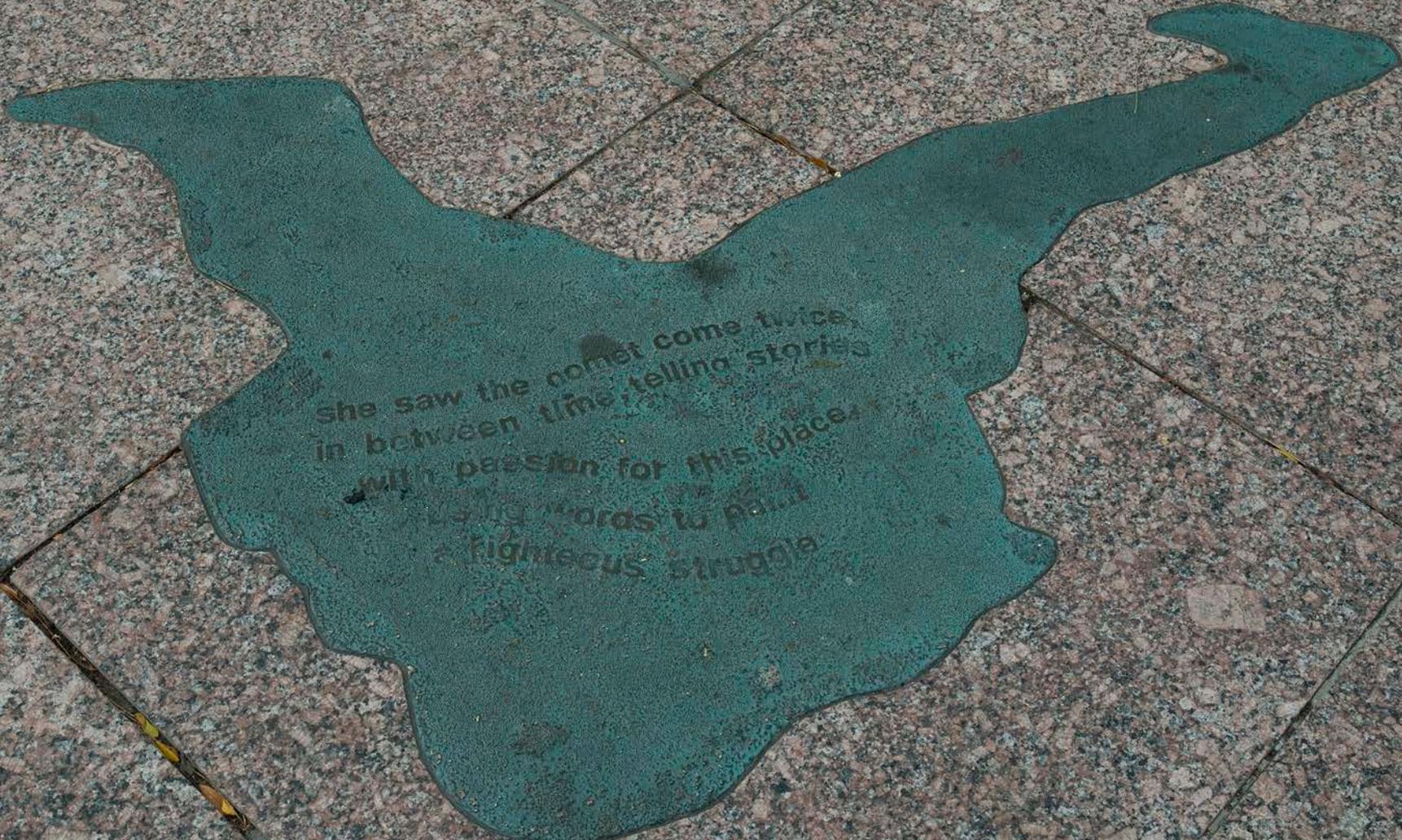
L-1.0.12

SCALE
1" = 40'-0"

Shadows of Spirit Example #1 (7 total)



Shadows of Spirit Example #2 (7 total)



She saw the notes come twice,
in between time, telling stories
with passion for this place,
using words to paint
a righteous struggle

