



REQUEST FOR PROPOSAL

#21269

For

R G Jones Parking Lot Addition

FOR THE CLEVELAND MUNICIPAL SCHOOL DISTRICT
DBA: CLEVELAND METROPOLITAN SCHOOL DISTRICT
BOARD OF EDUCATION, 1111 SUPERIOR AVENUE E, SUITE 1800
CLEVELAND, OHIO 44114

UNDER THE DIRECTION OF THE TRADES DEPARTMENT OF THE BOARD OF EDUCATION OF
THE CLEVELAND METROPOLITAN SCHOOL DISTRICT CUYAHOGA COUNTY, OHIO

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Part I: NOTICE OF REQUEST FOR PROPOSAL #21269

Separate Sealed proposals for the requirement set forth below will be received in the Cashier's Office of the Cleveland Metropolitan School District located at 1111 Superior Avenue E, Cleveland, Ohio 44114, until **1:00 pm current local time on March 8, 2019**. This RFP will not be publicly opened.

R G Jones Parking Lot Addition

Copies of Instructions to Proposers, Specifications, and Drawings may be obtained directly from the District's Webpage. Go to clevelandmetroschools.org/purchasing and click on the RFP number. If you require assistance, please email seletha.thompson@clevelandmetroschools.org or (216) 838-0418.

There will be a Pre-Proposal Conference for this Request for Proposal on **February 8, 2019 at 2:30 PM**. The Pre-Proposal Conference will be at the **Cleveland Metropolitan School District Trades Office, 3840 Ridge Road, Cleveland, Ohio 44144**. Attendance at the Pre-Proposal Conference is encouraged but not mandatory.

All questions and correspondence related to this RFP must be submitted in writing **ONLY** by **12:00 pm on** at the email address given above. All answers to corresponding questions and concerns will be sent directly to those submitting the question. A comprehensive question and answer list will also be posted at clevelandmetroschools.org/purchasing. Any errors and/or omissions reported will be addressed via Addenda. Addenda will be issued no later than February 28, 2019.

No proposal may be withdrawn for at least ninety (90) days after the deadline for submittal.

The Cleveland Metropolitan School District reserves the right to reject any and all Proposals, to waive any and all informalities or irregularities, and to disregard all non-conforming responsive conditional Proposals.

The Cleveland Metropolitan School District does not discriminate in educational programs, activities or employment on the basis of race, color, national origin, sex, age, religion or disability.

The new Uniform Grant Guidance, 2 CFR200 (UGG) will go into effect for Cleveland Metropolitan School District (CMSD) on July 1, 2018 and will apply to awards or funding increments issued on or after this date. Purchases funded by federal grant funds must adhere to regulations found in Uniform Guidance "Super Circular", 2 CFR 200 (UGG), as a condition of receiving funds and to meet annual audit compliance. In an effort to keep policy for all grants consistent, the CMSD will implement the new federal guidelines regarding procurement utilized with federal grants immediately.

Proposers on this work shall be required to comply with all applicable requirements pertaining to fair labor, state and local government.

M. Angela Foraker
Executive Director, Procure to Pay
January 30, 2019

Section I: Instructions to Proposers

Providing Supplemental Transportation Services Including Cabs and Vans

1. All proposals shall be made upon the proposal Form (s) furnished. All information requested in the RFP must be filled in legibly and complete with blue ink signatures, or the Proposal may be considered non-responsive. No oral, telephonic, or telegraphic proposals or modifications will be considered. **Proposals shall be submitted in an opaque envelope, and the RFP name and number must be on the outside envelope of submittals including shipping labels.**
2. Proposals are due at the Cashier's Office of the Cleveland Metropolitan School District, 1111 Superior Avenue E, Cleveland, Ohio 44114, before **1:00 pm. current local time on March 8, 2019.** Proposals will not be opened publicly.
3. All submissions must include **one (1) original, with blue ink signatures, two (2) paper copies of the proposal, and one (1) electronic copy of the proposal on a flash drive.** Vendors who do not comply with this requirement will be notified that they have twenty-four (24) hours in which to comply with this requirement or their Proposal will be disqualified. This applies to copies only.

Proposals that are submitted must include:

- a. Completed Proposal Form(s) including evidence of State certification to perform the work required.
- b. Signed Acknowledgement for Instructions to Proposers
- c. Signed and notarized Proposer's Qualification Form.
- d. Completed Addendum Acknowledgement Form acknowledging all addenda issued (if applicable).
- e. Signed Conflict of Interest Form.
- f. Completed and notarized Non-Collusion Affidavit.
- g. Completed and notarized EOA Compliance Declaration documents.
- h. Completed and notarized Diversity Business Enterprise Participation Forms.
- i. Completed addendum acknowledgement form acknowledging all addenda issued (if applicable).
- j. Properly executed Affidavit and/or Company Board of Directors Resolution authorizing certain person(s) to sign legal documents such as the Proposal Form, Proposer's Qualification Form, etc.

Proposer acknowledges that all material and information responsive to the specifications must be furnished or the proposal may be deemed non-responsive and not considered.

4. No proposal may be withdrawn for at least ninety (90) days after the deadline for submittal.

5. The Cleveland Metropolitan School District reserves the right to reject any and all proposals, to waive any and all informalities or irregularities, and to disregard all non-conforming responsive conditional proposals.
6. Proposer understands and agrees that subsequent to submission of the proposal, any District resolution authorizing the award of a contract or agreement does not vest any contractual rights in the proposer.
7. Proposer understands and agrees that any such District resolution operates only to encumber funds necessary for the projects and does not create a binding contract.
8. Proposer further acknowledges and agrees that any such District resolution may be revoked, at any time prior to execution of a formal, written contract.
9. Proposer acknowledges and agrees that it has no vested contractual right until such time as a purchase order and contract have been issued.
10. Proposer further acknowledges and agrees that execution of a contract and issuance of a purchase order is not a ministerial function, but is a formal requirement for acceptance of the RFP.
11. Proposer must present evidence to the District, upon request, that they are fully competent and have the necessary facilities, equipment and financial resources to perform the work required in the Specifications within the time frame required.
12. Proposer shall not include Ohio Sales tax in the price quoted. The Cleveland Metropolitan School District will provide a tax exempt certificate to the proposer upon request.
13. **SECURITY:** Vendor's workmen, foremen, other personnel, and subcontractors who will be working on District property will be required to meet Cleveland Metropolitan School District security requirements. Vendor must issue personnel I.D. badges. Any worker not complying with CMSD security requirements will immediately be ordered off the project and without prejudice or recourse to CMSD.
 - Vendor agrees to successfully complete background checks on all of its employees, agents, and subcontractors who provide services under this Agreement to CMSD facilities. Vendor agrees to warrant that it will not at any time hire or utilize any individual to provide services under this Agreement on CMSD premises where such person has been convicted of, or pleaded guilty to, any criminal offense enumerated in O.R.C. 3319.39(B) or equivalent provisions under the laws of another state or the Federal Government.
14. **INSURANCE:** The successful company, their subcontractors and suppliers of labor and/or materials for this project on behalf of the Cleveland Metropolitan School District, including organizations having personnel, equipment, and vehicles on District property, shall provide evidence of insurance as follows:

- | | |
|---|---|
| a. Commercial General Liability: | Including limited contractual liability
\$2,000,000.00 Limit of Liability
(Per occurrence) |
| b. Automobile Liability: | Including non-owned and hired
\$2,000,000.00 Limit of Liability
(per occurrence) |
| c. Workers Compensation: | Workers compensation and
employer's insurance to the full extent
as required by applicable Law |

This requirement must be fulfilled by the successful vendor providing the Purchasing Office of the CMSD with a current Certificate of Insurance (standard ACORD form), showing the Board of Education of the Cleveland Municipal School District as an additional insured (Certificate Holder does not constitute being an additional insured), within five (5) days of Notice of Intent to Award Agreement. The certificates of insurance shall contain a provision that the policy or policies will not be canceled without thirty (30) days' prior written notice to the District.

The required insurance must be provided by a company licensed by the State of Ohio, which company must be financially acceptable to the Administration of the Cleveland Municipal School District

The School District is not liable for vandalism which results in damage(s) to the property or vehicles of the Vendor. The school District will not reimburse for private insurance deductibles for such vandalism.

Vandalism damage is defined as damage resulting from criminal conduct for which an individual may (but not necessarily be processed under the Ohio Revised Code.

15. **DIVERSITY BUSINESS GOAL:** The Diversity Business and Vendor Contract Compliance Programs shall make every good faith effort to ensure that certified diversity business enterprises in the Cleveland Metropolitan School's relevant geographic market area shall be afforded the maximum opportunity to compete for contracts, services, and purchases. The general goals for diversity business participation are: 15% for services, 20% for goods and supplies, and 30% for maintenance, construction, and repair.

Non-diversity vendors will have their diversity business participation counted toward their goal attainment only with minority vendors who are certified and demonstrate previous experience in the respective business classification of the prime contractor. Only direct participation in the subcontract will be counted toward diversity business enterprise goal attainment.

Vendors shall refer to Section V of this RFP for further information and requirements on the District's diversity goals.

The diversity business goal for this RFP is: 30% for maintenance, construction/repair

16. **REQUESTS FOR CLARIFICATIONS:** Questions regarding interpretation of the content of this RFP must be directed to: Seletha Thompson, email: seletha.thompson@clevelandmetroschools.org. Answers to any questions shall be in writing and shall be sent to all firms who are on record with the District as having received a

copy of this RFP. It is therefore imperative that firms provide full and accurate contact information to the District. The name of the party submitting the question will not be identified in the answers. Firms considering responding to this RFP are strictly prohibited from communicating with any member of District's staff or representatives of the Owner except as set forth in this section.

17. **EVALUATION CRITERIA.** Evaluation of the proposal will be based upon several factors including, but not limited to: competence to perform the required services as indicated by the training, education and experience of the firm's personnel, especially the training, education and experience of the employees who would be assigned to perform the services; ability in terms of workload and availability of qualified personnel, equipment and facilities to perform the required services competently and expeditiously; past performance as reflected by the evaluations of previous clients with respect to factors such as control of costs, quality of work and meeting of deadlines; and other similar factors. The District is not required to select the firm that submits the lowest cost proposal for providing the services. In the event the District is unable to negotiate a satisfactory contract with the selected firm, the District may terminate negotiations with that firm and enter into negotiations with another firm submitting that submitted a proposal.
18. The Vendor authorizes the District and its representatives to contact the owners and professionals on projects on which the Vendor has worked, and Vendor authorizes such owners and professionals to provide the District with a candid evaluation of the Vendor's performance. By submitting its proposal, the Vendor agrees that if it or any person, directly or indirectly, on its behalf or for its benefit brings an action against any of such owners or professional or the employees of any of them as a result of or related to such candid evaluation, the Vendor will indemnify and hold harmless such owners and professionals and the employees of any of them from any claims whether or not proven that are part of or are related to such action and from all legal fees and expenses incurred by any of them arising out of or related to such legal action. This obligation is expressly intended for the benefit of such owners and professionals, and the employees of each of them.
19. The new Uniform Grant Guidance, 2 CFR200 (UGG) will go into effect for Cleveland Metropolitan School District (CMSD) on July 1, 2018 and will apply to awards or funding increments issued on or after this date. Purchases funded by federal grant funds must adhere to regulations found in Uniform Guidance "Super Circular", 2 CFR 200 (UGG), as a condition of receiving funds and to meet annual audit compliance. In an effort to keep policy for all grants consistent, the CMSD will implement the new federal guidelines regarding procurement utilized with federal grants immediately.

Section II: Proposal Requirements & Response Components & Structure

The specifications for **RFP #21269** are described below. Vendors are required to provide the information below as well as complete the Required Purchasing Division documents located in Appendix A.

To ensure that all Proposals are evaluated in an equivalent fashion, Bidders must submit a Proposal that corresponds to the sequence and format outlined below. The Bidder should ensure that its Proposal clearly explains all issues and questions addressed in this Section. In responding, it is at the discretion of the Bidder to expand upon topics.

Any proposal not providing the required information, or not conforming to the format specified in this RFP, may be disqualified on that basis. Incomplete proposals or proposals submitted after the submission deadline may not be considered.

EACH PROPOSAL SHALL CONTAIN THE FOLLOWING SECTIONS:

- A. Transmittal Cover Letter
- B. Company Information / Executive Summary
- C. Experiences and References
- D. Business Stability
- E. Organization and Staff Capacity
- F. Security
- G. Service Delivery Plan
- H. Quality Assurance Plan
- I. Proof of Insurability
- J. List of Exceptions
- K. Bid Pricing
- L. All District Related Forms
 - a. Taxpayer ID
 - b. No Proposal Form (if applicable)
 - c. Certificate of Debarment
 - d. Conflict of Interest
 - e. Proposer Qualification Form
 - f. Non-Collusion Affidavit
 - g. DBE Forms- A, B, C, D, E, F & G
 - h. EOA Contractual Declaration Forms 1 & 2
 - i. Employment Data Form
 - j. Addendum Acknowledgement
 - k. References

Section A: Transmittal Cover Letter

Prepare a letter transmitting the proposal on business letterhead. The letter should identify the business name, phone number, and business web address along with the name, phone number and email address of the key contact person. The letter must have the signature of a person with

authority to obligate the business. The transmittal letter shall also contain a statement that the proposal is a firm offer for a ninety (90) day period.

Section B: Company Information / Executive Summary

Provide information about your company. Include contact information and any other relevant information about the firm's history, structure, organizational metrics, and qualifications for fulfilling CMSD's requirements

Section C: Experiences and References

To demonstrate the company's experience with similar schools or larger schools, and experiences in the education sector, include:

- A. Summary Description of company and relevant experiences, as well as that of any strategic partners, if applicable.
- B. A list of reference clients served within the past five years (preferably schools); please include contact information (name, address, email, phone number).

Section D: Business Stability

To provide documentation of sufficient financial soundness and capacity to provide the services and carry out the contractor's requirements and obligations under this RFP and the subsequent contract, please provide:

- A. A company financial report for the most recent fiscal year, or explanation of unavailability and equivalent alternative financial documentation.
- B. Documentation of company legal operating status. Provide copies of all relevant certificates or disclosures.

Section E: Organization and Staff Capacity

To demonstrate how personnel will manage, supervise and perform the services and communicate with CMSD effectively to maintain a high standard of services, please include:

- A. Description of experience and qualifications of key personnel providing the services with clear explanation of personnel roles and responsibilities. Include personnel responsible for work order completion, hiring/training, employee management, quality assurance, issue resolution/customer service, billing, compliance and documentation. For all personnel, describe planned level of effort, anticipated duration of involvement and on-site availability, and tenure with the contractor.
- B. Description of management and reporting relationships. Provide detailed organizational chart.

Section F: Security

Information about the firm's policies, practices, and standards for maintaining the confidentiality and integrity of client's data, intellectual property, and trade secrets.

Section G: Service Delivery Plan

To demonstrate how the bidder will effectively perform the services specified in this RFP, while demonstrating understanding of CMSD's mission, values, and activities as a charter school network, please include:

- A. Description of how the bidder will provide all aspects of each service as specified; include detailed plan explaining how bidder will perform and document specific routine services with reference to the service requirements specified in this RFP.
- B. Bidder's staffing model (i.e., #of FTEs, shifts, etc.), staff allocation and scheduling of services provision; explain how staffing and scheduling will align with CMSD's schedule.
- C. If applicable, description of any additional services that will be provided at cost, by the contractor above and beyond the minimum basic services specified in this RFP.

Section H: Quality Assurance Plan

To demonstrate how the bidder will ensure quality of service, please include:

- A. Description of how the bidder will monitor, measure and ensure service quality, safety and reliability; include detail on bidder's methods/program quality assurance (e.g. work standards, inspections, resolution of unaccepted table work, staff timesheets, safety issues log, other relevant systems).
- B. Bidder's methods to document and ensure timeliness and responsiveness in addressing urgent, non-urgent, safety-related and/or non-safety related items as specified in this RFP and is identified at any time by CMSD.
- C. Bidder's methods to ensure and document required safety practices (e.g. Safety Plan).
- D. Descriptions of how the bidder will keep CMSD leadership and relevant staff informed of service quality, and maintain high customer service standards.

Section I: Proof of Insurability

To demonstrate contractor's ability of insurance obligations, please provide proof of insurance in the amounts outlined in the Insurance Requirements.

Section J: List of Exceptions

If applicable, submit a detailed list setting forth any requested exceptions, including explanations, to the RFP (i.e., of specific services that will not be provided by the bidder, and justifying reasons).

Section K: Bid Pricing

Provide firm bid pricing information with a breakdown of specific costs for services outlined in this RFP.

Section L: All District Related Forms

There are a number of REQUIRED forms identified in the RFP that must be completed by the service provider. These forms must be completed, signed as described in the text and included in the service provider response. These forms include:

- Taxpayer ID
- No Proposal Form (if applicable)
- Certificate of Debarment
- Conflict of Interest
- Proposer Qualification Form
- Non-Collusion Affidavit
- DBE Forms- A, B, C, D, E, F & G
- EOA Contractual Declaration Forms 1 &2
- Employment Data Form
- Addendum Acknowledgement
- References

Part II: DISTRICT RELATED FORMS

Required Purchasing Division Documents and Instructions

Section I: Addendum Acknowledgement Form for RFP #21269

Having read and examined the Request for Proposal Documents, including the specifications, prepared by the Cleveland Metropolitan School District for the above-referenced Project, and the following Addenda:

Addendum Number

Date of Receipt

Proposer: _____

The undersigned Vendor proposes to perform all work for the applicable contract, in accordance with the contract document for the proposed sums.

Signature: _____ Date: _____

Section II: Acknowledgement

(Name of Company)

Hereby acknowledges receipt of this Request for proposal and the reading of these Instructions to Proposers. We further agree that if awarded the contract, we will submit the required Performance Bond and Insurance Certificate within five (5) days of written notification that the District has adopted a resolution authorizing the encumbrance of funds for the project. We understand, however, that a formal written contract, similar to the one contained in the RFP Package, will need to be executed and purchase order issued by the District before we have any vested contractual rights. Wherever, we agree to commence the work as required herein and timely complete the project pursuant to the Specifications by the date stated in the Notice to Proceed.

By: _____
(Name and Title)

Date: _____

Section III: Vendor Request Form

VENDOR INFORMATION

VENDOR NUMBER
(IF APPLICABLE)

VENDOR NAME

ADDRESS LINE 1

ADDRESS LINE 2

CITY

STATE

ZIP

TELEPHONE NO.

FAX NO

Area Code *Number*

Area Code *Number*

E-MAIL ADDRESS

PRIMARY CONTACT PERSON

REMIT TO (IF DIFFERENT FROM ABOVE)

VENDOR NAME

ADDRESS LINE 1

ADDRESS LINE 2

CITY

STATE

ZIP

TELEPHONE NO.

FAX NO

(Area Code) *Number*

(Area Code) *Number*

PRIMARY SERVICE, PRODUCT, OR SPECIALTY:

-

NOTE: VENDOR NAME AND TAX ID NUMBER MUST BE AS FILED WITH THE INTERNAL REVENUE SERVICE.

PLEASE INDICATE WHERE APPLICABLE

DIVERSITY BUSINESS ENTERPRISE:

YES

☐

NO

☐

MINORITY BUSINESS ENTERPRISE:

YES

☐

NO

☐

FEMALE BUSINESS ENTERPRISE:

YES

☐

NO

☐

Section IV: Taxpayer ID Form

Form W-9 (Rev. October 2018) Department of the Treasury Internal Revenue Service	Request for Taxpayer Identification Number and Certification ▶ Go to www.irs.gov/FormW9 for instructions and the latest information.	Give Form to the requester. Do not send to the IRS.
1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.		
2 Business name/disregarded entity name, if different from above		
See Specific instructions on page 3. Print or type.	3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes.	
	<div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Individual/sole proprietor or single-member LLC <input type="checkbox"/> Limited liability company. Enter the tax classification (C-C corporation, S-S corporation, P-Partnership) ▶ _____ <small>Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.</small> <input type="checkbox"/> Other (see instructions) ▶ _____ </div> <div> <input type="checkbox"/> C Corporation <input type="checkbox"/> S Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate </div> </div>	
	4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any) _____ Exemption from FATCA reporting code (if any) _____ <small>(Applies to accounts maintained outside the U.S.)</small>	
	5 Address (number, street, and apt. or suite no.) See instructions.	
6 City, state, and ZIP code		Requester's name and address (optional)
7 List account number(s) here (optional)		

Part I Taxpayer Identification Number (TIN)
 Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.
Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number <div style="display: flex; justify-content: space-between;"> <div style="border-bottom: 1px solid black; width: 30%;"></div> <div style="border-bottom: 1px solid black; width: 30%;"></div> <div style="border-bottom: 1px solid black; width: 30%;"></div> </div>	or Employer identification number <div style="display: flex; justify-content: space-between;"> <div style="border-bottom: 1px solid black; width: 30%;"></div> <div style="border-bottom: 1px solid black; width: 30%;"></div> <div style="border-bottom: 1px solid black; width: 30%;"></div> </div>
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Part II Certification
 Under penalties of perjury, I certify that:
 1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
 2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
 3. I am a U.S. citizen or other U.S. person (defined below); and
 4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.
Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here Signature of U.S. person ▶ _____	Date ▶ _____
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General Instructions
 Section references are to the Internal Revenue Code unless otherwise noted.
Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to www.irs.gov/FormW9.
Purpose of Form
 An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following:

- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)
 Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

 If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See *What is backup withholding*, later.

Cat. No. 10231X

Section V: No Proposal Form

RFP #21269

This form must be completed only if vendor is not submitting a proposal

To all prospective bidders/proposers:

Each company or person receiving this package has at some point in time requested to be placed on the proposal list of the Cleveland Metropolitan School District for this product and/or service.

It is the intent of the District to update this list subsequent to the contract cycle. Please note the following and take action accordingly.

If you are making a bid/proposal this cycle, disregard the remainder of this letter. Your name will remain on the active proposer list.

_____ (1) If you are not making a bid/proposal this cycle, but want to remain on _____ the active proposer's list for the future RFPs, place a check mark in the box to the left. Complete the name and address section below and return this _____ letter to Purchasing at the address below.

_____ (2) If you do not wish to remain on the active proposer's list, place a check mark to the left. Complete the name and address section below and return this letter to Purchasing at the address below.

Name of Company: _____

Company Representative: _____

Address: _____

City, State: _____ Zip Code: _____

Telephone Number: _____

Fax Number: _____

Date: _____

Section VI: Certificate of Debarment



Certification Regarding Debarment, Suspension, and Other Responsibility Matters Primary Covered Transactions

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, 13 CFR Part 145. The regulations were published as Part VII of the May 26, 1988 *Federal Register* (pages 19160-19211). Copies of the regulations are available from local offices of the U.S. Small Business Administration.

(BEFORE COMPLETING CERTIFICATION, READ INSTRUCTIONS ON REVERSE)

- (1) The prospective primary participant certifies to the best of its knowledge and belief that it and its principals:
 - (a) Are not presently debarred, suspended, proposed for disbarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
 - (b) Have not within a three-year period preceding this application been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
 - (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
 - (d) Have not within a three-year period preceding this application had one or more public transactions (Federal, State, or local) terminated for cause or default.
- (2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective primary participant shall attach an explanation to this proposal.

Business Name _____

Date _____

By _____
Name and Title of Authorized Representative

Signature of Authorized Representative

Section VI: Certificate of Debarment Pg. 2

- 2 -

INSTRUCTIONS FOR CERTIFICATION

1. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.
2. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such person from participation in this transaction.
3. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.
4. The prospective primary participant shall provide immediate written notice to the department or agency to which this proposal is submitted if at any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
5. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations (13 CFR Part 145).
6. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.
7. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transactions," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
8. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the ineligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.
9. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
10. Except for transactions authorized under paragraph 6 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

Section VII: Conflict of Interest Form

Statement of Potential Conflicts of Interest

Vendor Name:	Primary Contact:
Address 1:	Telephone #:
Address 2:	Fax #:
City:	Email:
State, Zip:	Website:

Cleveland Metropolitan School District (CMSD) adheres to Ohio Ethics Law and strictly follows the opinion of the Ohio Ethics Commission. As such, each vendor is requested to submit this statement declaring any potential conflicts of interest in doing business with the District. Please answer the following two questions providing all requested information.

1. Are any current Cleveland Metropolitan School District (CMSD) employees, Cleveland Board of Education members, or any of their immediate family members, also members of the vendor's board of directors, hold any officer position with the vendor, or own any shares of any stock issued by the vendor?

Yes_____ No_____

If **Yes**, and if the CMSD employee, CMSD board member, or immediately family member is a member of the vendor's board of directors or holds an office with the vendor, please state the person's name and position with the vendor.

Name:_____

Position:_____

If **Yes**, and if the CMSD employee, CMSD board member, or immediate family member owns share of any stock in the vendor organization or company, state the percentage of all outstanding company shares owned by the CMSD employee or board member.

_____%

2. Are any current CMSD employees, CMSD board members, or any immediate family members also employees of the vendor?

Yes_____ No_____

If **Yes**, please state the person's name and provide a description of their job duties for the provider:

Name:_____

Job Duties:_____

If **Yes**, please describe the contact that the vendor will have with the CMSD employee or CMSD board member in the course of providing services to the District:

CERTIFICATION

I do hereby certify that the foregoing statements are true and accurate, and that my signature below attests to the authenticity of my identity as the person actually signing this form. This document is not a contract. In order for a binding Agreement to exist, a signed Agreement will be required prior to any legally binding commitment by the District.

NOTARIZED STATEMENT

_____ being duly sworn and deposes says

That he/she is the _____ of
(title)

_____, and answers to all the
(organization)

foregoing questions and all statements therein contained are true and correct.

(signature)

Subscribed and sworn before me this ____ day of _____, 20____

Notary Public: _____

My commission expires: _____

Section VIII: Proposer Qualifications Form

Proposer must answer all questions or attach a written explanation for each question.

PROPOSER NAME: _____

ADDRESS: _____

CITY; STATE: _____ ZIP: _____

CONTACT PERSON: _____

TITLE: _____

TELEPHONE: () _____ TOLL FREE: () _____

TAXPAYER IDENTIFICATION NUMBER: _____

1. What type of organization? (i.e. corporation, partnership, etc.)
2. How many years has your organization been in business?
3. How many years has your organization been in business under its current name?
4. List any other aliases your organization has utilized in the last two years and the form of Business
5. If you are currently a corporation, list the following:
 - a. State of incorporation
 - b. Date of incorporation
 - c. President's name
 - d. Secretary's name
 - e. Treasurer's name
 - f. Statutory agent's name

- g. Name of shareholders, if less than 10
 - h. Principal place of doing business
6. If you are currently in a partnership, list the following:
- a. Name and address of all general and limited partners.
 - b. Original name and date of organization's inception
7. If you are neither a corporation nor a partnership, please describe your organization and list principals.
8. Are you legally qualified to do business in the State of Ohio?
9. Are you legally qualified to do business in Cuyahoga County and licensed by the City of Cleveland?
10. Has your organization ever been (i) declared by a customer to be in default under a contractor and/or (ii) sued by a customer for failure to completely a contract or properly perform services in a timely manner? If yes, please state where, when, and why.
11. Has your organization ever been cited by a local, county, state, or federal authority for violation of a regulation or statute or failing to timely complete a contract in accordance with specifications? If yes, please state date, agency, and final disposition.
12. Has your organization ever filed for bankruptcy? If yes, please state where, when and why?
13. On a separate sheet, list the major customers for whom your organization has provided this type of equipment or service in the past five years. Include owner's name and type of work performed.
14. Has your organization ever been sued by a supplier for failure to timely pay for materials or equipment provided? If yes, please provide details.
15. What is the dollar limit of your firm's General (CLS) Liability Insurance?

Name of insuring company:_____

Policy number:_____

16. What is the dollar limit of your firm's Automotive Liability Insurance?

Owned vehicles_____

Non-Owned vehicles_____

Name of insuring company_____

Policy number_____

17. List the name and address of every person having an interest in this RFP.

18. Has any federal, state or local government entity ever cited or taken any action against your organization or any of its principals for failure to pay or remit any taxes including but not limited to income, withholding, sales, franchise, or personal property taxes? If yes, please give name of agency, date and amount of taxes overdue and resolution of the issue.

19. Is your organization and its' principals current in payment of personal property taxes?

20. The prospective lower tier participant certifies, by submission of this RFP, that neither it nor its principals is presently debarred, suspended, proposed, for debarment or suspension, declared ineligible, or voluntarily excluded from participation in this transaction by any State and/or Federal Department or Agency.

21. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participants shall attach an explanation to this RFP.

Notarized Statement

_____ being duly sworn and deposes says

that he/she is the _____ of
(title)

_____, and answers to all the
(organization)

foregoing questions and all statements therein contained are true and correct.

(signature)

Subscribed and sworn before me this _____ day of _____, 20____

Notary Public: _____

My commission expires: _____

Section IX: State of Ohio Insurance

Sample: State Of Ohio Insurance

S A M P L E

STATE OF OHIO

DEPARTMENT OF INSURANCE

CERTIFICATE OF COMPLIANCE

As Superintendent of Insurance of the State of Ohio, I

do hereby certify that _____

a corporation located at _____

in the State of _____

with the laws of this state applicable to it, and is

authorized to transact in this state its appropriate

business of insurance as prescribed under Section 3941.02.

of Ohio, including Fidelity Insurance.

From _____ 20____, until _____

In witness whereof, I have hereunto
subscribed my name and caused my
seal to be affixed at Columbus, Ohio
this day and date.

Superintendent of Insurance of Ohio

Section X: Sample Certificate of Liability Insurance

Sample: Acord Certificate of Insurance

		CERTIFICATE OF LIABILITY INSURANCE		DATE (MM/DD/YYYY)										
THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.														
IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).														
PRODUCER	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">CONTACT NAME:</td> </tr> <tr> <td>PHONE (A/C, No, Ext):</td> <td>FAX (A/C, No):</td> </tr> <tr> <td colspan="2">E-MAIL ADDRESS:</td> </tr> <tr> <td colspan="2" style="text-align: center;">INSURER(S) AFFORDING COVERAGE</td> </tr> <tr> <td colspan="2" style="text-align: right;">NAIC #</td> </tr> </table>				CONTACT NAME:		PHONE (A/C, No, Ext):	FAX (A/C, No):	E-MAIL ADDRESS:		INSURER(S) AFFORDING COVERAGE		NAIC #	
CONTACT NAME:														
PHONE (A/C, No, Ext):	FAX (A/C, No):													
E-MAIL ADDRESS:														
INSURER(S) AFFORDING COVERAGE														
NAIC #														
INSURED	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>INSURER A:</td></tr> <tr><td>INSURER B:</td></tr> <tr><td>INSURER C:</td></tr> <tr><td>INSURER D:</td></tr> <tr><td>INSURER E:</td></tr> <tr><td>INSURER F:</td></tr> </table>				INSURER A:	INSURER B:	INSURER C:	INSURER D:	INSURER E:	INSURER F:				
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COVERAGES	CERTIFICATE NUMBER:	REVISION NUMBER:												
THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.														
INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR VVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS							
	GENERAL LIABILITY <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PROJECT <input type="checkbox"/> LOC						EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMP/OP AGG \$ \$							
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS						COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$							
	UMBRELLA LIAB <input type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input type="checkbox"/> RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$ \$							
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICE/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N	N/A				WC STATUTORY LIMITS <input type="checkbox"/> OTHER <input type="checkbox"/> E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$							
DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)														
CERTIFICATE HOLDER				CANCELLATION										
				SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.										
				AUTHORIZED REPRESENTATIVE										

ACORD 25 (2010/05)

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Section XI: Non-Collusion Affidavit

This Affidavit must be executed and shall accompany the proposal in order for the proposal to be considered.

NON-COLLUSION AFFIDAVIT
State of Ohio, Cuyahoga County

_____, being first duly sworn, deposes and says that

he/she is _____ of _____

of the party making the foregoing proposal; that such proposal is genuine and not collusive or sham; that said proposer has not colluded, conspired, connived, or agreed, directly or indirectly, with any proposer or person, to put in a sham proposal, or that such other person shall refrain from proposing, and has not in any manner, directly or indirectly sought by agreement or collusion, or communication or conference, with any person, to fix the proposal price of affiant or any other proposer, to fix any overhead, profit or cost element of said proposal price, or of that of any proposer, or to secure any advantage against the Board of Education of the Cleveland Metropolitan School District, or any person or persons interested in the proposal; and that all statements contained in said proposal are true; and further that such proposer has not, directly or indirectly, submitted this proposal, or the contents thereof, or divulged information or data relative thereto to any Association or to any member or agent thereof.

Affiant

Sworn to and subscribed before me this ____ day of _____, 20__.

Notary Public in and for Cuyahoga County, Ohio

My commission expires: _____

Section XII: Diversity Business Enterprise Program and Participation Forms

PROGRAM OVERVIEW

It is the goal of the Diversity Business Enterprise (DBE) program to ensure the firms owned and/or controlled by minorities and women have the opportunity to compete for any expenditure of funds including but not limited to contracts, lease purchase, requisitions, and all forms of equipment, work services, materials, construction, etc.

The DBE program shall make every good faith effort to ensure that certified DBE's in the relevant Cleveland Municipal School District geographic market have the maximum opportunity to proposal for contracts. The Cleveland Municipal School District geographic market is Cuyahoga, Summit, Lake, and Lorain counties.

The District has established goals for DBE participation in all contracts that it awards. The goals range from 15 to 30 percent and vary by the type of contract awarded:

- 15% Service Contracts
- 20% Goods and Supplies
- 30% Maintenance/Construction Repair

A Diversity Business Enterprise encompasses Minority Business Enterprises (MBEs) and Female Business Enterprises (FBEs)

A DBE is an enterprise in which minorities, African Americans, Native Americans, Hispanic or Latin Americans, Asian Pacific Islander Americans, and/or women own at least 51% of the shares of stock or controlling interest.

A FBE is a female-owned enterprise with at least 51% of the shares of stock or controlling interest, which is held by female.

A company may be in compliance with the District's DBE program although the applicable numerical goal is not met if a company makes a good faith commitment to comply with DBE regulations. The Purchasing Director determines whether a company has made a good faith commitment.

DBE requirements under certain circumstances can be waived by the district with convincing proof of good faith efforts.

TERMS AND CONDITIONS OF NOTICE AND REQUIREMENTS TO ENSURE DIVERSITY BUSINESS ENTERPRISE (DBE) OPPORTUNITY

Definition of DBE: A Diversity Business Enterprise (DBE)

"Small Diversity business concern" means a small business concern that is at least fifty-one (51) percent unconditionally owned by one or more individuals who are both socially and economically diverse, or a publicly owned business that has at least fifty-one (51) percent of its stock unconditionally owned by one or more socially and economically diverse individuals and that has its management and daily business controlled by one or more such individuals. This term also means a small business concern that is at least

fifty-one (51) percent unconditionally owned by an economically diverse Indian tribe or Native Hawaiian Organization, or a publicly owned business that has at least fifty-one (51) percent of its stock unconditionally owned by one of these entities, that has its management and daily business controlled by members of an economically diverse Indian tribe or Native Hawaiian organization.

1. "Socially diverse individuals" means individuals who have been subjected to racial or ethnic prejudice or culture bias because of their identity as a member of a group without regard to their qualities as individuals.
2. "Economically diverse individuals" means socially diverse individuals whose ability to compete in the free enterprise system is impaired due to diminished opportunities to obtain capital and credit as compared to others in the same line of business who are not socially diverse. Individuals who certify that they are members of named groups (African Americans, Hispanic Americans or Latin Americans, Native Americans, Asian-Pacific Islander Americans, Subcontinent Asian Americans) are to be considered socially and economically diverse.

Definition of FBE: Female Business Enterprise (FBE)

"Female-owned small business concern" means a small business concern:

1. Which is at least fifty-one (51) percent owned by one or more women; or, in the case of any publicly owned business, at least fifty-one (51) percent of the stock of which is owned by one or more women and;
2. Whose management and daily business operations are controlled by one or more woman.

TERMS

1. DBE participation will be counted toward meeting the goals outlined in the notice as follows:
 - a. The total dollar value of a correct contract or subcontractor indirect subcontract awarded toward a certified DBE will be counted toward the applicable goal.
 - b. In the case of a joint venture, certified by the Cleveland Municipal School District, the portion of the total dollar value of the contract equal to the percentage of the ownership and control of the DBE partner in the joint vendor will be counted toward the applicable goal. (PLEASE RETURN DBE FORM E)
 - c. Only expenditures to DBE that perform a commercially useful function in the work of a contract or subcontract or indirect subcontract will be counted toward DBE goals. A DBE is considered to perform a commercially useful function when it is responsible for execution of a distinct element of work of a contract or subcontract and carries out its responsibilities by actually performing, managing, and supervising the work involved. If a DBE contractor subcontracts a significantly greater portion of the work of the contract than would be expected on the basis of normal industry practices, the DBE is presumed not to be performing a commercially useful function. The DBE may present evidence to rebut this presumption.
 - d. The total dollar value of materials and supplies obtained from DBE suppliers and manufacturers will be counted toward DBE goals if the DBE assumes the actual and contractual responsibility for the provision of the materials and supplies.

2. A proposer who fails or refuses to complete and return this Notice may be deemed a non-responsive proposer.
3. The contractor's goals as set forth in this Notice shall express the contractor's commitment to the percentage of DBE utilization during the term of this contract. The contract shall be deemed to have met its commitment for DBE utilization if the DBE utilization rate of the contractor meets the goals established by this Notice.
4. The contractor must receive the approval of the District before making substitutions for any subcontractors listed in the Notice. Substitution of DBE is not allowed unless the contractor receives District approval.
5. The contractor's commitment to a specific goal is to meet the DBE objectives and is not INTENDED and shall not be used to discriminate against any qualified company or group or companies.
6. The contractor's commitment to a specific goal for DBE utilization as required by this Notice shall constitute a commitment to make every good faith effort to meet such goal by a subcontracting to or undertaking to joint venture with DBE firms. If the contractor fails to meet the goal, it will carry the burden of furnishing sufficient documentation as part of the proposal response of its good faith efforts to justify a grant of relief from the goals set forth in this Notice. Such justification will take the forms of a detailed report which will document at least the following information:
 - a. Attendance at the pre-proposal meeting, if any, scheduled by the District to inform DBE's of Subcontracting opportunities under a given solicitation.
 - b. Advertisement in general circulation media, trade association publications, and minority-focus media for at least twenty (20) days before bids or proposals are due. If twenty (20) days are not available, publication for a shorter reasonable time is acceptable.
 - c. Written notification to DBE that their interest in the contract is solicited, and follow-up contact to determine whether the DBE's were interested.
 - d. Efforts made to select portions of the proposed work to be performed by DBE in order to increase the likelihood of achieving the stated goals.
 - e. Efforts to negotiate with DBE for specific sub-proposal, including at a minimum:
 - i. The names, addresses, and telephone numbers of DBE's that were contacted.
 - ii. A description of the information provided to DBE regarding the plans and specifications for portion of the work to be performed; and
 - iii. A statement of why additional agreements with DBE were not reached.
 - iv. Completion of (Form E) if DBE's are not involved in the RFP.
 - f. Concerning each DBE the supplier/contractor contacted but rejected as unqualified, the reasons for the supplier's/contractor's conclusion.
 - g. Efforts made to help the DBE's contacted that needed assistance in obtaining required bonding, lines of credit, or insurance.
 - h. Use of the services of minority community organizations, minority contractor's groups,

governmental minority business assistance offices, and other organizations that assist in the recruitment and placement of DBE's.

7. Suppliers/contractors that fail to meet DBE goals and fail to demonstrate sufficient good faith efforts are not eligible for contract awarded.
8. The District, through its Diversity Officer will review the contractor's minority business enterprise involvement efforts during performance of this contract. Such review will include, but not be limited to, contractor's quarterly statement of income from the District and what portion of said income went to the DBE enterprise(s) as evidenced by affirmation of the DBE enterprise(s) which the contractor hereby agrees to supply each quarter during the term of its contract with the District. If the contractor meets its goal or if the contractor demonstrates that every reasonable effort has been made to meet its goal, the contractor shall be presume to be in compliance. Where the Diversity Officer finds that the contractor shall be presume to be in compliance. Where the Diversity Officer finds that the contractor has failed to comply with the requirements of this Notice, said Diversity Officer shall inform the Purchasing Director who shall immediately notify the contractor to take corrective action. If the contractor fails or refuses to comply promptly, then the Purchasing Director, upon approval of the District, shall issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop orders shall be made subject of claim for extension of time or for excess costs or damages by the contractor. When the District proceeds with such formal action it has the burden of proving that the contractor has not met the requirements of coming forward and showing that it has met the good faith requirements of the Notice, specifically including paragraph 7 hereof. Where the contractor is found to have failed to exert every good faith effort to involve DBE in the work provided, the District may declare that the contractor is ineligible to receive further District funds, whether as a contractor, subcontractor, or as a consultant, for a period of up to three (3) years.
9. The contractor will keep records and documents for three (3) years following performances of this contract to indicate compliance with this Notice. These records and documents, or copies thereof, will be made available at reasonable times and places for inspection by any authorized representative of the District upon request together with any other compliance information which such representative may require.
10. Proposers and contractors are bound by all requirements, terms and conditions of this Notice.
11. Nothing in this Notice shall be interpreted to diminish the present contract compliance review

1: DBE Form A

Name of Firm: _____

Address: _____

City, State, Zip Code: _____

Telephone Number: _____

Type of Business (Product or Service): _____

Date of Proposed Contract Award: _____

Amount of Proposed Contract Award: _____

Diversity Business Enterprise Subcontractor(s):

Dollar Amount Subcontract Award: _____

Percent of Subcontract Award: _____

D.B.E. Participation: _____ \$ _____

F.B.E. Participation: _____ \$ _____

Name of EEO Officer: _____

(Signature of owner, partner, or authorized officer)

Name: _____ Dated: _____

(printed)

Title: _____

DO NOT COMPLETE BELOW THIS LINE

___ Compliant ___ Compliance Pending ___ Non-Compliant

Compliance Date: _____

(signature, DBE Department) (date)

2: DBE Form B

NOTICE OF REQUIREMENT TO ENSURE DIVERSITY BUSINESS ENTERPRISE (DBE) OPPORTUNITY

Note: All eligible proposers for award of the contract should comply with the Requirements, Terms, and Conditions of this Notice.

The undersigned proposer hereby agrees that the goal it has established for DBE participation in this project through either subcontracting or entering into a joint Venture with DBEs in conformity with the Requirements, Terms and Conditions of this Notice is a goal of thirty (30%) percent for a construction/repair/ maintenance contract, twenty (20%) percent for a supply contract, and fifteen (15%) for a service contract of the total contract amount of this project. In no event will the absence of goals as stated above be deemed as compliance with the requirements, terms and conditions of this notice.

In addition, the undersigned will complete and attach hereto the DBE (Form C) Schedule for DBE participation, showing all DBE/FBE that will participate as subcontractors or joint ventures in this contract and a DBE (Form D), DBE Letter of Intent form for each DBE/FBE listed on the Schedule.

Proposer: _____

Date: _____

By: _____

Title: _____

Definition of DBE: A Diversity Business Enterprise (DBE)

"Small Diversity business concern" means a small business concern that is a least (51) percent unconditionally owned by one or more individuals who are both socially and economically diverse, or a publicly owned business that has at least (51) percent of its stock unconditionally owned by one or more socially and economically diverse individuals and that has its management and daily business controlled by one or more such individuals. This term also means a small business concern that is at least (51) percent unconditionally owned by an economically diverse Indian tribe or Native Hawaiian Organization, or a publicly owned business that has least (51) percent of its stock unconditionally owned by one of these entities, that has its management and daily business controlled by members of an economically diverse Indian tribe or Native Hawaiian Organization.

3: DBE Form C

SCHEDULE MBE/FBE PARTICIPATION

Project Name: _____

Name of Non-DBE Contractor: _____

Identification Number: _____

Location: _____

Name of Minority Contractor: _____

Address: _____

City, State, Zip: _____

Type of work to be performed and work hours involved:

Projected commencement and completion dates for work:

Agreed price in dollars or percentage:

The undersigned will enter into a formal agreement with DBE for work listed in this schedule conditioned upon execution for a contract with the Cleveland Municipal School District

TO BE RETURNED WITH THE PROPOSAL

Signature of Non-DBE Prime Contractor

Date: _____

4: DBE Form D

DBE LETTER OF INTENT

To: _____
Non-DBE Prime or General Proposer

Project: _____

NON-DBE PRIME OR GENERAL PROPOSER

The Undersigned intends to perform work in connection with the above-referenced project as (check one):

☐ an individual ☐ a corporation ☐ a partnership ☐ a joint venture

DBE status of the undersigned is confirmed in the Cleveland Municipal School District's DBE file of bona fide enterprises with a certification date of: _____

The Undersigned is prepared to perform the following described work in connection with the above referenced project. Specify in detail particular work items or parts thereof to be performed:

at the following price or percent of contract: \$ _____

You have projected the following commencement date of such work, and the undersigned is projecting completion of such work as follows:

Items _____

Projected Commencement Date _____

Projected Completion Date _____

_____ % (percent) of the dollar value of the subcontract will be sublet and/or awarded to NON-DBE contractor (s) and/or NON-FBE SUPPLIERS. The undersigned will enter into a formal agreement for the above work with you conditioned upon your execution of a contract with the Cleveland Municipal School District.

Date

Name of DBE Firm (where applicable)

Signature of DBE (where applicable)

Signature of MBE Firm

(TO BE RETURNED WITH RFP)

Name of FBE Firm

Signature of FBE Firm

5: DBE Form E

DBE Unavailability Certification

I, _____,
Name Title

Of _____, certify that on _____
Date

I contacted the following DBE to obtain a Proposal for work items to be performed on:

Board Project: _____

Minority Contractor: _____

Work Items Sought: _____

Form of Proposal Sought: _____

Female Contractor: _____

Work Items Sought: _____

Form of Proposal Sought: _____

To the best of my knowledge and belief said minority business enterprise was unavailable (exclusive of the unavailability due to lack of agreement on price) for work on this project or unable to prepare a proposal for the following reason (s):

Signature, Non-DBE prime Proposer

Date

_____ was offered an opportunity to proposal on the above-referenced work on

_____ by _____
Date Non-DBE Prime Proposer

Signature, Non-DBE Prime Proposer

The above statement is a true and accurate account of why I did not submit a Proposal on this project.

Signature, Non-DBE prime Proposer

6: DBE Form F

Non-Minority Prime Affidavit For DBE

STATE OF }
COUNTY OF }

} SS.

AFFIDAVIT

The undersigned swear that the foregoing statements are correct and include all material information necessary to identify and explain the items and operation of our subcontract and the intended participation by each party in the undertaking. Further, the undersigned covenant and agree to provide to the Cleveland Municipal School District current, complete, and accurate information regarding actual subcontract work and the payments thereof, and any proposed changes in any of the subcontract arrangements and to permit the audit and examination of the books, records and files of the subcontract or those of each party relevant to the subcontract, by authorized representatives of the Cleveland Municipal School District. Any material misrepresentation will be grounds for terminating any contract which may be awarded and for initiating action under federal and state laws concerning false statements.

Name of Firm: _____

Signature: _____

Name and Title: _____

Date: _____

STATE OF }
COUNTY OF }

} SS.

On this _____ day of _____, 20____, before me appeared _____

_____, to me personally known, who being duly sworn,

did execute the foregoing affidavit, and did state that they were properly authorized by _____

_____ to execute the affidavit and did so as their free act and deed.

(Seal)

Notary Public _____

Commission expires _____

7: DBE Form G

This form need not be completed if all join venture firms are diversity business enterprises

1. Name of Joint Venture: _____
2. Address of Joint Venture: _____
3. Phone Number of Joint Venture: _____
4. Identify the firms which comprise this joint venture. (The DBE partner must complete DBE Form A or have current DBE Certification)

- a. Describe the roll of the DBE firm in the joint venture: _____

- b. Describe briefly the experience and business qualifications of each non-DBE Joint Venture: _____

5. Nature of Joint Venture's Business: _____

6. Provide a copy of the Joint Venture Agreement.

7. What is the percentage of DBE Ownership? DBE _____% FBE _____%

8. Ownership of Joint Venture: (This need not be completed if described in the Joint Venture agreement provided in response to question 6).

- a. Profit and loss sharing: _____

- b. Capital contributions, including equipment: _____

- c. Other applicable ownership interest: _____

9. Control of and participation in this contract. Identify by name, race, and "firm" those individuals and their titles who are responsible for day-to-day management and policy decision making, including, but not limited to, those prime responsibility form:

a. Financial decisions:_____

b. Management decisions, such as:

i. Estimating:_____

ii. Marketing and Sales:_____

iii. Hiring and firing of management personnel:_____

iv. Purchasing of major items or supplies:_____

c. Supervision of field operations:_____

Note: If after complete the DBE Form B and before the completion of the joint venture's work on any contract awarded, there is any significant change in the information submitted, the joint venture must inform the Cleveland Municipal School District, either directly or through the non-DBE prime subcontractor if the joint vendor is a subcontractor.

8: DBE Form H

Non-Minority Prime Affidavit (Joint Venture)

STATE OF OHIO

CUYAHOGA COUNTY

AFFIDAVIT

The undersigned swear that the forgoing statements are correct and include all material information necessary to identify and explain the items and operation of our subcontract and the intended participation by each joint venture in the undertaking. Further, the undersigned covenant and agree to provide to the Cleveland Municipal School District current, complete, and accurate information regarding actual joint venture work and the payments thereof and any proposed changes in any of the subcontract arrangements and to permit the audit and examination of the books, records and files of the joint venture or those of each party relevant to the joint venture, by authorized representatives of the Cleveland Municipal School District. Any material misrepresentation will be grounds for terminating any contract which may be awarded and for initiating action under federal and state laws concerning false statements.

Name of Firm (Prime)

Name of Firm (DBE)

Signature

Signature

Name and Title

Name and Title

Date

Date

STATE OF

] COUNTY OF

]SS.

On this _____ day of _____ 20 __, before me appeared _____, to me personally known, who being duly sworn, did execute the foregoing affidavit, and did state that they were properly authorized by _____ to execute the affidavit and did so as their free act and deed.

(Seal)

Notary Public

Commission expires

Section XIII: EOA Contractual Declaration Forms

CMSD Affirmative Action Program

Vendor Contract Compliance, Procedures and Guidelines

Note: Please read carefully all of the information contained in these documents.

Pursuant to the Affirmative Action Policy Adopted by the Cleveland Municipal School District, the following guidelines and procedures will be implemented to ensure that all vendors doing business with the District are in compliance with Equal Employment Opportunity Standards.

A. SUBMISSION OF VENDOR EMPLOYMENT PRACTICE REPORT

All vendors and contractors who propose to provide goods, services, supplies, and equipment through formal proposals, informal proposals, and contract term agreements are required to submit a Vendor Employment Practice Report with each Proposal. Approved status by the Vendor Employment Practice Report includes the following documents which must be completed in their entirety and returned with the proposal.

Please note, compliance approval consists of both DBE and Vendor Contract Compliance approval.

1. General Information Sheet (Form 1): Provides basic information on the vendor.

1a. SMSA/OR RECRUITMENT AREA: Indicates the relevant labor area in which your facility is located. Designate the Standard Metropolitan Statistical Area, county, or city from which the facility can draw applicants or recruit for most positions.

In making relevant labor area determinations, examine the statistics on racial, ethnic, and gender composition of the Standard Metropolitan Statistical Area, county, or city surrounding your organization, as well as other appropriate adjacent areas.

The relevant labor area should be the SMSA county or city with the highest population of minorities and women.

1b. DEFINITION: As defined by the U.S. Bureau of the Census, SMSA is: "Except in the New England States, a county or group of contiguous counties which contains at least one city of 50,000; in addition contiguous counties if they are socially and economically integrated within the central city; in the New England States towns and cities instead of counties. Each SMSA must include at least one central city."

2. **Compliance Declaration Form** (Form 2) - The Agreement indicating the vendor is in compliance with Equal Employment Opportunity requirements, will take affirmative action, and will comply with all Fair Labor Standard practices.

3. **Current Employment Data Form** (Form 3) – Current personnel data indicating employees in each job category classified by gender and race.

4. **Existing Affirmative Action Program** – If any and copies of any agreement between the vendor and the Equal Employment Opportunity Commission, Office of Federal Contract Compliance Program or court order pertaining to equal employment opportunity.

B. EVALUATION OF COMPLIANCE DATA

1. The Diversity Officer will evaluate data submitted by vendors who are recommended to receive District proposals and contracts. Vendors found in compliance with the District's Equal employment opportunity standards (Affirmative Action and DBE Program) will be placed on the approved vendor's list.
2. In the event that a vendor is found not in compliance with the District's equal employment opportunity standards, the Diversity Officer will inform the Purchasing Director of the Reason(s) and ask that the Purchasing Director not award the contract or proposal to the vendor pending compliance. The Purchasing Director or Manager of Diversity will inform the vendor of reason(s) for non-compliance. Vendors found not in compliance will be given ten (10) business days from the time of notification by the Purchasing Director or Manager of Diversity to submit an acceptable affirmative action program to the Diversity Officer.
3. If the vendor which has been found not in compliance submits an acceptable affirmative action plan to the Diversity Officer within ten (10) business days of notification, the vendor may be given conditional approval.

C. AFFIRMATIVE ACTION PLAN

1. Vendor found not in compliance with the District's equal employment opportunity standards are expected to develop and implement affirmative action programs if they expect to be eligible to successfully propose for District contracts.
2. While it is the vendor's responsibility to develop an affirmative action program which will result in equal employment opportunity for persons from all sectors of the community, the Officer in Charge of the Diversity Program may refer prospective proposers to resources which may be of assistance in developing affirmative action programs.
3. In the event that a vendor who has been awarded a District contract does not make satisfactory progress toward goals in the affirmative action program, the District will not negotiate a new contract until the vendor assures the Diversity Officer that significant progress will be made.

D. CONDITIONS UNDER WHICH PROPOSALS MAY BE REJECTED OR CONTRACTS TERMINATED ON EQUAL EMPLOYMENT OPPORTUNITY GROUNDS

1. Vendor fails to submit completed and signed EEO documents with proposal or other requested information in a timely manner.
2. The vendor is found not to be in compliance with EEO laws, regulations and District policy, and does not have an acceptable Affirmative Action Program, or if the vendor has an acceptable Affirmative Action Program but the Diversity Officer determines the vendor has not made satisfactory progress toward goals in the plan and shows no promise of achieving the goals.
3. Any inconsistencies of misrepresentation of the facts in any of the requested information designed to portray the vendor in a more favorable position with respect to Equal Employment Opportunity Compliance will be grounds for cancellation of the contract by the Purchasing Director upon recommendation by the Diversity Officer and confirmation by the Cleveland Municipal School District.

Form 1: Vendor Contract Compliance Form

Name of Firm: _____

Address: _____

City, State, Zip Code: _____

Telephone Number: _____

Standard Metropolitan Statistical Area: _____

Recruitment Area: _____

Type of Business (product or service): _____

Name of EEO Officer: _____

Signature of Owner, Partner, or Authorized Officer: _____

Name (type or print): _____

Date: _____ Title: _____

Do not complete below this line

Status of Vendor:

___ Compliance

___ Conditional Compliance

___ Non-Compliance

___ Compliance Pending

Comments: _____

Date: _____ Signature: _____

DESCRIPTION OF JOB CATEGORIES

OFFICIALS, MANAGERS, AND SUPERVISORS

Occupations requiring administrative personnel who set District policies, exercise overall responsibility of the places, and direct individual departments or special phases of a firm's operations includes: officials, executives, middle management, plant managers, department managers, and superintendents, salaried supervisors who are members of management, purchasing agents, buyers, and kindred workers.

PROFESSIONALS

Occupations requiring either college graduation or experience of such kind and amount as to provide background. Includes: accountants and auditors, airplane pilots and editors, engineers, layers, librarians, mathematicians, natural scientists, personnel and labor relations workers, physical scientists, physicians, social scientists, teacher's and kindred workers.

TECHNICIANS

Occupations requiring a combination of basic scientific knowledge and manual skill which can be obtained through (about) two years of post high school education, such as that which is offered in many technical institutes and junior colleges, or through equivalent on-the-job training. Includes: drafters, engineering aides, junior engineers, mathematical aids, nurses, photographers, radio operators, scientific assistants, surveyor of technical illustrators, technicians (medical, dental, electronic, physical sciences), and kindred workers.

SALES WORKERS

Occupations engaging wholly or primarily in direct selling. Includes: advertising agents and salespersons, insurance agents and brokers, real estate agents and brokers, stock bond salespersons, demonstrators, sales persons, sales clerks, and kindred workers.

OFFICE AND CLERICAL

Includes all clerical-type work regardless of level of difficulty, where the activities are predominantly non-manual, includes: bookkeepers, cashiers, collectors (bills and account), messengers and office clerks, office machine operators, shipping and receiving clerks, stenographers, typists and secretaries, telegraph and telephone operators and kindred workers.

CRAFTWORKERS (SKILLED)

Manual workers of relatively high skill level having a thorough and comprehensive knowledge of the process involved in their work, exercise considerable independent judgment, and usually receive an extension period of training. Includes: the building trades hourly paid foremen who are not members of management, mechanics and repairers, skilled machine operators, compositors and typesetters, electricians, engravers, job setters (metal), motion picture projectionists, pattern and model makers, stationary engineers, tailors and kindred workers.

OPERATIVE (SEMI-SKILLED)

Workers who operate machine or processing equipment or perform other factory-type duties of intermediate skill level which can be mastered in a few weeks and require limited training.

LABORERS (UNSKILLED)

Workers in manual occupations which generally require no special training. Perform elementary duties that may be learned in a few days and require the application of little or no independent judgment. Includes: garage laborers, car washers and greasers, gardeners (except farmers), ground-

keepers, long-shore workers, craftsperson and stevedores, lumber's and wood chippers, laborers performing lifting, digging, mixing, loading, and pulling operations, and kindred workers.

SERVICE WORKERS

Workers in both protective and non-protective service occupations. Includes: attendants (hospital and other instruction, professional and personal service), barbers, and cleaners, cooks, guards, door keepers, stewards, janitors, police officers and detectives, porters, food services, and kindred workers.

APPRENTICES

Persons employed in a program including work training and related instruction to learn a trade or craft which is traditionally considered an apprentice, regardless of whether the program is registered with a Federal or State agency.

Form 3: Employment Data Form

Please note this data may be obtained by visual survey or post-employment record. Neither visual surveys nor post-employment records are prohibited by any federal, state or local law. All specified data is required to be filled in by District policy.

Job Categories	All EMPLOYEES			MALES					FEMALES				
	TOTALS MALES & FEMALES	MALES	FEMALES	WHITE (NOT OF HISPANIC ORIGIN)	BLACK (NOT OF HISPANIC ORIGIN)	ASIAN AMERICAN OR PACIFIC ISLANDER	AMERICAN INDIAN OR ALSKAN NATIVE	HISPANIC	WHITE (NOT OF HISPANIC ORIGIN)	BLACK (NOT OF HISPANIC ORIGIN)	ASIAN AMERICAN OR PACIFIC ISLANDER	AMERICAN INDIAN OR ALSKAN NATIVE	HISPANIC
OFFICIALS, MGRS & SUPERVISORS													
PROFESSIONALS													
TECHNICIANS													
SALES WORKERS													
OFFICE/CLERICAL													
CRAFTWORKERS (SKILLED)													
OPERATIONS (SEMI-SKILLED)													
LABORERS (UNSKILLED)													
SERVICE WORKERS													
APPRENTICES													
TOTAL													

Additional information (optional):

Describe any other actions taken which show that all employees are recruited, hired, or trained or promoted without regard to their race, religion, color, sex, handicap, age or national origin. Use second sheet if additional space is needed:

The undersigned certifies that they are legally authorized by the proposer to make the statements and representations contained in this report, and that they have read all of the foregoing statements and representations which are true and correct to the best of their knowledge and belief.

FIRM OR CORPORATE NAME: _____ DATE: _____

SIGNATURE: _____ TITLE: _____

**CMSD SUPPLIER CONTRACT
(DO NOT COMPLETE)**

Supplier Name *Address, City, State, Zip*
 (“Supplier”) and **THE CLEVELAND MUNICIPAL SCHOOL DISTRICT**, 1111 Superior Ave. E.
 Suite 1800, Cleveland, Ohio 44114 (the “District”), and is for the purpose described below.

- by providing the following: (list all equipment, supplies, goods, services and deliverables to be provided):

promises.

2. **TERM.** This Agreement shall commence on the date executed by the second of the Parties to sign this instrument and shall terminate on acceptance of all equipment, supplies, goods, services and deliverables described above and no later than _____ (Date); provided, however, that the District may terminate this Agreement without obligation and without cause by giving fourteen (14) days written notice to the Supplier under the Termination for Convenience clause below.

- 50

pay the Supplier an amount not to exceed:

	Dollars (\$ _____).
<i>spell out dollar amount</i>	<div style="display: inline-block; text-align: center; width: 15%;"> <i>numeric amount</i> </div> <div style="display: inline-block; text-align: center; width: 15%;"> <i>dollar</i> </div>

4. **PAYMENT FOR THIS CONTRACT SHALL BE:**

	Dollars (\$ _____).
<i>spell out dollar amount</i>	<div style="display: inline-block; text-align: center; width: 15%;"> <i>numeric amount</i> </div> <div style="display: inline-block; text-align: center; width: 15%;"> <i>dollar</i> </div>

payable as follows (*state payment terms*):

Payment rendered may be within ninety (90) days after the District receives an invoice from the Supplier together with a detailed summary of the equipment, supplies, goods, services and deliverables provided.

Supplier will submit periodic invoices describing any services, equipment, supplies, goods, and deliverables provided, the amount of each service or item, and any documentation and program reports requested by the District to prove that the service was actually provided. Failure to provide proof of the service actually being provided, upon the District's request, shall excuse the District of paying for the invoiced services.

Supplier is not entitled to payment of contract proceeds if equipment, supplies, goods, services and deliverables under this Agreement are no longer needed, required, requested, received, or should this Agreement be terminated by the District with or without cause.

The District's obligations as to payment remain conditioned upon Supplier providing equipment, goods, supplies, services and deliverables in accordance with this Agreement in a reasonably prudent manner. Should the Supplier fail to provide equipment, goods, services and deliverables in accordance with this Agreement either in full or in part, the District maintains the right to refuse future payments, as well as the right to recoup payments already tendered for any services that have been performed or any defective item provided. The District is not liable in any manner for expenses incurred by the Supplier through its utilization of third-party Suppliers or Contractors.

5. **FUNDING SOURCE.**

	FD				FN		SC		PG	
<i>Fund</i>			<i>Cost Center</i>		<i>Function</i>		<i>Spend Category</i>		<i>Program</i>	
<i>Additional Worktags</i>					<i>Additional Worktags</i>					

6. **INDEMNIFICATION AND HOLD HARMLESS.** The Supplier shall indemnify, defend, and hold harmless the District, all of its members, officers, employees, and agents, from and against any and all liability (whether real or asserted), claims, demands expenses, costs (including legal fees), and causes of

action of any nature whatsoever for injury or death of persons, or damage or destruction of property which may result from or arise out of the negligence or intentional misconduct of the Supplier or its employees, officers, or agents, in the course of the Supplier's performance of this Agreement or the Supplier's failure to perform. This indemnification and hold harmless obligation survives the term of this Agreement.

7. **INDEPENDENT CONTRACTOR STATUS.** Supplier and the District acknowledge and agree that Supplier is an independent Contractor and has no authority to bind the District or otherwise act as a representative of the District. The District will provide **no** benefits such as health insurance, unemployment insurance, or worker's compensation insurance to Independent Contractor. Independent Supplier will be responsible for payment of all federal, state and local income taxes, unemployment and worker's compensation coverage's.
8. **AMENDMENT/MODIFICATION.** No amendment or modification of this Agreement, and no waiver hereunder, shall be valid or binding unless set forth in writing and signed by each party.
9. **CONFIDENTIALITY/OWNERSHIP.** The Supplier agrees that all financial, statistical or proprietary information provided by the District or any information that the Supplier may acquire, directly or indirectly, if any, which relates to the District will be kept confidential and not used by or released to any third party or parties without the prior written consent of the District. The Supplier further agrees that any written material, (e.g., report, study, etc.), developed for the District shall be property of the District, and the District shall be entitled to obtain copyrights or any similar such protection for any deliverables furnished by the Supplier under the terms of this Agreement, and that any such materials be considered a "work-for-hire."
10. **NO DAMAGES FOR DELAY.** The District shall not be held responsible for any loss, damage, costs, or expenses sustained by the Supplier as the result of any project delays, disruptions, suspensions, work stoppages, or interruptions of any kind, whether reasonable or unreasonable or whether occasioned by changes ordered in the work or otherwise caused by an act or omission of the District, its agents, employees, or representatives, or by any cause whatsoever beyond the control of the Supplier.
11. **FINDINGS FOR RECOVERY/ DEBARMENT OR SUSPENSION.** *[ATTACH CERTIFICATION FROM AUDITOR OF STATE'S WEBSITE AND FEDERAL SYSTEM FOR AWARD MANAGEMENT (SAM) WEBSITE]*

<https://ohioauditor.gov/findings/Certified/default.aspx>

<http://www.sam.gov/portal/public/SAM/>

Supplier represents that it has no unresolved findings for recovery against it by the Ohio Auditor of State or any notice of debarment or suspension from any Federal Agency. The District may terminate this contract at any time if the Supplier or any of its directors or officers is found at any time to have any unresolved findings for recovery by the Auditor of State or any notice of debarment or suspension from any Federal Agency.

12. **CRIMINAL BACKGROUND CHECK.** Supplier agrees to successfully complete a criminal background check on any of its employees who provide services under this Agreement in the school district and who are required by Ohio Revised Code Section 3319.39, 3319.31 or 3319.392, as amended. A copy of all such background checks shall be provided by the Supplier to the District at the Supplier's expense.

13. **DISCRIMINATION.** Supplier certifies that it does not discriminate and covenants that it shall not discriminate on the basis of race, religion, marital status, color, national origin, sex, age, disability or any other classification protected under federal, state, or local law.
14. **PERSONNEL.** Upon the District's request, and in its sole discretion, Supplier shall replace personnel, if any, assigned by Supplier.
15. **LABOR DISPUTE.** If the Supplier has knowledge that any actual or potential labor dispute is delaying or threatens to delay the timely performance of this contract, the party shall immediately give notice, including all relevant information, to the District.
16. **PROMPT PAYMENT DISCOUNT.** If the Supplier offers a prompt payment discount on any other contract, public or private, then the District shall be extended the same discount on this contract and shall be so notified of the existence of the discount and the terms thereof.
17. **DAMAGE TO BUILDINGS, EQUIPMENT, AND VEGETATION.** The Supplier shall use reasonable care to avoid damaging existing buildings, equipment, and vegetation on the District premises. If the Supplier's failure to use reasonable care causes damage to any District property, the Supplier shall replace or repair the damage at no expense to the District as the District directs. If the Supplier fails or refuses to make such repair or replacement, the Supplier shall be liable for the cost, which may be deducted from the contract price.
18. **TIME.** Time is of the essence in the performance of this contract.
19. **NOTICE OF BANKRUPTCY.** If the event Supplier enters into proceedings relating to bankruptcy, whether voluntary or involuntary, the Supplier agrees to furnish, by certified mail or electronic commerce method authorized by the contract, written notification of the bankruptcy to the District Office responsible for administering the contract. This notification shall be furnished within five days of the initiation of the proceedings relating to bankruptcy filing. This notification shall include the date on which the bankruptcy petition was filed, the identity of the court in which the bankruptcy petition was filed, and a listing of District contract numbers and contracting offices for all District contracts against which final payment has not been made. This obligation remains in effect until final payment under this contract.
20. **PAYMENT OF MONEYS DUE DECEASED SUPPLIER.** If the Supplier dies or is dissolved prior to completion of this Agreement, any moneys that may be due to Supplier from the District for services rendered prior to the date of death or dissolution shall be paid to Supplier's executors, administrators, heirs, personal representative, successors, or assigns or as may be directed by an order of a Probate Court.
21. **AVAILABILITY OF FUNDS.** The Parties acknowledge and agree that the District is a governmental entity and due to statutory provisions cannot commit to the payment of funds beyond its fiscal year (July 1, through June 30). If funds are not allocated for the Services that are the subject of this Agreement following the commencement of any succeeding fiscal year during which this Agreement may continue, the District may terminate this Agreement without liability for any termination charges, fees, or penalties, at the end of its last fiscal period for which funds were appropriated. The District shall be obligated to pay all charges incurred through the end of the last fiscal period for which funds were appropriated. The District shall give the Service Supplier written notice that funds have not been appropriated (a) within a reasonable time after the District receives notice of such non-appropriation; and, (b) at least fourteen (14) days prior to the effective date of such termination.

22. **RECORDS.** The Supplier shall maintain all records pertaining to this Agreement on file for not less than ten (10) years and until any audit issues are resolved and to make such records available to the District, or any other duly authorized representative, upon request except if this is a federally funded contract.

If this is federally funded, the Supplier shall comply with all federally required records retention rules, regulations and laws and shall allow access as required by local, state or federal law, rules, regulations or ordinances.

23. **DEFAULT.** Any of the following events constitute default by the Supplier:

- a. Non-performance of any term, covenant, or condition of this Agreement by the Supplier within the time provided; or
- b. Any act of insolvency by the Supplier or the filing of any petition under any bankruptcy, reorganization, insolvency, receivership, or moratorium law, or any law for the relief of, or relating to debtors; or
- c. The filing of any involuntary petition under any bankruptcy statute against the Supplier or the appointment of any receiver or trustee or to take possession of the property of the Supplier; or
- d. Failure of the Supplier to pay a third party(ies) resulting in any claim(s) against the District or the filing of Liens on Public Funds; or
- e. Failure to maintain the required insurance or equipment as well as failure to provide qualified/licensed personnel or quality and safe vehicles.

24. **EFFECT OF DEFAULT.** In the event of any default by the Supplier, the District may do any one or all of the following:

- a. Terminate the contract and withhold funds due, if any to satisfy any third-party claims;
- b. Sue for and recover all damages arising out of the Supplier's default;
- c. Cure the default and obtain reimbursement and cover from the Supplier.
- d. Exercise any other rights available to it in law or equity.

25. **WAIVER OF DEFAULT.** If the District consents to or waives the breach of any provision of covenant in this Agreement, such waiver shall not constitute a waiver of such provisions or covenant as to the future, and the District shall not be estopped from later enforcing any provision or covenant it may have previously waived or elected not to enforce; nor shall such waiver have any effect on the enforcement of any other provision of this contract.

26. **TERMINATION FOR CONVENIENCE OF DISTRICT.** The District may terminate this Agreement at its option without obligation upon fourteen (14) days written notice to the Supplier. The District may terminate this Agreement for any reason or no reason at all.

27. **EFFECT OF TERMINATION FOR CONVENIENCE.** If the District terminates this Agreement for its convenience, then the District shall only remit payment to the Supplier for work performed up to the date of termination. In no event shall the Supplier be entitled to lost or anticipatory profits.

28. **MISCELLANEOUS.**

- a. Supplier represents and warrants that she possesses the qualification and personnel, if required, to provide the services agreed to herein.

- b. Neither party may assign, modify, or sub-contract this Agreement, or any right or interest herein, without the prior written consent of the other party.
- c. This Agreement shall be binding upon and inure to the benefit of the Parties, their successors, and permitted assigns.
- d. To the extent that the terms of this Agreement materially conflict with or render ambiguous any provision of the Supplier's (Bid/Proposal), the terms of this Agreement shall govern.
- e. The paragraph headings are for convenience only and shall not effect the interpretation of this Agreement.
- f. This validity, construction of this Agreement shall be determined in accordance with the laws of the State of Ohio.
- g. The Supplier and all subcontractors shall comply with all local, state and federal laws, rules, regulations and ordinances.
- h. No travel expense reimbursement is authorized unless specifically stated in this contract. If so stated, the meals, travel, and lodging are reimbursable only in strict compliance with the Ohio Auditor of State Technical Bulletins, Guidance and Rules and Regulations and, if this contract is federally funded in whole or in part, in strict compliance with all rules, regulations and guidance of the U.S. Office of Management and Budget and any other federal office or agency having jurisdiction over federally funded contracts.
- i. This Agreement contains the entire agreement between the parties with respect to the services to be provided hereunder, and there are no representations, understandings or agreements, oral or written, which are not included herein.

29. **CONFLICT OF INTEREST.** The Supplier represents that he/she is not an employee or board member of the Cleveland Municipal School District. The Supplier further represents that no employee or board member of the Cleveland Municipal School District has any ownership interest in or fiduciary duties to the Supplier or any of its parent affiliations and is not on the board of directors of the Supplier or hold any officer position with the Supplier. The District's signatory to this agreement represents that neither he/she or any family member have any ownership interest in or fiduciary duties to the Supplier or any of its parent affiliations and are not on the board of directors of the Supplier or hold any officer position with the Supplier.

CONTRACT MUST BE APPROVED BY CMSD LEGAL DEPARTMENT PRIOR TO SIGNATURE

Approved as to form:

Law Department
Cleveland Municipal School District

DATE: _____

NOTICE TO SUPPLIERS

GOODS AND/OR SERVICES ARE NOT TO BE PROVIDED UNTIL AFTER THE CONTRACT HAS BEEN SIGNED BY A DULY AUTHORIZED REPRESENTATIVE OF THE DISTRICT AND A CERTIFIED PURCHASE ORDER AND/OR CONTRACT NUMBER HAS BEEN ISSUED TO THE SUPPLIER.

THE CLEVELAND MUNICIPAL SCHOOL DISTRICT IS NOT OBLIGATED TO PAY FOR GOODS AND/OR SERVICES PROVIDED PRIOR TO THE DATE THIS CONTRACT HAS BEEN SIGNED BY AN AUTHORIZED DISTRICT REPRESENTATIVE.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by them or their authorized representatives as of the day and year first above written.

(SUPPLIER NAME)

**CLEVELAND MUNICIPAL SCHOOL
DISTRICT**

BY:

BY: _____

TITLE: *Supplier*

TITLE: _____

DATE: _____

DATE: _____

Section XV: References

Include below three references of equal or larger size to this current RFP project. Public sector experience is preferred, but not required. Please attach relevant supporting documentation, such as project plans, scope of work.

Reference #1:

Company/School Name: _____

Address: _____

Type of Business: _____

Contact Person: _____

Telephone and Fax#: _____

Dates of Service: _____

Description of Services Provided: _____

Reference #2:

Company/School Name: _____

Address: _____

Type of Business: _____

Contact Person: _____

Telephone and Fax #: _____

Dates of Service: _____

Description of Services Provided: _____

Reference #3:

Company/School Name: _____

Address: _____

Type of Business: _____

Contact Person: _____

Telephone and Fax#: _____

Dates of Service: _____

Description of Services Provided: _____



RFP #21269

Part III: SPECIFICATIONS AND SCOPE OF WORK

R G Jones Parking Lot Addition

FOR THE CLEVELAND METROPOLITAN SCHOOL DISTRICT

Section I: Introduction

The Cleveland Metropolitan School District (hereafter the “District,” “CMSD” or Cleveland Municipal School District) is soliciting proposals to establish a supplier contract with one qualified vendor for **R G Jones Parking Lot Addition** for the Cleveland Metropolitan School District under Request for Proposal (“RFP”) 21269.

Section II: Cleveland Metropolitan School District General Information

The Cleveland Metropolitan School District is a large urban school system with over 100 instructional and non-instructional sites, approximately 5,000 teachers and administrative staff, 40,000 students, and 3,500 classrooms.

Section III: Vendor Profile

The primary attributes the District seeks in a vendor include:

- Demonstrated experience.
- Responsiveness to specifications and an understanding of District needs.
- Capacity & resources to perform the services described in the RFP.
- Availability and flexibility when it comes to meeting District needs.

Section IV: Proposal Process

The proposal process will proceed along the following guidelines, for which pertinent dates are presented in the RFP transmittal letter and respective RFP:

- Posting of RFP on CMSD Procurement webpage
- Notice in local newspaper regarding RFP posting
- Vendor submission of written questions
- On-line publication of written questions and responses
- Issuance of addendum, as necessary
- Receipt of proposals at CMSD
- Evaluation Committee review
- Notification of proposal award to selected vendor(s) and notification of non-award to other vendors
- Contract negotiation(s) with selected vendor(s)
- Contract finalization with selected vendor, final signatures obtained

All questions must be written and directed to **seletha.thompson@clevelandmetroschools.org**. All questions received and responses thereto will be distributed via the District’s website.

All information received by the District shall become the property of CMSD. The District reserves the right to accept or reject any or all proposals without explanation.

Proposers should note that the following Request for Proposals is general in nature to express a wide-ranging need. Proposers should feel free to define and specify in detail their services and products.

Section V: Contract Period & Award

The Agreement will begin June, 2019 pending authorization of funds at the discretion of the District.

Section VI: RFP #21269 – Specifications

REQUEST FOR PROPOSAL

CMSD is soliciting proposals for one qualified vendor for **R G Jones Parking Lot Addition** for the Cleveland Metropolitan School District under Request for Proposal ("RFP") 21269.

1. Introduction

The Trades Department of the Cleveland Metropolitan School District is requesting vendor responses for the expansion of the current parking lot at R. G. Jones Elementary School located at 4550 West 150th Street.

2. Scope of Work

The Cleveland Metropolitan School District is proposing to expand their current parking lot at the R.G. Jones Elementary School located at 4550 West 150th Street, north of I-480 and south of I-71. The school currently has parking capacity for 49 vehicles.

The school has observed that during the school year, there is not enough parking to accommodate their current daily operations. The complete work under this proposal shall include, but not be limited to, the expansion of the parking lot will bring the total parking total to 67. The project consists of the addition of approximately 7,900 square-feet of asphalt parking and pavement markings, new concrete curbing and sidewalk, associated parking lot drainage improvements, and the addition of a pole mounted site light. Final restoration will include landscape upgrades around the expanded parking lot.

ASPHALT PAVING

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Cold milling of existing asphalt pavement.
2. Hot-mix asphalt patching.
3. Hot-mix asphalt paving.
4. Hot-mix asphalt overlay.
5. Asphalt curbs.

B. Related Requirements:

1. Section 312000 "Earth Moving" for subgrade preparation, fill material, separation geotextiles, unbound-aggregate subbase and base courses, and aggregate pavement shoulders.
2. Section 321373 "Concrete Paving Joint Sealants" for joint sealants and fillers at pavement terminations.

1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference:** Conduct conference at Project site.

1.3 ACTION SUBMITTALS

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

1.4 INFORMATIONAL SUBMITTALS

- A. Material Certificates:** For each paving material. Include statement that mixes containing recycled materials will perform equal to mixes produced from all new materials.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications:** A paving-mix manufacturer registered with and approved by authorities having jurisdiction or the DOT of state in which Project is located.
- B. Regulatory Requirements:** Comply with materials, workmanship, and other applicable requirements of Ohio Department of Transportation (ODOT) for asphalt paving work.
1. Measurement and payment provisions and safety program submittals included in standard specifications do not apply to this Section.

PART 2 - PRODUCTS

2.1 AGGREGATES

- A. Coarse Aggregate:** ASTM D 692/D 692M, sound; angular crushed stone, crushed gravel, or cured, crushed blast-furnace slag.
- B. Fine Aggregate:** ASTM D 1073 or AASHTO M 29, sharp-edged natural sand or sand prepared from stone, gravel, cured blast-furnace slag, or combinations thereof.

- C. Mineral Filler: ASTM D 242/D 242M or AASHTO M 17, rock or slag dust, hydraulic cement, or other inert material.

2.2 ASPHALT MATERIALS

- A. Asphalt Binder: ASTM D 6373 or AASHTO M 320 binder designation PG 64-22.
- B. Tack Coat: ASTM D 977 or AASHTO M 140 emulsified asphalt, or ASTM D 2397/D 2397M or AASHTO M 208 cationic emulsified asphalt, slow setting, diluted in water, of suitable grade and consistency for application.

2.3 AUXILIARY MATERIALS

- A. Recycled Materials for Hot-Mix Asphalt Mixes: Reclaimed asphalt pavement; reclaimed, unbound-aggregate base material; and recycled tires, asphalt shingles, or glass from sources and gradations that have performed satisfactorily in previous installations, equal to performance of required hot-mix asphalt paving produced from all new materials.
- B. Herbicide: Commercial chemical for weed control, registered by the EPA, and not classified as "restricted use" for locations and conditions of application. Provide in granular, liquid, or wettable powder form.

2.4 MIXES

- 1. Surface Course Limit: Recycled content no more than 10 percent by weight.
- B. Hot-Mix Asphalt: Dense-graded, hot-laid, hot-mix asphalt plant mixes approved by authorities having jurisdiction; designed according to procedures in AI MS-2, "Asphalt Mix Design Methods"; and complying with the following requirements:
 - 1. Provide mixes with a history of satisfactory performance in geographical area where Project is located.
 - 2. Base Course: Per ODOT Standards.
 - 3. Surface Course: Per ODOT Standards.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Proof-roll subgrade below pavements with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.

3.2 COLD MILLING

- A. Clean existing pavement surface of loose and deleterious material immediately before cold milling. Remove existing asphalt pavement by cold milling to grades and cross sections indicated.
 - 1. Mill to a depth of 1-1/2 inches.

2. Patch surface depressions deeper than 1 inch after milling, before wearing course is laid.

3.3 PATCHING

- A. Asphalt Pavement: Saw cut perimeter of patch and excavate existing pavement section to sound base. Excavate rectangular or trapezoidal patches, extending 12 inches into perimeter of adjacent sound pavement, unless otherwise indicated. Cut excavation faces vertically. Remove excavated material. Recompact existing unbound-aggregate base course to form new subgrade.
- B. Portland Cement Concrete Pavement: Break cracked slabs and roll as required to reseal concrete pieces firmly.
 1. Remove disintegrated or badly cracked pavement. Excavate rectangular or trapezoidal patches, extending into perimeter of adjacent sound pavement, unless otherwise indicated. Cut excavation faces vertically. Recompact existing unbound-aggregate base course to form new subgrade.
- C. Tack Coat: Before placing patch material, apply tack coat uniformly to vertical asphalt surfaces abutting the patch. Apply at a rate of 0.05 to 0.15 gal./sq. yd..
 1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.
 2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.
- D. Placing Patch Material: Fill excavated pavement areas with hot-mix asphalt base mix for full thickness of patch and, while still hot, compact flush with adjacent surface.

3.4 SURFACE PREPARATION

- A. Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces. Ensure that prepared subgrade is ready to receive paving.
- B. Herbicide Treatment: Apply herbicide according to manufacturer's recommended rates and written application instructions. Apply to dry, prepared subgrade or surface of compacted-aggregate base before applying paving materials.
- C. Tack Coat: Apply uniformly to surfaces of existing pavement at a rate of 0.05 to 0.15 gal./sq. yd..
 1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.
 2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.

3.5 PLACING HOT-MIX ASPHALT

- A. Machine place hot-mix asphalt on prepared surface, spread uniformly, and strike off. Place asphalt mix by hand in areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross section, and thickness when compacted.

1. Spread mix at a minimum temperature of 250 deg F.
 2. Regulate paver machine speed to obtain smooth, continuous surface free of pulls and tears in asphalt-paving mat.
- B. Place paving in consecutive strips not less than 10 feet wide unless infill edge strips of a lesser width are required.
- C. Promptly correct surface irregularities in paving course behind paver. Use suitable hand tools to remove excess material forming high spots. Fill depressions with hot-mix asphalt to prevent segregation of mix; use suitable hand tools to smooth surface.

3.6 JOINTS

- A. Construct joints to ensure a continuous bond between adjoining paving sections. Construct joints free of depressions, with same texture and smoothness as other sections of hot-mix asphalt course.
1. Clean contact surfaces and apply tack coat to joints.
 2. Offset longitudinal joints, in successive courses, a minimum of 6 inches.
 3. Offset transverse joints, in successive courses, a minimum of 24 inches.
 4. Construct transverse joints at each point where paver ends a day's work and resumes work at a subsequent time. Construct these joints using either "bulkhead" or "papered" method according to AI MS-22, for both "Ending a Lane" and "Resumption of Paving Operations."

3.7 COMPACTION

- A. General: Begin compaction as soon as placed hot-mix paving will bear roller weight without excessive displacement. Compact hot-mix paving with hot, hand tampers or with vibratory-plate compactors in areas inaccessible to rollers.
1. Complete compaction before mix temperature cools to 185 deg F.
- B. Breakdown Rolling: Complete breakdown or initial rolling immediately after rolling joints and outside edge. Examine surface immediately after breakdown rolling for indicated crown, grade, and smoothness. Correct laydown and rolling operations to comply with requirements.
- C. Intermediate Rolling: Begin intermediate rolling immediately after breakdown rolling while hot-mix asphalt is still hot enough to achieve specified density. Continue rolling until hot-mix asphalt course has been uniformly compacted to the following density:
1. Average Density: 92 percent of reference maximum theoretical density according to ASTM D 2041/D 2041M, but not less than 90 percent or greater than 96 percent.
- D. Finish Rolling: Finish roll paved surfaces to remove roller marks while hot-mix asphalt is still warm.
- E. Edge Shaping: While surface is being compacted and finished, trim edges of pavement to proper alignment. Bevel edges while asphalt is still hot; compact thoroughly.
- F. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.
- G. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

3.8 ASPHALT CURBS

- A. Construct hot-mix asphalt curbs over compacted pavement surfaces. Apply a light tack coat unless pavement surface is still tacky and free from dust. Spread mix at a minimum temperature of 250 deg F.

1. Asphalt Mix: Same as pavement surface-course mix.
- B. Place hot-mix asphalt to curb cross section indicated or, if not indicated, to local standard shapes, by machine or by hand in wood or metal forms. Tamp hand-placed materials and screed to smooth finish. Remove forms after hot-mix asphalt has cooled.

3.9 INSTALLATION TOLERANCES

- A. Pavement Thickness: Compact each course to produce the thickness indicated within the following tolerances:
 1. Base Course: Plus or minus 1/2 inch.
 2. Surface Course: Plus 1/4 inch, no minus.
- B. Pavement Surface Smoothness: Compact each course to produce a surface smoothness within the following tolerances as determined by using a 10-foot straightedge applied transversely or longitudinally to paved areas:
 1. Base Course: 1/4 inch.
 2. Surface Course: 1/8 inch.
 3. Crowned Surfaces: Test with crowned template centered and at right angle to crown. Maximum allowable variance from template is 1/4 inch.

3.10 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.
- B. Replace and compact hot-mix asphalt where core tests were taken.
- C. Remove and replace or install additional hot-mix asphalt where test results or measurements indicate that it does not comply with specified requirements.

3.11 WASTE HANDLING

- A. General: Handle asphalt-paving waste according to approved waste management plan required in Section 017419 "Construction Waste Management and Disposal."

END OF SECTION

CONCRETE PAVING

PART 4 - GENERAL

4.1 SUMMARY

- A. Section Includes Concrete Paving Including the Following:
 - 1. Driveways.
 - 2. Roadways.
 - 3. Parking lots.
 - 4. Curbs and gutters.
 - 5. Walks.

4.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples: For each type of product, ingredient, or admixture requiring color selection.
- C. Design Mixtures: For each concrete paving mixture. Include alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

4.3 QUALITY ASSURANCE

- A. Ready-Mix-Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
 - 1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities" (Quality Control Manual - Section 3, "Plant Certification Checklist").

4.4 PRECONSTRUCTION TESTING

- A. Preconstruction Testing Service: Engage a qualified independent testing agency to perform preconstruction testing on concrete paving mixtures.

PART 5 - PRODUCTS

5.1 CONCRETE, GENERAL

- A. ACI Publications: Comply with ACI 301 unless otherwise indicated.

5.2 STEEL REINFORCEMENT

- A. Plain-Steel Welded-Wire Reinforcement: ASTM A 1064/A 1064M, fabricated from as-drawn steel wire into flat sheets.
- B. Deformed-Steel Welded-Wire Reinforcement: ASTM A 1064/A 1064M, flat sheet.
- C. Reinforcing Bars: ASTM A 615/A 615M, Grade 60; deformed.

- D. Joint Dowel Bars: ASTM A 615/A 615M, Grade 60 plain-steel bars; zinc coated (galvanized) after fabrication according to ASTM A 767/A 767M, Class I coating. Cut bars true to length with ends square and free of burrs.
- E. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars, welded-wire reinforcement, and dowels in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete of greater compressive strength than concrete specified.

5.3 CONCRETE MATERIALS

- A. Cementitious Materials: Use the following cementitious materials, of same type, brand, and source throughout Project:
 - 1. Portland Cement: ASTM C 150/C 150M, gray portland cement Type I.
 - 2. Fly Ash: ASTM C 618, Class C or Class F.
 - 3. Slag Cement: ASTM C 989/C 989M, Grade 100 or 120.
 - 4. Blended Hydraulic Cement: ASTM C 595/C 595M, Type IS, portland blast-furnace slag cement.
- B. Normal-Weight Aggregates: ASTM C 33/C 33M,, uniformly graded. Provide aggregates from a single source.
- C. Air-Entraining Admixture: ASTM C 260/C 260M.
- D. Chemical Admixtures: Admixtures certified by manufacturer to be compatible with other admixtures and to contain not more than 0.1 percent water-soluble chloride ions by mass of cementitious material.
- E. Color Pigment: ASTM C 979/C 979M, synthetic mineral-oxide pigments or colored water-reducing admixtures; color stable, free of carbon black, nonfading, and resistant to lime and other alkalis.
 - 1. Color: As indicated by manufacturer's designation.
- F. Water: Potable and complying with ASTM C 94/C 94M.

5.4 FIBER REINFORCEMENT

- A. Synthetic Fiber: Monofilament polypropylene fibers engineered and designed for use in decorative concrete paving, complying with ASTM C 1116/C 1116M, Type III, 1/2 to 1-1/2 inches long.
- B. Synthetic Fiber: Fibrillated polypropylene fibers engineered and designed for use in decorative concrete paving, complying with ASTM C 1116/C 1116M, Type III, 1/2 to 1-1/2 inches long.

5.5 CURING MATERIALS

- A. Absorptive Cover: AASHTO M 182, Class 3, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. dry or cotton mats.

- B. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
- C. Water: Potable.
- D. Evaporation Retarder: Waterborne, monomolecular, film forming, manufactured for application to fresh concrete.
- E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.
- F. White, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 2, Class B, dissipating.

5.6 RELATED MATERIALS

- A. Joint Fillers: ASTM D 1751, asphalt-saturated cellulosic fiber in preformed strips.
- B. Slip-Resistive Aggregate Finish: Factory-graded, packaged, rustproof, nonglazing, abrasive aggregate of fused aluminum-oxide granules or crushed emery aggregate containing not less than 50 percent aluminum oxide and not less than 20 percent ferric oxide; unaffected by freezing, moisture, and cleaning materials.

5.7 CONCRETE MIXTURES

- A. Prepare design mixtures, proportioned according to ACI 301, for each type and strength of normal-weight concrete, and as determined by either laboratory trial mixtures or field experience.
- B. Cementitious Materials: Use fly ash, pozzolan, slag cement, and silica fume as needed to reduce the total amount of portland cement, which would otherwise be used, by not less than 40 percent. Limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:
 - 1. Fly Ash or Pozzolan: 25 percent.
 - 2. Slag Cement: 50 percent.
 - 3. Combined Fly Ash or Pozzolan, and Slag Cement: 50 percent, with fly ash or pozzolan not exceeding 25 percent.
- C. Add air-entraining admixture at manufacturer's prescribed rate to result in normal-weight concrete at point of placement having an air content as follows:
 - 1. Air Content: 6 percent plus or minus 1-1/2 percent.
- D. Chemical Admixtures: Use admixtures according to manufacturer's written instructions.
- E. Synthetic Fiber: Uniformly disperse in concrete mixture at manufacturer's recommended rate, but not less than 1.5 lb/cu. yd..

- F. Color Pigment: Add color pigment to concrete mixture according to manufacturer's written instructions and to result in hardened concrete color consistent with approved mockup.
- G. Concrete Mixtures: Normal-weight concrete.

- 1. Compressive Strength (28 Days): 4000 psi.
- 2. Maximum W/C Ratio at Point of Placement: 0.45.
- 3. Slump Limit: 4 inches, plus or minus 1 inch.

5.8 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M and ASTM C 1116/C 1116M. Furnish batch certificates for each batch discharged and used in the Work.

PART 6 - EXECUTION

6.1 EXAMINATION

- A. Proof-roll prepared subbase surface below concrete paving to identify soft pockets and areas of excess yielding.

6.2 PREPARATION

- A. Remove loose material from compacted subbase surface immediately before placing concrete.

6.3 EDGE FORMS AND SCREED CONSTRUCTION

- A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.
- B. Clean forms after each use and coat with form-release agent to ensure separation from concrete without damage.

6.4 STEEL REINFORCEMENT INSTALLATION

- A. Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.

6.5 JOINTS

- A. General: Form construction, isolation, and contraction joints and tool edges true to line, with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline unless otherwise indicated.
- B. Construction Joints: Set construction joints at side and end terminations of paving and at locations where paving operations are stopped for more than one-half hour unless paving terminates at isolation joints.
- C. Isolation Joints: Form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, other fixed objects, and where indicated.

- D. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness, to match jointing of existing adjacent concrete paving:
- E. Edging: After initial floating, tool edges of paving, gutters, curbs, and joints in concrete with an edging tool to a 1/4-inch radius. Repeat tooling of edges after applying surface finishes. Eliminate edging-tool marks on concrete surfaces.

6.6 CONCRETE PLACEMENT

- A. Moisten subbase to provide a uniform dampened condition at time concrete is placed. Do not place concrete around manholes or other structures until they are at required finish elevation and alignment.
- B. Comply with ACI 301 requirements for measuring, mixing, transporting, and placing concrete.
- C. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.
- D. Screed paving surface with a straightedge and strike off.
- E. Commence initial floating using bull floats or darbies to impart an open-textured and uniform surface plane before excess moisture or bleedwater appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading surface treatments.

6.7 FLOAT FINISHING

- A. General: Do not add water to concrete surfaces during finishing operations.
- B. Float Finish: Begin the second floating operation when bleedwater sheen has disappeared and concrete surface has stiffened sufficiently to permit operations. Float surface with power-driven floats or by hand floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots and fill low spots. Refloat surface immediately to uniform granular texture.
 - 1. Burlap Finish: Drag a seamless strip of damp burlap across float-finished concrete, perpendicular to line of traffic, to provide a uniform, gritty texture.
 - 2. Medium-to-Fine-Textured Broom Finish: Draw a soft-bristle broom across float-finished concrete surface, perpendicular to line of traffic, to provide a uniform, fine-line texture.
 - 3. Medium-to-Coarse-Textured Broom Finish: Provide a coarse finish by striating float-finished concrete surface 1/16 to 1/8 inch deep with a stiff-bristled broom, perpendicular to line of traffic.
- C. Slip-Resistive Aggregate Finish: Before final floating, spread slip-resistive aggregate finish on paving surface according to manufacturer's written instructions.
 - 1. Cure concrete with curing compound recommended by slip-resistive aggregate manufacturer. Apply curing compound immediately after final finishing.
 - 2. After curing, lightly work surface with a steel-wire brush or abrasive stone and water to expose nonslip aggregate.

6.8 CONCRETE PROTECTION AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
- B. Comply with ACI 306.1 for cold-weather protection.
- C. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete but before float finishing.
- D. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.
- E. Curing Methods: Cure concrete by moisture curing, moisture-retaining-cover curing, curing compound or a combination of these.

6.9 PAVING TOLERANCES

- A. Comply with tolerances in ACI 117 and as follows:
 - 1. Elevation: 3/4 inch.
 - 2. Thickness: Plus 3/8 inch, minus 1/4 inch.
 - 3. Surface: Gap below 10-feet-long; unlevelled straightedge not to exceed 1/2 inch.
 - 4. Joint Spacing: 3 inches.
 - 5. Contraction Joint Depth: Plus 1/4 inch, no minus.
 - 6. Joint Width: Plus 1/8 inch, no minus.

6.10 REPAIR AND PROTECTION

- A. Remove and replace concrete paving that is broken, damaged, or defective or that does not comply with requirements in this Section. Remove work in complete sections from joint to joint unless otherwise approved by Architect.
- B. Protect concrete paving from damage. Exclude traffic from paving for at least 14 days after placement. When construction traffic is permitted, maintain paving as clean as possible by removing surface stains and spillage of materials as they occur.
- C. Maintain concrete paving free of stains, discoloration, dirt, and other foreign material. Sweep paving not more than two days before date scheduled for Substantial Completion inspections.

END OF SECTION

CONCRETE PAVING JOINT SEALANTS

PART 7 - GENERAL

7.1 SUMMARY

- A. Section Includes:
 - 1. Cold-applied joint sealants.
 - 2. Hot-applied joint sealants.
 - 3. Joint-sealant backer materials.
 - 4. Primers.

7.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

7.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples: For each kind and color of joint sealant required.
- C. Paving-Joint-Sealant Schedule: Include the following information:
 - 1. Joint-sealant application, joint location, and designation.
 - 2. Joint-sealant manufacturer and product name.
 - 3. Joint-sealant formulation.
 - 4. Joint-sealant color.

7.4 INFORMATIONAL SUBMITTALS

- A. Product certificates.

PART 8 - PRODUCTS

8.1 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, backing materials, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer, based on testing and field experience.

8.2 COLD-APPLIED JOINT SEALANTS

- A. Single-Component, Nonsag, Silicone Joint Sealant: ASTM D 5893/D 5893M, Type NS.
- B. Single-Component, Self-Leveling, Silicone Joint Sealant: ASTM D 5893/D 5893M, Type SL.
- C. Multicomponent, Nonsag, Urethane, Elastomeric Joint Sealant: ASTM C 920, Type M, Grade NS, Class 25, for Use T.
- D. Single Component, Pourable, Urethane, Elastomeric Joint Sealant: ASTM C 920, Type S, Grade P, Class 25, for Use T.
- E. Multicomponent, Pourable, Urethane, Elastomeric Joint Sealant: ASTM C 920, Type M, Grade P, Class 25, for Use T.

8.3 HOT-APPLIED JOINT SEALANTS

- A. Hot-Applied, Single-Component Joint Sealant: ASTM D 6690, Type I.

- B. Hot-Applied, Single-Component Joint Sealant: ASTM D 6690, Type I or Type II.
- C. Hot-Applied, Single-Component Joint Sealant: ASTM D 6690, Type I, II, or III.

- D. Hot-Applied, Single-Component Joint Sealant: ASTM D 6690, Type IV.

8.4 JOINT-SEALANT BACKER MATERIALS

- A. Round Backer Rods for Cold- and Hot-Applied Joint Sealants: ASTM D 5249, Type 1, of diameter and density required to control sealant depth and prevent bottom-side adhesion of sealant.
- B. Round Backer Rods for Cold-Applied Joint Sealants: ASTM D 5249, Type 3, of diameter and density required to control joint-sealant depth and prevent bottom-side adhesion of sealant.
- C. Backer Strips for Cold- and Hot-Applied Joint Sealants: ASTM D 5249; Type 2; of thickness and width required to control joint-sealant depth, prevent bottom-side adhesion of sealant, and fill remainder of joint opening under sealant.

8.5 PRIMERS

- A. Primers: Product recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated.

PART 9 - EXECUTION

9.1 INSTALLATION OF JOINT SEALANTS

- A. Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated unless more stringent requirements apply.
- B. Cleaning of Joints: Clean out joints immediately to comply with joint-sealant manufacturer's written instructions.
- C. Joint Priming: Prime joint substrates where indicated or where recommended in writing by joint-sealant manufacturer.
- D. Joint-Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions.
- E. Install joint-sealant backings to support joint sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
 - 1. Do not leave gaps between ends of joint-sealant backings.
 - 2. Do not stretch, twist, puncture, or tear joint-sealant backings.
 - 3. Remove absorbent joint-sealant backings that have become wet before sealant application and replace them with dry materials.
- F. Install joint sealants immediately following backing installation, using proven techniques that comply with the following:
 - 1. Place joint sealants so they fully contact joint substrates.
 - 2. Completely fill recesses in each joint configuration.
 - 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- G. Tooling of Nonsag Joint Sealants: Immediately after joint-sealant application and before skinning or curing begins, tool sealants according to the following requirements to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint:

1. Remove excess joint sealant from surfaces adjacent to joints.
 2. Use tooling agents that are approved in writing by joint-sealant manufacturer and that do not discolor sealants or adjacent surfaces.
- H. Provide joint configuration to comply with joint-sealant manufacturer's written instructions unless otherwise indicated.
- I. Clean off excess joint sealant as the Work progresses, by methods and with cleaning materials approved in writing by joint-sealant manufacturers.

END OF SECTION

PAVEMENT MARKINGS

PART 10 - GENERAL

10.1 SUMMARY

- A. Section includes painted markings applied to asphalt and concrete pavement.

10.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

10.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples: For each exposed product and for each color and texture specified.

PART 11 - PRODUCTS

11.1 PERFORMANCE REQUIREMENTS

- A. Accessibility Standard: Comply with applicable provisions in the USDOJ's "2010 ADA Standards for Accessible Design".

11.2 PAVEMENT-MARKING PAINT

- A. Pavement-Marking Paint: MPI #32, solvent-borne traffic-marking paint.

- 1. Color: As indicated.

- B. Pavement-Marking Paint: MPI #97, latex traffic-marking paint.

- 1. Color: As indicated.

- C. Glass Beads: AASHTO M 247, Type 1.

PART 12 - EXECUTION

12.1 PAVEMENT MARKING

- A. Do not apply pavement-marking paint until layout, colors, and placement have been verified with Architect.
- B. Allow paving to age for a minimum of 30 days before starting pavement marking.
- C. Sweep and clean surface to eliminate loose material and dust.

- D. Apply paint with mechanical equipment to produce pavement markings, of dimensions indicated, with uniform, straight edges. Apply at manufacturer's recommended rates to provide a minimum wet film thickness of 15 mils.
1. Apply graphic symbols and lettering with paint-resistant, die-cut stencils. Apply paint so that it cannot run beneath stencil.
 2. Broadcast glass beads uniformly into wet markings at a rate of 6 lb/gal.

END OF SECTION

COMMON WORK RESULTS FOR UTILITIES

PART 13 - GENERAL

13.1 SUMMARY

A. This Section includes the following:

1. Piping joining materials.
2. Dielectric fittings.
3. Sleeves.
4. Identification devices.
5. Grout.
6. Piping system common requirements.
7. Equipment installation common requirements.
8. Concrete bases.
9. Metal supports and anchorages.

13.2 DEFINITIONS

- A. Exposed Installations: Exposed to view outdoors or subject to outdoor ambient temperatures and weather conditions.
- B. Concealed Installations: Concealed from view and protected from weather conditions and physical contact by building occupants but subject to outdoor ambient temperatures. Examples include installations within unheated shelters.

13.3 ACTION SUBMITTALS

- A. Product Data: For the following:
1. Dielectric fittings.
 2. Identification devices.

13.4 INFORMATIONAL SUBMITTALS

- A. Welding certificates.

13.5 QUALITY ASSURANCE

- A. Steel Support Welding: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."
- B. Steel Piping Welding: Qualify processes and operators according to ASME Boiler and Pressure Vessel Code: Section IX, "Welding and Brazing Qualifications."
1. Comply with provisions in ASME B31 Series, "Code for Pressure Piping."
 2. Certify that each welder has passed AWS qualification tests for welding processes involved and that certification is current.
- C. Comply with ASME A13.1 for lettering size, length of color field, colors, and viewing angles of identification devices.

PART 14 - PRODUCTS

14.1 PIPING JOINING MATERIALS

- A. Pipe-Flange Gasket Materials: Suitable for chemical and thermal conditions of piping system contents.
 - 1. ASME B16.21, nonmetallic, flat, asbestos free, 1/8-inch maximum thickness, unless otherwise indicated.
 - a. Full-Face Type: For flat-face, Class 125, cast-iron and cast-bronze flanges.
 - b. Narrow-Face Type: For raised-face, Class 250, cast-iron and steel flanges.
 - 2. AWWA C110, rubber, flat face, 1/8 inch thick, unless otherwise indicated; and full-face or ring type, unless otherwise indicated.
- B. Flange Bolts and Nuts: ASME B18.2.1, carbon steel, unless otherwise indicated.
- C. Plastic, Pipe-Flange Gasket, Bolts, and Nuts: Type and material recommended by piping system manufacturer, unless otherwise indicated.
- D. Solder Filler Metals: ASTM B 32, lead-free alloys. Include water-flushable flux according to ASTM B 813.
- E. Brazing Filler Metals: AWS A5.8, BCuP Series, copper-phosphorus alloys for general-duty brazing, unless otherwise indicated; and AWS A5.8, BAg1, silver alloy for refrigerant piping, unless otherwise indicated.
- F. Welding Filler Metals: Comply with AWS D10.12/D10.12M for welding materials appropriate for wall thickness and chemical analysis of steel pipe being welded.
- G. Solvent Cements for Joining Plastic Piping:
 - 1. ABS Piping: ASTM D 2235.
 - 2. CPVC Piping: ASTM F 493.
 - 3. PVC Piping: ASTM D 2564. Include primer according to ASTM F 656.
 - 4. PVC to ABS Piping Transition: ASTM D 3138.
- H. Fiberglass Pipe Adhesive: As furnished or recommended by pipe manufacturer.

14.2 DIELECTRIC FITTINGS

- A. Dielectric Fittings, General: Assembly of copper alloy and ferrous materials or ferrous material body with separating nonconductive insulating material suitable for system fluid, pressure, and temperature.
- B. Dielectric Unions:
 - 1. Description: Factory fabricated, union, NPS 2 and smaller.
 - a. Pressure Rating: 150 psig minimum at 180 deg F.
 - b. End Connections: Solder-joint copper alloy and threaded ferrous; threaded ferrous.
- C. Dielectric Flanges:
 - 1. Description: Factory-fabricated, bolted, companion-flange assembly, NPS 2-1/2 to NPS 4 and larger.
 - a. Pressure Rating: 150 psig minimum.
 - b. End Connections: Solder-joint copper alloy and threaded ferrous; threaded solder-joint copper alloy and threaded ferrous.
- D. Dielectric Couplings:

1. Description: Galvanized-steel coupling with inert and noncorrosive, thermoplastic lining, NPS 3 and smaller.
 - a. Pressure Rating: 300 psig at 225 deg F.
 - b. End Connections: Threaded.
- E. Dielectric Nipples:
1. Description: Electroplated steel nipple with inert and noncorrosive, thermoplastic lining.
 - a. Pressure Rating: 300 psig at 225 deg F.
 - b. End Connections: Threaded or grooved.

14.3 SLEEVES

- A. Mechanical sleeve seals for pipe penetrations are specified in Section 220517 "Sleeves and Sleeve Seals for Plumbing Piping."
- B. Galvanized-Steel Sheet Sleeves: 0.0239-inch minimum thickness; round tube closed with welded longitudinal joint.
- C. Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, galvanized, plain ends.
- D. Cast-Iron Sleeves: Cast or fabricated "wall pipe" equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop, unless otherwise indicated.
- E. Molded PVC Sleeves: Permanent, with nailing flange for attaching to wooden forms.
- F. PVC Pipe Sleeves: ASTM D 1785, Schedule 40.
- G. Molded PE Sleeves: Reusable, PE, tapered-cup shaped, and smooth outer surface with nailing flange for attaching to wooden forms.

14.4 IDENTIFICATION DEVICES

- A. Equipment Nameplates: Metal permanently fastened to equipment with data engraved or stamped.
 1. Data: Manufacturer, product name, model number, serial number, capacity, operating and power characteristics, labels of tested compliances, and essential data.
 2. Location: Accessible and visible.
- B. Snap-on Plastic Pipe Markers: Manufacturer's standard preprinted, semirigid, snap-on type. Include color-coding according to ASME A13.1, unless otherwise indicated.
- C. Pressure-Sensitive Pipe Markers: Manufacturer's standard preprinted, color-coded, pressure-sensitive-vinyl type with permanent adhesive.
- D. Pipes with OD, Including Insulation, Less Than 6 Inches: Full-band pipe markers, extending 360 degrees around pipe at each location.
- E. Pipes with OD, Including Insulation, 6 Inches and Larger: Either full-band or strip-type pipe markers, at least three times letter height and of length required for label.
- F. Lettering: Use piping system terms indicated and abbreviate only as necessary for each application length.

1. Arrows: Either integrally with piping system service lettering to accommodate both directions of flow, or as separate unit on each pipe marker to indicate direction of flow.
- G. Plastic Tape: Manufacturer's standard color-coded, pressure-sensitive, self-adhesive vinyl tape, at least 3 mils thick.
1. Width: 1-1/2 inches on pipes with OD, including insulation, less than 6 inches; 2-1/2 inches for larger pipes.
 2. Color: Comply with ASME A13.1, unless otherwise indicated.
- H. Valve Tags: Stamped or engraved with 1/4-inch letters for piping system abbreviation and 1/2-inch sequenced numbers. Include 5/32-inch hole for fastener.
1. Material: 0.032-inch-thick, polished brass or aluminum.
 2. Material: 0.0375-inch-thick stainless steel.
 3. Material: 3/32-inch-thick plastic laminate with 2 black surfaces and a white inner layer.
 4. Material: Valve manufacturer's standard solid plastic.
 5. Size: 1-1/2 inches in diameter, unless otherwise indicated.
6. Shape: As indicated for each piping system.
- I. Valve Tag Fasteners: Brass, wire-link or beaded chain; or brass S-hooks.
- J. Engraved Plastic-Laminate Signs: ASTM D 709, Type I, cellulose, paper-base, phenolic-resin-laminate engraving stock; Grade ES-2, black surface, black phenolic core, with white melamine subcore, unless otherwise indicated. Fabricate in sizes required for message. Provide holes for mechanical fastening.
1. Engraving: Engraver's standard letter style, of sizes and with terms to match equipment identification.
 2. Thickness: 1/16 inch, unless otherwise indicated.
 3. Thickness: 1/16 inch, for units up to 20 sq. in. or 8 inches in length, and 1/8 inch for larger units.
 4. Fasteners: Self-tapping, stainless-steel screws or contact-type permanent adhesive.
- K. Plastic Equipment Markers: Manufacturer's standard laminated plastic, in the following color codes:
1. Green: Cooling equipment and components.
 2. Yellow: Heating equipment and components.
 3. Brown: Energy reclamation equipment and components.
 4. Blue: Equipment and components that do not meet criteria above.
 5. Hazardous Equipment: Use colors and designs recommended by ASME A13.1.
 6. Terminology: Match schedules as closely as possible. Include the following:
 - a. Name and plan number.
 - b. Equipment service.
 - c. Design capacity.
 - d. Other design parameters such as pressure drop, entering and leaving conditions, and speed.
 7. Size: 2-1/2 by 4 inches for control devices, dampers, and valves; 4-1/2 by 6 inches for equipment.

- A. Description: ASTM C 1107, Grade B, nonshrink and nonmetallic, dry hydraulic-cement grout.
 - 1. Characteristics: Post hardening, volume adjusting, nonstaining, noncorrosive, nongaseous, and recommended for interior and exterior applications.
 - 2. Design Mix: 5000-psi, 28-day compressive strength.
 - 3. Packaging: Premixed and factory packaged.

PART 15 - EXECUTION

15.1 DIELECTRIC FITTING APPLICATIONS

- A. Dry Piping Systems: Connect piping of dissimilar metals with the following:
 - 1. NPS 2 and Smaller: Dielectric unions.
 - 2. NPS 2-1/2 and Larger: Dielectric flanges.
- B. Wet Piping Systems: Connect piping of dissimilar metals with the following:
 - 1. NPS 2 and Smaller: Dielectric couplings or dielectric nipples.
 - 2. NPS 2-1/2 and Larger: Dielectric nipples.

15.2 PIPING INSTALLATION

- A. Install piping according to the following requirements and utilities Sections specifying piping systems.
- B. Drawing plans, schematics, and diagrams indicate general location and arrangement of piping systems. Indicated locations and arrangements were used to size pipe and calculate friction loss, expansion, pump sizing, and other design considerations. Install piping as indicated unless deviations to layout are approved on the Coordination Drawings.
- C. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise.
- D. Install piping to permit valve servicing.
- E. Install piping at indicated slopes.
- F. Install piping free of sags and bends.
- G. Install fittings for changes in direction and branch connections.
- H. Select system components with pressure rating equal to or greater than system operating pressure.
- I. Sleeves are not required for core-drilled holes.
- J. Permanent sleeves are not required for holes formed by removable PE sleeves.
- K. Install sleeves for pipes passing through concrete and masonry walls and concrete floor and roof slabs.
 - 1. Cut sleeves to length for mounting flush with both surfaces.
 - a. Exception: Extend sleeves installed in floors of equipment areas or other wet areas 2 inches above finished floor level.
 - 2. Install sleeves in new walls and slabs as new walls and slabs are constructed.
 - a. PVC Pipe Sleeves: For pipes smaller than NPS 6.
 - b. Steel Sheet Sleeves: For pipes NPS 6 and larger, penetrating gypsum-board partitions.
- L. Verify final equipment locations for roughing-in.

- M. Refer to equipment specifications in other Sections for roughing-in requirements.

15.3 PIPING JOINT CONSTRUCTION

- A. Join pipe and fittings according to the following requirements and utilities Sections specifying piping systems.
- B. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.
- C. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.
- D. Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:
1. Apply appropriate tape or thread compound to external pipe threads unless dry seal threading is specified.
 2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged. Do not use pipe sections that have cracked or open welds.
- E. Welded Joints: Construct joints according to AWS D10.12/D10.12M, using qualified processes and welding operators according to Part 1 "Quality Assurance" Article.
- F. Flanged Joints: Select appropriate gasket material, size, type, and thickness for service application. Install gasket concentrically positioned. Use suitable lubricants on bolt threads.
- G. Grooved Joints: Assemble joints with grooved-end pipe coupling with coupling housing, gasket, lubricant, and bolts according to coupling and fitting manufacturer's written instructions.
- H. Soldered Joints: Apply ASTM B 813 water-flushable flux, unless otherwise indicated, to tube end. Construct joints according to ASTM B 828 or CDA's "Copper Tube Handbook," using lead-free solder alloy (0.20 percent maximum lead content) complying with ASTM B 32.
- I. Brazed Joints: Construct joints according to AWS's "Brazing Handbook," "Pipe and Tube" Chapter, using copper-phosphorus brazing filler metal complying with AWS A5.8.
- J. Pressure-Sealed Joints: Assemble joints for plain-end copper tube and mechanical pressure seal fitting with proprietary crimping tool to according to fitting manufacturer's written instructions.
- K. Plastic Piping Solvent-Cemented Joints: Clean and dry joining surfaces. Join pipe and fittings according to the following:
1. Comply with ASTM F 402 for safe-handling practice of cleaners, primers, and solvent cements.
 2. ABS Piping: Join according to ASTM D 2235 and ASTM D 2661 appendixes.
 3. CPVC Piping: Join according to ASTM D 2846/D 2846M Appendix.
 4. PVC Pressure Piping: Join schedule number ASTM D 1785, PVC pipe and PVC socket fittings according to ASTM D 2672. Join other-than-schedule-number PVC pipe and socket fittings according to ASTM D 2855.
 5. PVC Nonpressure Piping: Join according to ASTM D 2855.
 6. PVC to ABS Nonpressure Transition Fittings: Join according to ASTM D 3138 Appendix.
- L. Plastic Pressure Piping Gasketed Joints: Join according to ASTM D 3139.
- M. Plastic Nonpressure Piping Gasketed Joints: Join according to ASTM D 3212.
- N. Plastic Piping Heat-Fusion Joints: Clean and dry joining surfaces by wiping with clean cloth or paper towels. Join according to ASTM D 2657.
1. Plain-End PE Pipe and Fittings: Use butt fusion.
 2. Plain-End PE Pipe and Socket Fittings: Use socket fusion.
- O. Bonded Joints: Prepare pipe ends and fittings, apply adhesive, and join according to pipe manufacturer's written instructions.

15.4 PIPING CONNECTIONS

- A. Make connections according to the following, unless otherwise indicated:
 - 1. Install unions, in piping NPS 2 and smaller, adjacent to each valve and at final connection to each piece of equipment.
 - 2. Install flanges, in piping NPS 2-1/2 and larger, adjacent to flanged valves and at final connection to each piece of equipment.
 - 3. Install dielectric fittings at connections of dissimilar metal pipes.

15.5 EQUIPMENT INSTALLATION

- A. Install equipment level and plumb, unless otherwise indicated.
- B. Install equipment to facilitate service, maintenance, and repair or replacement of components. Connect equipment for ease of disconnecting, with minimum interference with other installations. Extend grease fittings to an accessible location.
- C. Install equipment to allow right of way to piping systems installed at required slope.

15.6 IDENTIFICATION

- A. Piping Systems: Install pipe markers on each system. Include arrows showing normal direction of flow.
 - 1. Plastic markers, with application systems. Install on insulation segment if required for hot noninsulated piping.
 - 2. Locate pipe markers on exposed piping according to the following:
 - a. Near each valve and control device.
 - b. Near each branch, excluding short takeoffs for equipment and terminal units. Mark each pipe at branch if flow pattern is not obvious.
 - c. Near locations where pipes pass through walls or floors or enter inaccessible enclosures.
 - d. At manholes and similar access points that permit view of concealed piping.
 - e. Near major equipment items and other points of origination and termination.
- B. Equipment: Install engraved plastic-laminate sign or equipment marker on or near each major item of equipment.
 - 1. Lettering Size: Minimum 1/4 inch high for name of unit if viewing distance is less than 24 inches, 1/2 inch high for distances up to 72 inches, and proportionately larger lettering for greater distances. Provide secondary lettering two-thirds to three-fourths of size of principal lettering.
 - 2. Text of Signs: Provide name of identified unit. Include text to distinguish among multiple units, inform user of operational requirements, indicate safety and emergency precautions, and warn of hazards and improper operations.
- C. Adjusting: Relocate identifying devices that become visually blocked by work of this or other Divisions.

15.7 CONCRETE BASES

- A. Concrete Bases: Anchor equipment to concrete base according to equipment manufacturer's written instructions and according to seismic codes at Project.
 - 1. Construct concrete bases of dimensions indicated, but not less than 4 inches larger in both directions than supported unit.
 - 2. Install dowel rods to connect concrete base to concrete floor. Unless otherwise indicated, install dowel rods on 18-inch centers around the full perimeter of base.

3. Install epoxy-coated anchor bolts for supported equipment that extend through concrete base, and anchor into structural concrete floor.
4. Place and secure anchorage devices. Use supported equipment manufacturer's setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
5. Install anchor bolts to elevations required for proper attachment to supported equipment.
6. Install anchor bolts according to anchor-bolt manufacturer's written instructions.
7. Use 3000-psi, 28-day compressive-strength concrete and reinforcement as specified in Section 033000 "Cast-in-Place Concrete."

15.8 ERECTION OF METAL SUPPORTS AND ANCHORAGES

- A. Refer to Section 055000 "Metal Fabrications" for structural steel.
- B. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor piped utility materials and equipment.
- C. Field Welding: Comply with AWS D1.1/D1.1M.

15.9 GROUTING

- A. Mix and install grout for equipment base bearing surfaces, pump and other equipment base plates, and anchors.
- B. Clean surfaces that will come into contact with grout.
- C. Provide forms as required for placement of grout.
- D. Avoid air entrapment during placement of grout.
- E. Place grout, completely filling equipment bases.
- F. Place grout on concrete bases and provide smooth bearing surface for equipment.
- G. Place grout around anchors.
- H. Cure placed grout.

END OF SECTION

STORMWATER CONVEYANCE

PART 16 - GENERAL

16.1 SUMMARY

- A. Section Includes:
 - 1. Ductile-iron culvert pipe and fittings.
 - 2. PE pipe and fittings.
 - 3. PVC pipe and fittings.
 - 4. Concrete pipe and fittings.
 - 5. Non-pressure transition couplings.
 - 6. Expansion joints.
 - 7. Cleanouts.
 - 8. Encasement for piping.
 - 9. Manholes.
 - 10. Polymer-concrete, channel drainage systems.
 - 11. Catch basins.
 - 12. Stormwater inlets.
 - 13. Stormwater detention structures.
 - 14. Pipe outlets.

16.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Sustainable Design Submittals:
- C. Shop Drawings:
 - 1. Manholes: Include plans, elevations, sections, details, frames, and covers.
 - 2. Catch basins. Include plans, elevations, sections, details, frames, covers, and grates.
 - 3. Stormwater Detention Structures: Include plans, elevations, sections, details, frames, covers, design calculations, and concrete design-mix reports.

16.3 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: Show pipe sizes, locations, and elevations. Show other piping in same trench and clearances from storm drainage system piping. Indicate interface and spatial relationship between manholes, piping, and proximate structures.
- B. Profile Drawings: Show system piping in elevation. Draw profiles at horizontal scale of not less than 1 inch equals 50 feet and vertical scale of not less than 1 inch equals 5 feet. Indicate manholes and piping. Show types, sizes, materials, and elevations of other utilities crossing system piping.
- C. Product Certificates: For each type of cast-iron soil pipe and fitting.
- D. Field quality-control reports.

16.4 QUALITY ASSURANCE

- A. Piping materials shall bear label, stamp, or other markings of specified testing agency.

PART 17 - PRODUCTS

17.1 HUB-AND-SPIGOT, CAST-IRON SOIL PIPE AND FITTINGS

- A. Pipe and Fittings:
 - 1. Marked with CISPI collective trademark and NSF certification mark.
 - 2. Class: ASTM A 74, Service class.
- B. Gaskets: ASTM C 564, rubber.
- C. Caulking Materials: ASTM B 29, pure lead and oakum or hemp fiber.

17.2 HUBLESS CAST-IRON SOIL PIPE AND FITTINGS

- A. Pipe and Fittings:
 - 1. Marked with CISPI collective trademark and NSF certification mark.
 - 2. Standard: ASTM A 888 or CISPI 301.
- B. CISPI, Hubless-Piping Couplings:
 - 1. Description: Stainless-steel corrugated shield; stainless-steel bands and tightening devices; and rubber sleeve with integral, center pipe stop.
 - 2. Standards:
 - a. ASTM C 1277 and CIPSI 310 for couplings.
 - b. ASTM C 564 for gaskets.
- C. Heavy-Duty, Hubless-Piping Couplings:
 - 1. Description: Stainless-steel shield; stainless-steel bands and tightening devices; and rubber sleeve with integral, center pipe stop.
 - 2. Standards:
 - a. ASTM C 1277 and ASTM C 1540 for couplings.
 - b. ASTM C564 for rubber gaskets.
- D. Cast-Iron, Hubless-Piping Couplings:
 - 1. Description: Two-piece, cast-iron housing; stainless-steel bolts and nuts; and rubber sleeve with integral, center pipe stop.
 - 2. Standards:
 - a. ASTM C 1277 for couplings.
 - b. ASTM A 48/A 48M for cast-iron castings.
 - c. ASTM C 564 for gaskets.

17.3 DUCTILE-IRON, CULVERT PIPE AND FITTINGS

- A. Pipe: ASTM A 716, for push-on joints.

- B. Standard Fittings: AWWA C110/A21.10, ductile or gray iron, for push-on joints.
- C. Compact Fittings: AWWA C153/A21.53, for push-on joints.
- D. Gaskets: AWWA C111/A21.11, rubber.

17.4 CORRUGATED-PE PIPE AND FITTINGS

- A. Corrugated-PE Drainage Pipe and Fittings NPS 3 to NPS 10: AASHTO M 252, Type S, with smooth waterway for coupling joints.
- B. Corrugated-PE Pipe and Fittings NPS 12 to NPS 60: AASHTO M 294, Type S, with smooth waterway for coupling joints.
- C. Corrugated-PE Silttight Couplings: PE sleeve with ASTM D 1056, Type 2, Class A, Grade 2 gasket material that mates with pipe and fittings.
- D. Corrugated-PE Soiltight Couplings: AASHTO M 294, corrugated, matching pipe and fittings.

17.5 PVC PIPE AND FITTINGS

- A. NSF Marking: Comply with NSF 14, "Plastics Piping Systems Components and Related Materials," for plastic piping components. Include marking with "NSF-drain" for plastic storm drain and "NSF-sewer" for plastic storm sewer piping.
- B. PVC Corrugated Sewer Piping:
 - 1. Pipe: ASTM F 949, PVC, corrugated pipe with bell-and-spigot ends for gasketed joints.
 - 2. Fittings: ASTM F 949, PVC molded or fabricated, socket type.
 - 3. Gaskets: ASTM F 477, elastomeric seals.
- C. Adhesive Primer: ASTM F 656.

17.6 CONCRETE PIPE AND FITTINGS

- A. Nonreinforced-Concrete Sewer Pipe and Fittings: ASTM C 14, Class 1, with bell-and-spigot or tongue-and-groove ends and gasketed joints with ASTM C 443, rubber gaskets.
- B. Reinforced-Concrete Sewer Pipe and Fittings: ASTM C 76.
 - 1. Bell-and-spigot or tongue-and-groove ends and gasketed joints with ASTM C 443, rubber gaskets
 - 2. Class I, Wall A.

3. Class II, Wall A.
4. Class III, Wall A.
5. Class IV, Wall A.
6. Class V, Wall B.

17.7 NONPRESSURE TRANSITION COUPLINGS

- A. Comply with ASTM C 1173, elastomeric, sleeve-type, reducing or transition coupling, for joining underground nonpressure piping. Include ends of same sizes as piping to be joined, and corrosion-resistant-metal tension band and tightening mechanism on each end.
- B. Sleeve Materials:
 1. For Concrete Pipes: ASTM C 443, rubber.
 2. For Cast-Iron Soil Pipes: ASTM C 564, rubber.
 3. For Fiberglass Pipes: ASTM F 477, elastomeric seal or ASTM D 5926, PVC.
 4. For Plastic Pipes: ASTM F 477, elastomeric seal or ASTM D 5926, PVC.
 5. For Dissimilar Pipes: ASTM D 5926, PVC or other material compatible with pipe materials being joined.
- C. Unshielded, Flexible Couplings:
 1. Description: Elastomeric sleeve with stainless-steel shear ring and corrosion-resistant-metal tension band and tightening mechanism on each end.
- D. Shielded, Flexible Couplings:
 1. Description: ASTM C 1460, elastomeric or rubber sleeve with full-length, corrosion-resistant outer shield and corrosion-resistant-metal tension band and tightening mechanism on each end.
- E. Ring-Type, Flexible Couplings:
 1. Description: Elastomeric compression seal with dimensions to fit inside bell of larger pipe and for spigot of smaller pipe to fit inside ring.

17.8 EXPANSION JOINTS

- A. Ductile-Iron, Flexible Expansion Joints:
 1. Description: Compound fitting with combination of flanged and mechanical-joint ends complying with AWWA C110/A21.10 or AWWA C153/A21.53. Include two gasketed ball-joint sections and one or more gasketed sleeve sections, rated for 250-psig minimum working pressure and for offset and expansion indicated.
- B. Ductile-Iron Expansion Joints:
 1. Description: Three-piece assembly of telescoping sleeve with gaskets and restrained-type, ductile iron or steel with protective coating; bell-and-spigot end sections complying with AWWA C110/A21.10 or AWWA C153/A21.53.
 2. Pressure Rating: 250-psig minimum working pressure and for expansion indicated.

17.9 CLEANOUTS

A. Cast-Iron Cleanouts:

1. Description: ASME A112.36.2M, round, gray-iron housing with clamping device and round, secured, scoriated, gray-iron cover. Include gray-iron ferrule with inside caulk or spigot connection and countersunk, tapered-thread, brass closure plug.
2. Top-Loading Classification(s): Heavy Duty.
3. Sewer Pipe Fitting and Riser to Cleanout: ASTM A 74, Service class, cast-iron soil pipe and fittings.

B. PVC Cleanouts:

1. Description: PVC body with PVC threaded plug. Include PVC sewer pipe fitting and riser to cleanout of same material as sewer piping.

17.10 ENCASEMENT FOR PIPING

- A. Standard: ASTM A 674 or AWWA C105/A21.5.
- B. Material: Linear low-density polyethylene film of 0.008-inch or cross-laminated HDPE film of 0.004-inch minimum thickness.
- C. Form: Sheet or tube.
- D. Color: Black or natural.

17.11 MANHOLES

A. Standard Precast Concrete Manholes:

1. Description: ASTM C 478, precast, reinforced concrete, of depth indicated, with provision for sealant joints.
2. Diameter: 48 inches minimum unless otherwise indicated.
3. Ballast: Increase thickness of precast concrete sections or add concrete to base section as required to prevent flotation.
4. Base Section: 6-inch minimum thickness for floor slab and 4-inch minimum thickness for walls and base riser section, and separate base slab or base section with integral floor.
5. Riser Sections: 4-inch minimum thickness, and lengths to provide depth indicated.
6. Top Section: Eccentric-cone type unless concentric-cone or flat-slab-top type is indicated, and top of cone of size that matches grade rings.
7. Joint Sealant: ASTM C 990, bitumen or butyl rubber.
8. Resilient Pipe Connectors: ASTM C 923, cast or fitted into manhole walls, for each pipe connection.
9. Steps: Individual FRP steps; FRP ladder; or ASTM A 615/A 615M, deformed, 1/2-inch steel reinforcing rods encased in ASTM D 4101, PP, wide enough to allow worker to place both feet on one step and designed to prevent lateral slippage off step. Cast or anchor steps into sidewalls at 12- to 16-inch intervals. Omit steps if total depth from floor of manhole to finished grade is less than 60 inches.
10. Adjusting Rings: Interlocking HDPE rings with level or sloped edge in thickness and diameter matching manhole frame and cover, and of height required to adjust manhole frame and cover to indicated elevation and slope. Include sealant recommended by ring manufacturer.
11. Grade Rings: Reinforced-concrete rings, 6- to 9-inch total thickness, to match diameter of manhole frame and cover, and height as required to adjust manhole frame and cover to indicated elevation and slope.

17.12 CONCRETE

- A. General: Cast-in-place concrete in accordance with ACI 318, ACI 350, and the following:
 - 1. Cement: ASTM C 150/C 150M, Type II.
 - 2. Fine Aggregate: ASTM C 33/C 33M, sand.
 - 3. Coarse Aggregate: ASTM C 33/C 33M, crushed gravel.
 - 4. Water: Potable.
- B. Portland Cement Design Mix: 4000 psi minimum, with 0.45 maximum water/cementitious materials ratio.
 - 1. Reinforcing Fabric: ASTM A 1064/A 1064M, steel, welded wire fabric, plain.
 - 2. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (420 MPa) deformed steel.
- C. Manhole Channels and Benches: Factory or field formed from concrete. Portland cement design mix, 4000 psi minimum, with 0.45 maximum water/cementitious materials ratio. Include channels and benches in manholes.
 - 1. Channels: Concrete invert, formed to same width as connected piping, with height of vertical sides to three-fourths of pipe diameter. Form curved channels with smooth, uniform radius and slope.
 - a. Invert Slope: 2 percent through manhole.
 - 2. Benches: Concrete, sloped to drain into channel.
 - a. Slope: 4 percent.
- D. Ballast and Pipe Supports: Portland cement design mix, 3000 psi minimum, with 0.58 maximum water/cementitious materials ratio.
 - 1. Reinforcing Fabric: ASTM A 1064/A 1064M, steel, welded wire fabric, plain.
 - 2. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (420 MPa) deformed steel.

17.13 POLYMER-CONCRETE, CHANNEL DRAINAGE SYSTEMS

- A. Narrow, Sloped-Invert, Polymer-Concrete Channel Drainage Systems:
 - 1. Description: Modular system of channel sections, grates, and appurtenances; designed so grates fit into channel recesses without rocking or rattling.
 - 2. Channel Sections: Narrow, interlocking-joint, sloped-invert, polymer-concrete modular units with end caps.
 - a. Include rounded bottom, with built-in invert slope of 0.6 percent and with outlets in number, sizes, and locations indicated.
 - b. Include extension sections necessary for required depth.
 - c. Dimensions: 4-inch inside width. Include number of units required to form total lengths indicated.
 - d. Frame: Gray-iron or galvanized steel for grates.
 - 3. Grates: Manufacturer's designation "heavy duty," with slots or perforations, and of width and thickness that fit recesses in channel sections.
 - a. Material: Ductile iron.
 - 1) Locking Mechanism: Manufacturer's standard device for securing grates to channel sections.
 - 4. Covers: Solid ductile or gray iron, of width and thickness that fit recesses in channel sections, and of lengths indicated.
 - 5. Supports, Anchors, and Setting Devices: Manufacturer's standard unless otherwise indicated.

6. Channel-Section Joining and Fastening Materials: As recommended by system manufacturer.
- B. Narrow, Level-Invert, Polymer-Concrete Channel Drainage Systems:
1. Description: Modular system of channel sections, grates, and appurtenances; designed so grates fit into channel recesses without rocking or rattling.
 2. Channel Sections: Narrow, interlocking-joint, precast, polymer-concrete modular units with end caps.
 - a. Include rounded bottom, with level invert and with NPS 4 outlets in number and locations indicated.
 - b. Dimensions: 5- inch inside width and 9-3/4 inches deep. Include number of units required to form total lengths indicated.
 - 1) Frame: Gray-iron or galvanized steel for grates.
 3. Grates: Manufacturer's designation "heavy duty," with slots or perforations, and of width and thickness that fit recesses in channel sections.
 - a. Material: Ductile iron.
 - b. Locking Mechanism: Manufacturer's standard device for securing grates to channel sections.
 4. Covers: Solid ductile or gray iron, of width and thickness that fit recesses in channel sections, and of lengths indicated.
 5. Supports, Anchors, and Setting Devices: Manufacturer's standard unless otherwise indicated.
 6. Channel-Section Joining and Fastening Materials: As recommended by system manufacturer.
- C. Wide, Level-Invert, Polymer-Concrete Channel Drainage Systems:
1. Description: Modular system of channel sections, grates, and appurtenances; designed so grates fit into channel recesses without rocking or rattling.
 2. Channel Sections: Wide, interlocking-joint, precast, polymer-concrete modular units with end caps.
 - a. Include flat or rounded bottom, with level invert and with outlets in number, sizes, and locations indicated.
 - b. Dimensions: 8- inch inside width and 13-3/4 inches deep. Include number of units required to form total lengths indicated.
 - 1) Frame: Gray iron or galvanized steel for grates.
 3. Grates: Manufacturer's designation "heavy duty," with slots or perforations, and of width and thickness that fit recesses in channel sections.
 - a. Material: Ductile iron.
 - b. Locking Mechanism: Manufacturer's standard device for securing grates to channel sections.
 4. Covers: Solid ductile or gray iron, of width and thickness that fit recesses in channel sections, and of lengths indicated.
 5. Supports, Anchors, and Setting Devices: Manufacturer's standard unless otherwise indicated.

6. Channel-Section Joining and Fastening Materials: As recommended by system manufacturer.
- D. Drainage Specialties: Precast, polymer-concrete units.
1. Large Catch Basins:
 - a. 24-by-12-inch polymer-concrete body, with outlets in quantities and sizes indicated.
 - b. Gray-iron slotted grate.
 - c. Frame: Include gray-iron or steel frame for grate.
 2. Small Catch Basins:
 - a. 19- to 24-inch by approximately 6-inch polymer-concrete body, with outlets in quantities and sizes indicated.
 - b. Gray-iron slotted grate.
 - c. Frame: Include gray-iron or steel frame for grate.
 3. Sediment Interceptors:
 - a. 27-inch-square, polymer-concrete body, with outlets in quantities and sizes indicated.
 - b. 24-inch-square, gray-iron frame and slotted grate.

17.14 CATCH BASINS

- A. Standard Precast Concrete Catch Basins:
1. Description: ASTM C 478, precast, reinforced concrete, of depth indicated, with provision for sealant joints.
 2. Base Section: 6-inch minimum thickness for floor slab and 4-inch minimum thickness for walls and base riser section, and separate base slab or base section with integral floor.
 3. Riser Sections: 4-inch minimum thickness, 48-inch diameter, and lengths to provide depth indicated.
 4. Top Section: Eccentric-cone type unless concentric-cone or flat-slab-top type is indicated. Top of cone of size that matches grade rings.
 5. Joint Sealant: ASTM C 990, bitumen or butyl rubber.
 6. Adjusting Rings: Interlocking rings with level or sloped edge in thickness and shape matching catch basin frame and grate. Include sealant recommended by ring manufacturer.
 7. Grade Rings: Include two or three reinforced-concrete rings, of 6- to 9-inch total thickness, that match 24-inch-diameter frame and grate.
 8. Steps: Individual FRP steps; FRP ladder; or ASTM A 615/A 615M, deformed, 1/2-inch steel reinforcing rods encased in ASTM D 4101, PP, wide enough to allow worker to place both feet on one step and designed to prevent lateral slippage off step. Cast or anchor steps into sidewalls at 12- to 16-inch intervals. Omit steps if total depth from floor of catch basin to finished grade is less than 60 inches.
 9. Pipe Connectors: ASTM C 923, resilient, of size required, for each pipe connecting to base section.
- B. Frames and Grates: ASTM A 536, Grade 60-40-18, ductile iron designed for A-16 (AASHTO HS20-44), structural loading. Include flat grate with small square or short-slotted drainage openings.

1. Size: 24 by 24 inches minimum unless otherwise indicated.
 2. Grate Free Area: Approximately 50 percent unless otherwise indicated.
- C. Frames and Grates: ASTM A 536, Grade 60-40-18, ductile iron designed for A-16 (AASHTO HS20-44), structural loading. Include 24-inch ID by 7- to 9-inch riser with 4-inch-minimum width flange, and 26-inch-diameter flat grate with small square or short-slotted drainage openings.
1. Grate Free Area: Approximately 50 percent unless otherwise indicated.

17.15 STORMWATER INLETS

- A. Curb Inlets: Made with vertical curb opening, of materials and dimensions in accordance with utility standards.
- B. Gutter Inlets: Made with horizontal gutter opening, of materials and dimensions in accordance with utility standards. Include heavy-duty frames and grates.
- C. Combination Inlets: Made with vertical curb and horizontal gutter openings, of materials and dimensions in accordance with utility standards. Include heavy-duty frames and grates.
- D. Frames and Grates: Heavy duty, in accordance with utility standards.

17.16 PIPE OUTLETS

- A. Head Walls: Cast-in-place reinforced concrete, with apron and tapered sides.
- B. Riprap Basins: Broken, irregularly sized and shaped, graded stone in accordance with NSSGA's "Quarried Stone for Erosion and Sediment Control."
 1. Average Size: NSSGA No. R-3, screen opening 2 inches.
 2. Average Size: NSSGA No. R-4, screen opening 3 inches.
 3. Average Size: NSSGA No. R-5, screen opening 5 inches.
- C. Filter Stone: In accordance with NSSGA's "Quarried Stone for Erosion and Sediment Control," No. FS-2, No. 4 screen opening, average-size graded stone.
- D. Energy Dissipaters: In accordance with NSSGA's "Quarried Stone for Erosion and Sediment Control," No. A-1, 3-ton average weight armor stone, unless otherwise indicated.

PART 18 - EXECUTION

18.1 EARTHWORK

- A. Excavation, trenching, and backfilling are specified in Section 312000 "Earth Moving."

18.2 PIPING INSTALLATION

- A. General Locations and Arrangements: Drawing plans and details indicate general location and arrangement of underground storm drainage piping. Location and arrangement of piping layout take into account design considerations. Install piping as indicated, to extent practical. Where specific installation is not indicated, follow piping manufacturer's written instructions.
- B. Install piping beginning at low point, true to grades and alignment indicated with unbroken continuity of invert. Place bell ends of piping facing upstream. Install gaskets, seals, sleeves, and couplings in accordance with manufacturer's written instructions for use of lubricants, cements, and other installation requirements.

- C. Install manholes for changes in direction unless fittings are indicated. Use fittings for branch connections unless direct tap into existing sewer is indicated.
- D. Install proper size increasers, reducers, and couplings where different sizes or materials of pipes and fittings are connected. Reducing size of piping in direction of flow is prohibited.
- E. When installing pipe under streets or other obstructions that cannot be disturbed, use pipe-jacking process of microtunneling.
- F. Install gravity-flow, nonpressure drainage piping in accordance with the following:
 - 1. Install piping pitched down in direction of flow.
 - 2. Install piping NPS 6 and larger with restrained joints at tee fittings and at changes in direction. Use corrosion-resistant rods, pipe or fitting manufacturer's proprietary restraint system, or cast-in-place concrete supports or anchors.
 - 3. Install piping with 36-inch-minimum cover.
 - 4. Install hub-and-spigot, cast-iron soil piping in accordance with CISPI's "Cast Iron Soil Pipe and Fittings Handbook."
 - 5. Install hubless cast-iron soil piping in accordance with CISPI 310 and CISPI's "Cast Iron Soil Pipe and Fittings Handbook."
 - 6. Install ductile-iron piping and special fittings in accordance with AWWA C600 or AWWA M41.
 - 7. Install PE corrugated sewer piping in accordance with ASTM D 2321.
 - 8. Install PVC sewer piping in accordance with ASTM D 2321 and ASTM F 1668.
 - 9. Install nonreinforced-concrete sewer piping in accordance with ASTM C 1479 and ACPA's "Concrete Pipe Installation Manual."
 - 10. Install reinforced-concrete sewer piping in accordance with ASTM C 1479 and ACPA's "Concrete Pipe Installation Manual."
- G. Install corrosion-protection piping encasement over the following underground metal piping in accordance with ASTM A 674 or AWWA C105/A21.5:
 - 1. Hub-and-spigot, cast-iron soil pipe and fittings.
 - 2. Hubless cast-iron soil pipe and fittings.
 - 3. Ductile-iron pipe and fittings.
 - 4. Expansion joints.

18.3 PIPE JOINT CONSTRUCTION

- A. Join gravity-flow, nonpressure drainage piping in accordance with the following:
 - 1. Join hub-and-spigot, cast-iron soil piping with gasketed joints in accordance with CISPI's "Cast Iron Soil Pipe and Fittings Handbook" for compression joints.
 - 2. Join hub-and-spigot, cast-iron soil piping with caulked joints in accordance with CISPI's "Cast Iron Soil Pipe and Fittings Handbook" for lead and oakum caulked joints.
 - 3. Join hubless cast-iron soil piping in accordance with CISPI 310 and CISPI's "Cast Iron Soil Pipe and Fittings Handbook" for hubless-coupling joints.
 - 4. Join ductile-iron culvert piping in accordance with AWWA C600 for push-on joints.
 - 5. Join ductile-iron piping and special fittings in accordance with AWWA C600 or AWWA M41.
 - 6. Join corrugated-PE piping in accordance with ASTM D 3212 for push-on joints.
 - 7. Join PVC corrugated sewer piping in accordance with ASTM D 2321 for elastomeric-seal joints.
 - 8. Join nonreinforced-concrete sewer piping in accordance with ASTM C 14 and ACPA's "Concrete Pipe Installation Manual" for rubber-gasketed joints.
 - 9. Join reinforced-concrete sewer piping in accordance with ACPA's "Concrete Pipe Installation Manual" for rubber-gasketed joints.
 - 10. Join dissimilar pipe materials with nonpressure-type flexible couplings.
- B. Join force-main pressure piping in accordance with the following:

1. Join PVC pressure piping in accordance with AWWA M23 for gasketed joints.
2. Join dissimilar pipe materials with pressure-type couplings.

18.4 CLEANOUT INSTALLATION

- A. Install cleanouts and riser extensions from sewer pipes to cleanouts at grade. Use cast-iron soil pipe fittings in sewer pipes at branches for cleanouts and cast-iron soil pipe for riser extensions to cleanouts. Install piping so cleanouts open in direction of flow in sewer pipe.
 1. Use Light-Duty, top-loading classification cleanouts in earth or unpaved foot-traffic areas.
 2. Use Medium-Duty, top-loading classification cleanouts in paved foot-traffic areas.
 3. Use Heavy-Duty, top-loading classification cleanouts in vehicle-traffic service areas.
 4. Use Extra-Heavy-Duty, top-loading classification cleanouts in roads.
- B. Set cleanout frames and covers in earth in cast-in-place concrete block, 18 by 18 by 12 inches deep. Set with tops 1 inch(es) above surrounding earth grade.
- C. Set cleanout frames and covers in concrete pavement and roads with tops flush with pavement surface.

18.5 MANHOLE INSTALLATION

- A. General: Install manholes, complete with appurtenances and accessories indicated.
- B. Install precast concrete manhole sections with sealants in accordance with ASTM C 891.
- C. Where specific manhole construction is not indicated, follow manhole manufacturer's written instructions.
- D. Set tops of frames and covers flush with finished surface of manholes that occur in pavements. Set tops 3 inches above finished surface geo elsewhere unless otherwise indicated.

18.6 CATCH BASIN INSTALLATION

- A. Construct catch basins to sizes and shapes indicated.
- B. Set frames and grates to elevations indicated.

18.7 STORMWATER INLET AND OUTLET INSTALLATION

- A. Construct inlet head walls, aprons, and sides of reinforced concrete, as indicated.
- B. Construct riprap of broken stone, as indicated.
- C. Install outlets that spill onto grade, anchored with concrete, where indicated.
- D. Install outlets that spill onto grade, with flared end sections that match pipe, where indicated.
- E. Construct energy dissipaters at outlets, as indicated.

18.8 CONCRETE PLACEMENT

- A. Place cast-in-place concrete in accordance with ACI 318.

18.9 CHANNEL DRAINAGE SYSTEM INSTALLATION

- A. Install with top surfaces of components, except piping, flush with finished surface.
- B. Assemble channel sections to form slope down toward drain outlets. Use sealants, adhesives, fasteners, and other materials recommended by system manufacturer.
- C. Embed channel sections and drainage specialties in 4- inch-minimum concrete around bottom and sides.
- D. Fasten grates to channel sections if indicated.
- E. Assemble channel sections with flanged or interlocking joints.
- F. Embed channel sections in 4- inch-minimum concrete around bottom and sides.

18.10 CONNECTIONS

- A. Connect nonpressure, gravity-flow drainage piping in building's storm building drains specified in Section 221413 "Facility Storm Drainage Piping."

- B. Connect force-main piping to building's storm drainage force mains specified in Section 221413 "Facility Storm Drainage Piping." Terminate piping where indicated.
- C. Make connections to existing piping and underground manholes.
 - 1. Use commercially manufactured wye fittings for piping branch connections. Remove section of existing pipe; install wye fitting into existing piping; and encase entire wye fitting, plus 6-inch overlap, with not less than 6 inches of concrete with 28-day compressive strength of 3000 psi.
 - 2. Make branch connections from side into existing piping, NPS 4 to NPS 20. Remove section of existing pipe, install wye fitting into existing piping, and encase entire wye with not less than 6 inches of concrete with 28-day compressive strength of 3000 psi.
 - 3. Make branch connections from side into existing piping, NPS 21 or larger, or to underground manholes and structures by cutting into existing unit and creating an opening large enough to allow 3 inches of concrete to be packed around entering connection. Cut end of connection pipe passing through pipe or structure wall to conform to shape of and be flush with inside wall unless otherwise indicated. On outside of pipe, manhole, or structure wall, encase entering connection in 6 inches of concrete for minimum length of 12 inches to provide additional support of collar from connection to undisturbed ground.
 - a. Use concrete that will attain a minimum 28-day compressive strength of 3000 psi unless otherwise indicated.
 - b. Use epoxy-bonding compound as interface between new and existing concrete and piping materials.
 - 4. Protect existing piping, manholes, and structures to prevent concrete or debris from entering while making tap connections. Remove debris or other extraneous material that may accumulate.
- D. Connect to sediment interceptors specified in Section 221323 "Sanitary Waste Interceptors."
- E. Pipe couplings, expansion joints, and deflection fittings with pressure ratings at least equal to piping rating may be used in applications below unless otherwise indicated.
 - 1. Use nonpressure-type flexible couplings where required to join gravity-flow, nonpressure sewer piping unless otherwise indicated.
 - a. Unshielded flexible couplings for same or minor difference OD pipes.
 - b. Unshielded, increaser/reducer-pattern, flexible couplings for pipes with different OD.
 - c. Ring-type flexible couplings for piping of different sizes where annular space between smaller piping's OD and larger piping's ID permits installation.

18.11 CLOSING ABANDONED STORM DRAINAGE SYSTEMS

- A. Abandoned Piping: Close open ends of abandoned underground piping indicated to remain in place. Include closures strong enough to withstand hydrostatic and earth pressures that may result after ends of abandoned piping have been closed. Use either procedure below:
 - 1. Close open ends of piping with at least 8-inch-thick, brick masonry bulkheads.
 - 2. Close open ends of piping with threaded metal caps, plastic plugs, or other acceptable methods suitable for size and type of material being closed. Do not use wood plugs.
- B. Abandoned Manholes and Structures: Excavate around manholes and structures as required and use one procedure below:
 - 1. Remove manhole or structure and close open ends of remaining piping.
 - 2. Remove top of manhole or structure down to at least 36 inches below final grade. Fill to within 12 inches of top with stone, rubble, gravel, or compacted dirt. Fill to top with concrete.

- C. Backfill to grade in accordance with Section 312000 "Earth Moving."

18.12 IDENTIFICATION

- A. Materials and their installation are specified in Section 312000 "Earth Moving." Arrange for installation of green warning tape directly over piping and at outside edge of underground structures.
1. Use warning tape or detectable warning tape over ferrous piping.
 2. Use detectable warning tape over nonferrous piping and over edges of underground structures.

18.13 FIELD QUALITY CONTROL

- A. Inspect interior of piping to determine whether line displacement or other damage has occurred. Inspect after approximately 24 inches of backfill is in place, and again at completion of Project.
1. Submit separate reports for each system inspection.
 2. Defects requiring correction include the following:
 - a. Alignment: Less than full diameter of inside of pipe is visible between structures.
 - b. Deflection: Flexible piping with deflection that prevents passage of ball or cylinder of size not less than 92.5 percent of piping diameter.
 - c. Damage: Crushed, broken, cracked, or otherwise damaged piping.
 - d. Infiltration: Water leakage into piping.
 - e. Exfiltration: Water leakage from or around piping.
 3. Replace defective piping using new materials, and repeat inspections until defects are within allowances specified.
 4. Reinspect and repeat procedure until results are satisfactory.
- B. Test new piping systems, and parts of existing systems that have been altered, extended, or repaired, for leaks and defects.
1. Do not enclose, cover, or put into service before inspection and approval.
 2. Test completed piping systems in accordance with requirements of authorities having jurisdiction.
 3. Schedule tests and inspections by authorities having jurisdiction with at least 24 hours' advance notice.
 4. Submit separate report for each test.
 5. Gravity-Flow Storm Drainage Piping: Test in accordance with requirements of authorities having jurisdiction, UNI-B-6, and the following:
 - a. Exception: Piping with soil tight joints unless required by authorities having jurisdiction.
 - b. Option: Test plastic piping in accordance with ASTM F 1417.
- C. Leaks and loss in test pressure constitute defects that must be repaired.
- D. Replace leaking piping using new materials, and repeat testing until leakage is within allowances specified.

18.14 CLEANING

- A. Clean interior of piping of dirt and superfluous materials. Flush with potable water.

END OF SECTION

GEOTECHNICAL INVESTIGATION REPORT

A Geotechnical Investigation Report for the R G Jones Parking Lot Addition site was performed and attached for review and information. See Appendix A

Section VII: Cost Form

#21269 Cost Form for R G Jones Parking Lot Addition

Vendor must use and complete the Proposal Forms included in this Proposal Package. No other forms will be accepted. Vendor also states that he/she will abide by all terms and conditions of the District as stated in this RFP, and that contractor will maintain the required insurance limits for the duration of the contract. Vendor agrees to hold pricing for a period of ninety (90) days from date of proposal opening. Pricing must be all-inclusive and cover every aspect of the work.

The undersigned proposes to expand the current parking lot at R. G. Jones Elementary School from 49 vehicles to 67 vehicles for Cleveland Metropolitan School District in accordance with the Specifications and to the entire satisfaction of, and acceptance by, the District and for the following prices. The Agreement will begin **June, 2019** pending authorization of funds at the discretion of the District.

The Bidder submitting this form agrees to perform all work described within the Contract Documents for the following Unit Prices:

Ref. No.	Item Description	Quantity	Unit of Measure	Unit Price Labor (\$)	Unit Price Materials (\$)	Total Unit Price (\$)	Item Total (\$)
1	Mobilization	1	Lump Sum				
2	Storm Water Pollution Prevention Measures	1	Lump Sum				
3	Strip and Re-spread Topsoil	255	CY				
4	Earthwork	185	CY				
5	Pavement Marking Removal	180	Lin. Feet				
6	Sign Removal	3	Each				
7	Tree Removal	9	Each				
8	Relocation of Irrigation Backflow Preventer	1	Lump Sum				
9	Asphalt Pavement Removal	165	Square Yard				

10	Concrete Walk Removal	65	Square Yard				
11	Concrete Curb Removal	100	Lin. Feet				
12	Asphalt Pavement	875	Square Yard				
13	Concrete Sidewalk	10	Square Yard				
14	Concrete Curb	385	Lin. Feet				
15	Site Sign	3	Each				
16	Pavement Markings	600	Lin. Feet				
17	Bollard	2	Each				
18	Storm Catch Basin ODOT 2-3	1	Each				
19	Yard Drain	1	Each				
20	8" Storm Sewer	27	Lin. Feet				
21	Re-set and Seal Existing Catch Basin	1	Each				
22	Re-set and Seal Existing Grease Trap Manhole	2	Each				
23	Re-set and Seal Existing Clean Out	1	Each				
24	Pole Mounted Site Light and Foundation	1	Each				
25	Electric Service Line	155	Lin. Feet				
26	Lawn Restoration/Seeding	1	Lump Sum				
27	Landscaping	1	Lump Sum				

Bidder Acknowledgment of All Addenda

No of Addendum: _____

The Bidder submitting this form agree to perform all work described within the Contract Documents for the following Price:

Informal Bid Total

\$

By signature acknowledge the undersigned acknowledges full knowledge of the existing site conditions, plans, specifications and proposed work and warrants that the cost proposed is sufficient for the entirety of the scope contemplated within the contract documents including any miscellaneous items or work not specifically identified, but common to the performance of said work. Likewise these unit prices may be made for the reasonable extension and unlimited deduction of work in calculating change orders associated with such scope modifications.

Bidder acknowledges Owner reserves the right to reject any or all bids.

Bidder acknowledges failure by Bidder to Contract for said services will result in forfeiture of the Bid Security.

Bidder Acknowledges **Completion Date of Substantial Completion Date 30 Days from Notice to Proceed, Restoration Completion 45 Days from Notice to Proceed.**

Bidder Acknowledges **Liquidated Damages of \$800 per day** will apply.

Evidence of Authority to Sign must be attached/affixed and attested by Secretary of Corporation

Please complete the signatory requirement below

Company Name: _____

Representative: _____ (Print Name) _____ (Title)

Signature: _____ Date: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone No: (____) _____ Fax No: (____) _____

E-Mail Address: _____

Appendix A

Geotechnical Report



June 19, 2018

Mr. Robert Kasler
Cleveland Metropolitan School District
3840 Ridge Road
Cleveland, Ohio 44144

RE: Geotechnical Investigation for Proposed R.G. Jones Elementary School Parking Lot Expansion
4550 West 150th Street, Cleveland, OH
MSG Project No: C5760001

Dear Mr. Kasler:

The Mannik & Smith Group, Inc., (MSG) was retained by Cleveland Metropolitan School District (CMSD) to conduct a geotechnical investigation for the proposed R.G. Jones Elementary School parking lot expansion in Cleveland, Ohio. The subject property is located at 4550 West 150th Street. The site location is depicted in *Figure 1, Site Location Map* in Appendix A. This geotechnical investigation was performed in general accordance with MSG Proposal No. OP180426, dated April 23, 2018.

As we understand, the overall project consists of design and construction to add additional vehicular parking area south of the existing parking lot on the west side of the existing building. The proposed parking expansion area is currently grass covered with a concrete walkway through the center of the expansion area going north to south. We understand the pavement expansion will extend approximately 90 to 130 feet south of the existing parking lot and extend to just north of the existing playground area.

FIELD EXPLORATION

Five (5) borings were completed for this geotechnical investigation, advanced to a depth of 5 feet below existing grade. The approximate locations of the borings are shown in *Figure 2, Soil Boring Location Plan* in Appendix A.

On May 23, 2018, MSG performed the borings with a track-mounted drill rig by hydraulically pushing 3.25-inch inner diameter steel casing into the soil in accordance with ASTM D1452. Standard penetration testing (SPT) was conducted in accordance with ASTM D1586 and was completed in 2.5 foot intervals to a depth of 5 feet below existing grade. During the SPT testing, soil samples were obtained with a 2-inch outer diameter split spoon sampler driven 18 inches into the soil with blows of a 140-pound hammer falling 30 inches.

The disturbed samples recovered by the split spoon samplers were visually classified in the field, logged, sealed in sample jars and returned to the MSG's office for examination by a geotechnical engineer. Geotechnical samples are typically stored in the MSG lab for a period of 30 days and can be kept for longer periods upon written notice from the client. A sample storage fee will apply for samples requested to be stored longer than 30 days. At the completion of drilling, all borings were backfilled with soil cuttings and granular bentonite pellets to the ground surface.

TECHNICAL SKILL.
CREATIVE SPIRIT.

SUMMARY OF FINDINGS

The subsurface soil encountered in the bore holes drilled at the site are shown in detail on the soil boring logs contained in Appendix B. Note that the subsurface conditions described herein may vary between and beyond the borings. Laboratory test results are provided in Appendix C.

The surficial material consisted of 11 to 14 inches of topsoil at all borings. Beneath the surficial material, the soil profile generally consisted of a native very stiff to hard brown and gray silty clay with variable amounts of sand and trace amounts of gravel and shale fragments to a depth of about 5 feet below existing grade. However, at B-03 through B-05, a layer of fill or probable fill was encountered beneath the topsoil extending to depths ranging from 1.2 to 2.5 feet below existing grade. This fill/probable fill was encountered above the natural very stiff to hard silty clay and consisted of medium dense gray or brown sand with variable amounts of gravel and rock fragments in B-03 and B-04 and hard brown silty clay intermixed with gray slag fragments in B-05. The native silty clay was generally observed to be dry. The fill/probable fill was observed to be dry to moist. The USCS classification of the native silty clay soil is CL.

The moisture content for the on-site soils ranged from 12.0 to 15.6 percent with an average of about 14 percent, which is representative of a dry to damp material. The Standard Penetration test (SPT) resistance (N) values for the soils ranged from 11 to 32 with an average of 16.

As the borings were advanced, the drill crew checked the drilling rods and the sampling equipment for indications of groundwater or seepage. Each borehole was checked again for groundwater immediately after the completion of drilling. Groundwater was not encountered in any of the soil borings.

SITE PREPARATION

Before proceeding with construction, surface soils, vegetation, topsoil, root systems, refuse, asphalt, concrete including any existing abandoned buried foundations, and other deleterious materials should be stripped from the proposed construction areas. Depending on the time of year of construction and the Contractor's Means and Methods at controlling surface water, it may be possible that portions of the upper 12 to 18 inches of site material including the surface soils will be considered unsuitable and will be required to be stripped during site preparation activities. The on-site soils could become unstable if proper site water controls are not implemented and/or if they are subject to construction traffic. Every effort should be taken to minimize disturbance during compaction or over excavation and where possible, free standing water should be diverted away from the construction perimeter or pumped out using a sump to accommodate the proper compaction techniques.

Generally, areas exposed by stripping operations on which subgrade preparations are to be performed should be compacted in place to 98 percent of Standard Proctor or 95 percent of Modified Proctor.

It is recommended that the prepared subgrade for the pavement areas be proof rolled to detect any unstable areas. Proof rolling should be accomplished by making a minimum of two complete passes in each of two perpendicular directions with a fully-loaded tandem-axle dump truck, or other approved pneumatic-tired vehicle, with a minimum weight of 20 tons. If proof rolling reveals the presence of unstable areas within the subgrade, certain remedial measures will be required to stabilize the subgrade. Depending on the severity of distress encountered during proof rolling, undercutting of 12 to 24 inches below subgrade and backfilling with engineered fill may be performed. If an undercut and replacement of the top 12 to 24 inches fails to stabilize the subgrade, use of granular backfill with geogrid stabilization may be required. Undercuts may be reduced to 12 to 18 inches if geogrid and granular backfill is utilized. Alternately, chemical stabilization of the upper 12 to 18 inches with cement may be performed.

Where fill materials are encountered, such as in the vicinity of B-03 to B-05, visual inspections by the on-site Geotechnical Engineer or his/her designated representative along with proof rolling will be required to determine the suitability of the fill materials and whether undercuts will be required. Based upon the SPT N values in the fill/probable fill in B-03 to B-05, which ranged from 13 to 32 blows per foot, it appears some compaction effort has been performed previously on this material. Undercuts should be anticipated in a few areas where fill materials deemed unsuitable are encountered.

The actual undercut depths and/or subgrade remediation measures required should be determined by the on-site Geotechnical Engineer or his/her designated representative.

Existing abandoned utilities within the proposed location were not identified. However, if such utilities are present, they should be removed and relocated or abandoned in place. If abandoned in place, it is recommended that the utility pipe be filled with cement grout to avoid potential collapse in the future. Should the utility lines be removed from the site, the resultant trench excavations should be backfilled with well-compacted granular material, placed and compacted.

ENGINEERED FILL

Any fill placed in areas which will support new pavement should be free of organics, debris, frozen soils or any other deleterious materials. The native inorganic silty clay is generally considered suitable for reuse as fill but may require moisture conditioning effort. High plasticity clay or organic soils, where encountered, are not considered suitable for reuse as fill.

The fill material should be verified by an approved testing laboratory or by a geotechnical engineering firm. All fine grained fill soils should be checked for plasticity index and liquid limit before placement. Cohesive fill materials should have a liquid limit less than 40 percent and plasticity index less than 20 percent (i.e., non-expansive).

Coarse crushed granular material is recommended as fill for utility trench backfill, replacement of undercut areas and as aggregate base material for pavement areas. The granular material shall consist of natural aggregate materials that meet the gradation requirements of ODOT Item 304, or engineer approved equivalent. Typical lift thickness utilized for this material is 8 inches. In utility trenches, granular backfill material should extend at least two pipe diameters above the pipe's crown. Clay (on-site material) compacted to 95 percent of Modified Proctor can be used as a backfill for the balance of the trench excavation.

Fill should be compacted to 98 percent of the Standard Proctor or 95 percent Modified Proctor maximum dry density and should be compacted at ± 2 percent of optimum moisture content. Fill materials should be placed in horizontal lifts and adequately keyed into stripped and scarified subgrade soils and adjacent fill. Proper drainage should be maintained during and after fill placement to prevent water from impacting compaction efforts or long-term fill integrity. A qualified geotechnical consultant should be retained to monitor fill placement in order to assure compaction requirements are achieved. Soil density testing should be performed during fill placement activities to assure proper fill compaction. A commonly used testing criterion is one test per 2,500 square feet per lift in areas to support proposed structures and one test per 5,000 square feet in parking lots, drive ways, exterior slabs, etc., with a minimum of three tests per lift. Areas that do not achieve compaction requirements after initial placement should be recompacted to meet project requirements.

The actual lift thickness suitable for fill placement is dependent upon the soil type, compaction equipment, and the compaction specification. In general fill should be placed in 9-inch loose thickness lifts; assuming appropriately

weighted and ballasted compaction equipment is utilized. In confined areas where hand operated compaction equipment is required, 4-inch and 6-inch loose thickness lifts should be utilized for hand operated vibratory plate compactors and hand operated vibratory drum rollers weighing at least 1,000 pounds, respectively. Sand fills should be compacted using smooth vibratory rollers. Clay fills should be compacted using a sheep foot compactor. The geotechnical engineer, as part of the construction monitoring, should review the equipment utilized for compaction to confirm suitability relative to the specified loose lift thickness. If necessary, the geotechnical engineer will recommend a revised lift thickness suitable to the equipment performing compaction.

PAVEMENT RECOMMENDATIONS

Site preparation recommendations presented above shall be followed to provide subgrade conditions suitable for pavement support. Adequate drainage should be provided to the pavement structure to ensure a successful pavement service life is achieved. MSG recommends that underdrains be utilized around catch basins and in other low areas of the proposed pavements to limit the accumulation of water below the pavement structures. Surface edge drains should also be used at curbs.

California Bearing Ratio (CBR) testing was not performed. Based on the soil characteristics from the geotechnical investigation and anticipated proposed elevations, a CBR value of 6 was assumed for the prepared subgrade. Pavement design information was not provided for this project. The pavement design input parameters are established based on the procedures contained in the 1993 Guide for Design of Pavement Structures by AASHTO. For the basis of the design, MSG assumed the following input parameters:

Table 1
ASSUMED PAVEMENT DESIGN PARAMETERS

Design Life	20 Years
Design ESAL	100,000 (Light Duty); 1,000,000 (Heavy Duty)
Reliability	80 %
Original Serviceability Index	4.2 (Flexible Paving); 4.5 (Rigid Paving)
Terminal Serviceability Index	2.0
Overall Standard Deviation	0.45 (Flexible Paving); 0.35 (Rigid Paving)

For flexible pavement design, MSG assumed structural number coefficients of 0.42 and 0.14 for asphalt concrete and aggregate base, respectively. Based on the above assumptions, recommended flexible pavement sections are provided in the following table.

Table 2
RECOMMENDED FLEXIBLE PAVEMENT SECTIONS

Pavement Materials*	Light Duty	Heavy Duty
Surface Course	1.5	1.5
Intermediate Course	2.0	3.5
Aggregate Base (MDOT 21AA)	8.0	10.0

* Use pavement materials as outlined above, or engineer/owner approved equivalent.

For rigid pavement design, MSG assumed a concrete elastic modulus (E_c) of 5,000,000 psi, a concrete rupture modulus (S'_c) of 700 psi and a load transfer coefficient (J) of 2.7. Based on the above assumptions, recommended rigid pavement sections are provided in the following table.

Table 3
RECOMMENDED RIGID PAVEMENT SECTIONS

Pavement Materials*	Light Duty	Heavy Duty
Portland Cement Concrete	6.0	8.0
Aggregate Base (MDOT 21AA)	8.0	8.0

* Use pavement materials as outlined above, or engineer/owner approved equivalent.

EXCAVATION AND SLOPE

Familiarity with applicable local, state and federal safety regulations, including current OSHA excavation and trench safety is vital. Therefore it should be a requisite for both the Owner and Contractor with the Contractor by and large being responsible for the safety of the site. Activities at the site, such as utilities or building demolition and site preparation, may require excavations at significant depths below the ground surface. Slope height, slope inclination, and excavation depth (including utility trench excavations) should in no case exceed those specified in local, state, or federal safety (OSHA Health and Safety Standards for Excavations, 29 CFR Part 1926 Subpart P) regulations. Such regulations are strictly enforced and, if not followed, the Owner, Contractor, or earthwork or utility Subcontractors could be liable for substantial penalties. Maximum allowable slopes for excavations less than 20 feet based on soil type and angle to horizontal are reflected in Table 4.

The overburden soils encountered during our investigation were generally composed of very stiff to hard silty clay. Based upon the data obtained, we anticipate OSHA will classify site soils as Type A soil. Flatter slopes will be required if seepage conditions occur during construction or if subsurface sand lenses are encountered. For permanent excavations and slopes, the grades should be no steeper than 4(H):1(V) without further geotechnical review of the finalized grading plan. If any excavation, including a utility trench, is extended to a depth of more than 20 feet, OSHA requires that a Professional Engineer design the side slopes of such excavations.

Table 4
ALLOWABLE SLOPES

Soil Type	H:V	Slope Angle
Stable Rock	Vertical	90°
Type A	¾:1	53°
Type B	1:1	45°
Type C	1 ½ : 1	34°
Type A (Short-Term) for a maximum excavation depth of 12 ft.	½:1	63°

GROUNDWATER CONTROL

The project civil engineer is responsible for designing the surface drainage improvements. Groundwater was not observed at any of the soil boring locations during the on-site drilling activities. Typically, the groundwater elevation fluctuates and is higher during the winter and spring and lower in summer and early fall. The amount and type of dewatering required during construction will depend on the weather, groundwater levels at the time of construction, and the effectiveness of the Contractor's techniques in preventing surface water runoff from entering open excavations and lowering the groundwater table. Given the cohesive nature of the soils encountered on-site, the Contractor should be prepared to address general water infiltration (i.e. pumping water from prepared sumps). The use of perimeter drains and/or sub-drains may be necessary on approval of the site civil design engineer. To minimize surface water, slopes in pavement areas should consist of 1.5 percent slopes towards inlets or drainage structures.

CLOSURE

The evaluations, conclusions, and recommendations in this report are based on our interpretation of the field and laboratory data obtained during the geotechnical investigation, our understanding of the project and our experience with similar sites and subsurface conditions. Data used during this exploration included:

- Five (5) exploratory borings;
- Observations of the project site by our staff; and,
- Results of laboratory soil testing.


The subsurface conditions discussed in this report and those shown on the boring logs represent an estimate of the subsurface conditions based on interpretation of the boring data using normally accepted geotechnical engineering judgements. Although individual test borings are representative of the subsurface conditions at the locations on the dates shown, they are not necessarily indicative of subsurface conditions at other locations or at other times. MSG is not responsible for independent conclusions, opinions, or recommendations made by others based upon information presented in this report. The project plans and specifications should be reviewed by the geotechnical engineer to confirm that the geotechnical aspects are generally consistent with the recommendations of this report. In addition, site preparation, structural fill compaction activities, and pavement construction activities should be monitored by the geotechnical engineer.

We appreciate the opportunity to be of continued service to this project and look forward to working with CMSD on future projects. Feel free to contact us with any questions concerning this submittal.

Sincerely,



Sarah Abdumajeed
Project Engineer



Jeffrey L. Snyder, PE
Geotechnical Group Manager

Submitted: One (1) Electronic Copy via email
File

Attachments: Appendix A – Figures, Appendix B – Soil Boring Logs, Appendix C – Soil Laboratory Test Data

APPENDIX A

FIGURE 1 – SITE LOCATION MAP
FIGURE 2 – SOIL BORING LOCATION PLAN



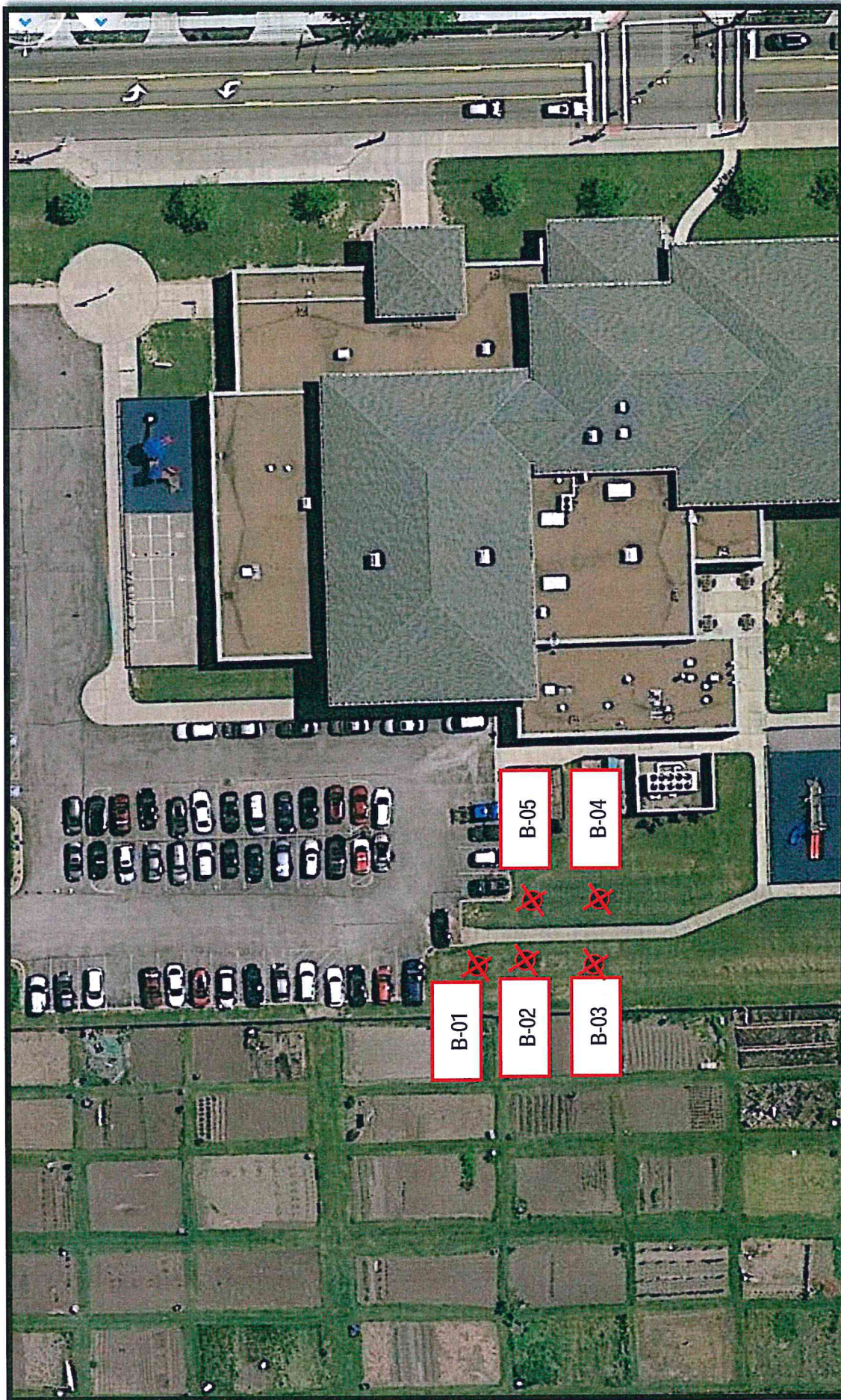


Map Adapted from Google Earth
2018[®]

Figure 1: Site Location Map
R. G. Jones Elementary School Parking Lot Expansion
Cleveland, Ohio

23225 Mercantile Road
Beachwood, Ohio 44122
Tel: 216-378-1490
Fax: 216-378-1497
www.MannikSmithGroup.com





Map Adapted from Google Earth
2018 ©

Figure 2: Soil Boring Location Plan
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APPENDIX B

SOIL BORING LOGS



GENERAL SOIL SAMPLE NOTES

Unless noted, all terms utilized herein refer to the Standard Definitions presented in ASTM D653.

Standard Penetration Test (ASTM D1586): A 2.0-inch outside-diameter (O.D.), 1-3/8-inch inside-diameter (I.D.) split barrel sampler is driven into undisturbed soil by means of a 140-pound weight falling freely through a vertical distance of 30 inches. The sampler is normally driven three successive 6-inch increments. The total number of blows required for the final 12 inches of penetration is the Standard Penetration Resistance (N).

COHESIVE SOILS			COHESIONLESS SOILS	
Consistency	Approximate Range of N	Unconfined Compressive Strength (psf)	Density Classification	Approximate Range of N
Very Soft	0 – 1	Below 500	Very Loose	0 – 4
Soft	2 – 4	500 – 1,000	Loose	5 – 10
Medium Stiff	5 – 8	1,000 – 2,000	Medium Dense	11 – 30
Stiff	9 – 15	2,000 – 4,000	Dense	31 – 50
Very Stiff	16 – 30	4,000 – 8,000	Very Dense	Over 50
Hard	31 – 50	8,000 – 16,000		
Very Hard	Over 50	Over 16,000		

CLASSIFICATION

The major soil constituent is the principal noun, i.e. sand, silt, gravel. The second major soil constituent and other minor constituents are reported as follows:

Second Major Constituent (percent by weight)	Minor Constituents (percent by weight)
Trace – 1% to 11%	Trace – 1% to 11%
Adjective – 12% to 35% (clayey, silty, etc.)	Little – 12% to 22%
And – Over 35%	Some – 23% to 33%

PARTICLE SIZES
















Boulders	- Greater than 12 inches (305 mm)
Cobbles	- 3 inches (76.2 mm) to 12 inches (305 mm)
Gravel:	Coarse - ¾ inches (19.05 mm) to 3 inches (76.2 mm)
	Fine - No. 4 (4.75 mm) to ¾ inches (19.05 mm)
Sand:	Coarse - No. 10 (2.00 mm) to No. 4 (4.75 mm)
	Medium - No. 40 (0.425 mm) to No. 10 (2.00 mm)
	Fine - No. 200 (0.074 mm) to No. 40 (0.425 mm)
Silt	- 0.005 mm to 0.074 mm
Clay	- Less than 0.005 mm

If clay content is sufficient so that clay dominates soil properties, clay becomes the principal noun with the other major soil constituent as modifier: i.e., silty clay. Other minor soil constituents may be included in accordance with the classification breakdown for cohesionless soils: i.e., silty clay, trace sand, little gravel.

If sand particle size is greater than 11% by weight of the total sample weight, the adjective (i.e., fine, medium or coarse) is added to the soil description for the sand portion of the sample, provided sand is the major or second major constituent.

SAMPLE DESIGNATIONS

AS	Auger Sample - directly from auger flight	ST	Shelby Tube Sample - 3-inch diameter unless otherwise noted
BS	Miscellaneous Samples - Bottle or Bag	PS	Piston Sample - 3-inch diameter unless otherwise noted
MC	Macro-Core Sample - 2.25-inch O.D., 1.75-inch I.D., 5 feet long polyethylene liner	RC	Rock Core - NX core unless otherwise noted
LB	Large-Bore (Micro-Core) Sample - 1-inch diameter, 2 feet long polyethylene liner	CS	CME Continuous Sample - 5 feet long, 3-inch diameter unless otherwise noted
SS	Split Spoon Sample - 1-inch or 2-inch O.D.	HA	Hand Auger
LS	Split Spoon (SS) Sampler with 3 feet long liner insert	DP	Drive Point
NR	No Recovery	CM	Coring Machine

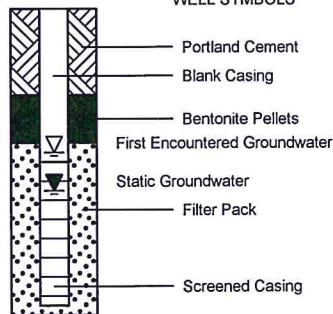
MAJOR DIVISIONS					TYPICAL NAMES
COARSE-GRAINED SOILS MORE THAN HALF IS COARSER THAN NO. 200 SIEVE	GRAVELS MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS WITH LESS THAN 15% FINES	GW		WELL-GRADED GRAVELS WITH OR WITHOUT SAND
			GP		POORLY-GRADED GRAVELS WITH OR WITHOUT SAND
		GRAVELS WITH 15% OR MORE FINES	GM		SILTY GRAVELS WITH OR WITHOUT SAND
			GC		CLAYEY GRAVELS WITH OR WITHOUT SAND
	SANDS MORE THAN HALF COARSE FRACTION IS FINER THAN NO. 4 SIEVE SIZE	CLEAN SANDS WITH LESS THAN 15% FINES	SW		WELL-GRADED SANDS WITH OR WITHOUT GRAVEL
			SP		POORLY-GRADED SANDS WITH OR WITHOUT GRAVEL
		SANDS WITH 15% OR MORE FINES	SM		SILTY SANDS WITH OR WITHOUT GRAVEL
			SC		CLAYEY SANDS WITH OR WITHOUT GRAVEL
FINE-GRAINED SOILS MORE THAN HALF IS FINER THAN NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT 50% OR LESS		ML		INORGANIC SILTS OF LOW TO MEDIUM PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
			CL		INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
			OL		ORGANIC SILTS OR CLAYS OF LOW TO MEDIUM PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50%		MH		INORGANIC SILTS OF HIGH PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
			CH		INORGANIC CLAYS OF HIGH PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
			OH		ORGANIC SILTS OR CLAYS OF HIGH PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
HIGHLY ORGANIC SOILS			PT		PEAT AND OTHER HIGHLY ORGANIC SOILS

SYMBOLS KEY

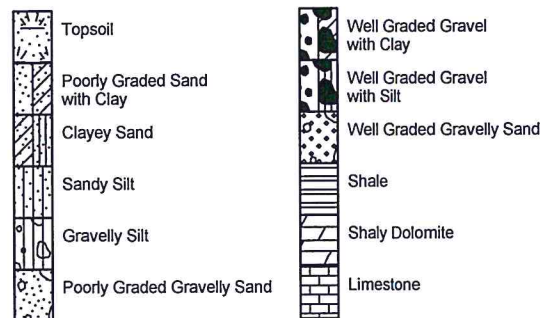
SAMPLE TYPES

Split Spoon sample, 1 inch or 2 inch outer-diameter.

WELL SYMBOLS



OTHER MATERIAL SYMBOLS



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BORING / WELL LOG KEY



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www.manniksmithgroup.com

BORING ID: B-01

PAGE 1 OF 1

CLIENT Cleveland Metropolitan School District PROJECT NAME R.G. Jones Elementary
PROJECT NUMBER C5760001 PROJECT LOCATION Cleveland, Ohio
DATE STARTED 5/23/18 COMPLETED 5/23/18 BORING COORDINATES N/A
DRILLING METHOD Direct Push with 3.25 Casing GROUND ELEVATION _____
DRILLING CONTRACTOR MSG TOTAL DEPTH 5.0 FT BACKFILL Cuttings and bentonite
DRILL RIG 6620 DT Geoprobe HAMMER TYPE Automatic ENGINEER ON RIG JET CHECKED BY JLS
DRILLER NT REMARKS N/A

GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (FEET)	SAMPLE TYPE NUMBER	BLOW COUNTS	SPT N VALUE	RECOVERY % (RQD)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	MOISTURE CONTENT (%)	▲ SPT N VALUE ▲	ATTERBERG LIMITS
										10 20 30 40	PL MC LL
										◇ UNCONF. COMP. STRENGTH (PSF) ◇	□ DRY DENSITY (PCF) □
	Topsoil (12")	0.0								2000 4000 6000 8000	100 110 120 130
	Hard, brown and gray silty CLAY, trace gravel and sand, dry (CL)	2.5	SS 1	12-6-10	16	67		9000+ ^P	13		
		5.0	SS 2	7-5-8	13	78		9000+ ^P			
	Bottom of borehole at 5.0 feet.										

LEGEND:

▽ WATER LEVEL AT TIME OF DRILLING N/A

▽ WATER LEVEL AT END OF DRILLING N/A

▽ WATER LEVEL AFTER DRILLING N/A

D = UCS TEST PERFORMED ON DISTURBED SAMPLE

P = POCKET PENETROMETER TEST

T = TORVANE SHEAR TEST



GEOTECH STANDARD LOG - GINT STD US LAB.GDT - 6/18/18 16:14 - W:\PROJECTS\PROJECTS A-E\C5760001\ADMIN\GEOTECH\LAB\C5760001_SOIL BORINGS.GPJ



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BORING ID: B-02

PAGE 1 OF 1

CLIENT Cleveland Metropolitan School District PROJECT NAME R.G. Jones Elementary
PROJECT NUMBER C5760001 PROJECT LOCATION Cleveland, Ohio
DATE STARTED 5/23/18 COMPLETED 5/23/18 BORING COORDINATES N/A
DRILLING METHOD Direct Push with 3.25 Casing GROUND ELEVATION _____
DRILLING CONTRACTOR MSG TOTAL DEPTH 5.0 FT BACKFILL Cuttings and bentonite
DRILL RIG 6620 DT Geoprobe HAMMER TYPE Automatic ENGINEER ON RIG JET CHECKED BY JLS
DRILLER NT REMARKS N/A

GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (FEET)	SAMPLE TYPE NUMBER	BLOW COUNTS	SPT N VALUE	RECOVERY % (RQD)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	MOISTURE CONTENT (%)	▲ SPT N VALUE ▲	ATTERBERG LIMITS
										10 20 30 40	PL MC LL
										◇ UNCONF. COMP. STRENGTH (PSF) ◇	□ DRY DENSITY (PCF) □
		0.0								2000 4000 6000 8000	100 110 120 130
	Topsoil (14")										
	Very stiff to hard, brown and gray silty CLAY, trace to little sand, trace gravel, trace shale fragments, dry (CL)	2.5	SS 1	10-4-7	11	67		7000 ^P			
			SS 2	6-7-9	16	100		9000+ ^P	15		
		5.0									
	Bottom of borehole at 5.0 feet.										

LEGEND:

▽ WATER LEVEL AT TIME OF DRILLING N/A

▽ WATER LEVEL AT END OF DRILLING N/A

▽ WATER LEVEL AFTER DRILLING N/A

D = UCS TEST PERFORMED ON DISTURBED SAMPLE

P = POCKET PENETROMETER TEST

T = TORVANE SHEAR TEST



GEOTECH STANDARD LOG - GINT STD US LAB.GDT - 6/18/18 16:14 - W:\PROJECTS\PROJECTS A-E\C5760001\ADMIN\GEOTECH\LAB\C5760001_SOIL BORINGS.GPJ



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BORING ID: B-04

PAGE 1 OF 1

CLIENT Cleveland Metropolitan School District PROJECT NAME R.G. Jones Elementary
PROJECT NUMBER C5760001 PROJECT LOCATION Cleveland, Ohio
DATE STARTED 5/23/18 COMPLETED 5/23/18 BORING COORDINATES N/A
DRILLING METHOD Direct Push with 3.25 Casing GROUND ELEVATION _____
DRILLING CONTRACTOR MSG TOTAL DEPTH 5.0 FT BACKFILL Cuttings and bentonite
DRILL RIG 6620 DT Geoprobe HAMMER TYPE Automatic ENGINEER ON RIG JET CHECKED BY JLS
DRILLER NT REMARKS N/A

GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (FEET)	SAMPLE TYPE NUMBER	BLOW COUNTS	SPT N VALUE	RECOVERY % (RQD)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	MOISTURE CONTENT (%)	▲ SPT N VALUE ▲	ATTERBERG LIMITS		
										10 20 30 40	PL	MC	LL
										◇ UNCONF. COMP. STRENGTH (PSF) ◇	□ DRY DENSITY (PCF) □		
		0.0								2000 4000 6000 8000	100	110	120 130
	Topsoil (11")												
	Medium dense, brown SAND, little silt, moist (PROBABLE FILL) (SP)												
	Hard, brown and gray silty CLAY, little sand, trace gravel, dry (CL)												
		2.5	SS 1	2-6-7	13	72		9000+ ^P					
			SS 2	3-6-6	12	100		9000+ ^P	16				
	Contains shale fragments	5.0											
	Bottom of borehole at 5.0 feet.												

LEGEND:

▽ WATER LEVEL AT TIME OF DRILLING N/A

▽ WATER LEVEL AT END OF DRILLING N/A

▽ WATER LEVEL AFTER DRILLING N/A

D = UCS TEST PERFORMED ON DISTURBED SAMPLE

P = POCKET PENETROMETER TEST

T = TORVANE SHEAR TEST



GEOTECH STANDARD LOG - GINT STD US LAB.GDT - 6/18/18 16:14 - W:\PROJECTS\PROJECTS A-E\C5760001\ADMIN\GEOTECH\LAB\C5760001_SOIL BORINGS.GPJ



The Mannik & Smith Group, Inc.
23225 Mercantile Road, Beachwood, OH 44122
ph: (216) 378-1490 fax: (216) 378-1497
www.manniksmithgroup.com

BORING ID: B-05

PAGE 1 OF 1

CLIENT Cleveland Metropolitan School District PROJECT NAME R.G. Jones Elementary
PROJECT NUMBER C5760001 PROJECT LOCATION Cleveland, Ohio
DATE STARTED 5/23/18 COMPLETED 5/23/18 BORING COORDINATES N/A
DRILLING METHOD Direct Push with 3.25 Casing GROUND ELEVATION _____
DRILLING CONTRACTOR MSG TOTAL DEPTH 5.0 FT BACKFILL Cuttings and bentonite
DRILL RIG 6620 DT Geoprobe HAMMER TYPE Automatic ENGINEER ON RIG JET CHECKED BY JLS
DRILLER NT REMARKS N/A

GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (FEET)	SAMPLE TYPE NUMBER	BLOW COUNTS	SPT N VALUE	RECOVERY % (RQD)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	MOISTURE CONTENT (%)	▲ SPT N VALUE ▲	ATTERBERG LIMITS
										10 20 30 40	PL MC LL
										◇ UNCONF. COMP. STRENGTH (PSF) ◇	□ DRY DENSITY (PCF) □
		0.0								2000 4000 6000 8000	100 110 120 130
	Topsoil (12")										
	Hard, brown silty CLAY, intermixed with gray slag fragments, damp	2.5	SS 1	9-26-6	32	100		8000 ^P	12		
	Hard, brown and gray silty CLAY, trace sand, dry (CL)		SS 2	6-7-9	16	100		9000+ ^P			
	Bottom of borehole at 5.0 feet.	5.0									

LEGEND:

▽ WATER LEVEL AT TIME OF DRILLING N/A

▽ WATER LEVEL AT END OF DRILLING N/A

▽ WATER LEVEL AFTER DRILLING N/A

D = UCS TEST PERFORMED ON DISTURBED SAMPLE

P = POCKET PENETROMETER TEST

T = TORVANE SHEAR TEST



GEOTECH STANDARD LOG - GINT STD US LAB.GDT - 6/18/18 16:14 - W:\PROJECTS\PROJECTS A-E\C5760001\ADMIN\GEOTECH\LAB\C5760001_SOIL BORINGS.GPJ

APPENDIX C

SOIL LABORATORY TEST DATA





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SUMMARY OF LABORATORY RESULTS

PAGE 1 OF 1



CLIENT Cleveland Metropolitan School District

PROJECT NAME R.G. Jones Elementary

PROJECT NUMBER C5760001

PROJECT LOCATION Cleveland, Ohio

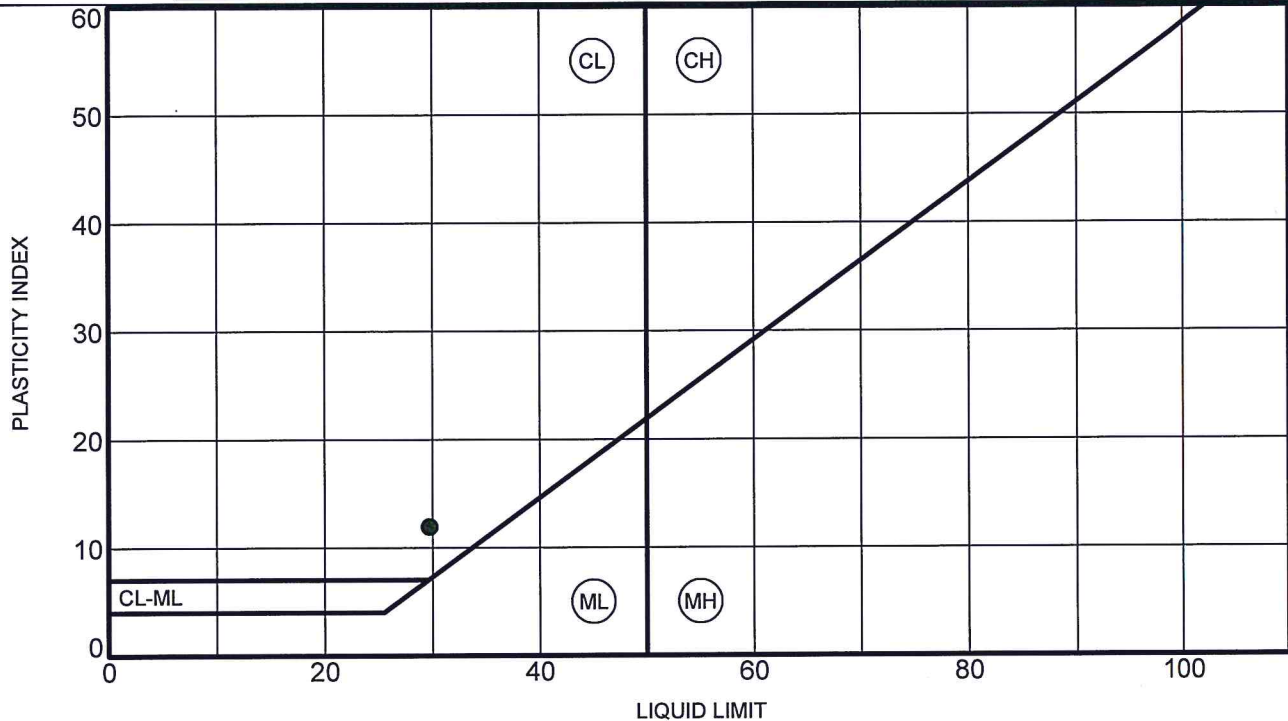
Boring No. / Sample No.	Depth	Liquid Limit	Plastic Limit	Plasticity Index	Maximum Size (mm)	%<#200 Sieve	Classification	Water Content (%)	Bulk Density (pcf)	Saturation (%)	Specific Gravity
B-01 / SS-1	1.0							13.1			
B-02 / SS-2	3.5							15.4			
B-03 / SS-2	3.5	30	18	12	9.525	74	CL	14.3			
B-04 / SS-2	3.5							15.6			
B-05 / SS-1	1.0							12.0			

CLIENT Cleveland Metropolitan School District

PROJECT NAME R.G. Jones Elementary

PROJECT NUMBER C5760001

PROJECT LOCATION Cleveland, Ohio

[illegible]



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GRAIN SIZE DISTRIBUTION

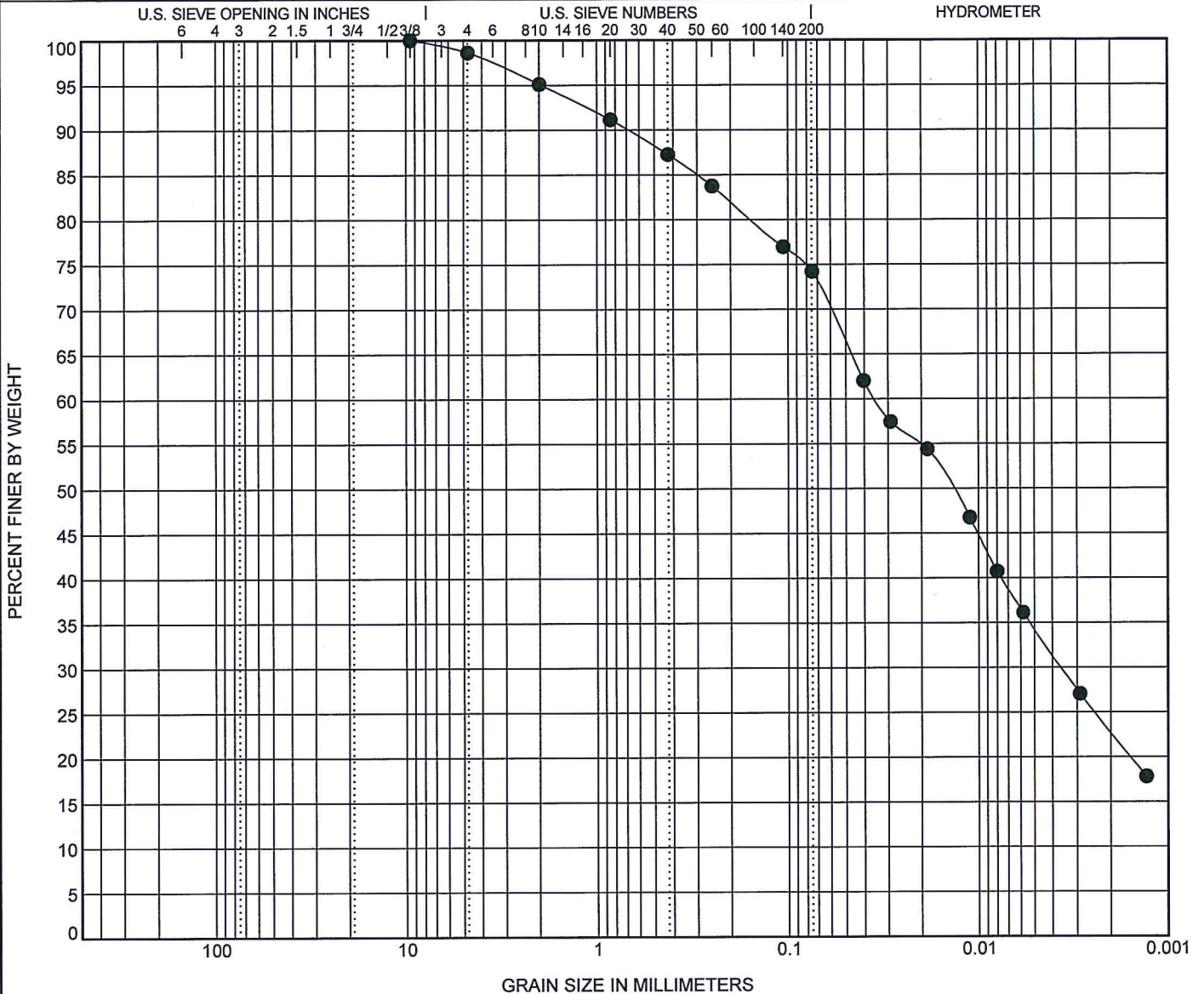


CLIENT Cleveland Metropolitan School District

PROJECT NAME R.G. Jones Elementary

PROJECT NUMBER C5760001

PROJECT LOCATION Cleveland, Ohio



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification			Classification				LL	PL	PI	Cc	Cu
●	B-03 / SS-2	3.5	LEAN CLAY with SAND (CL)				30	18	12		
Specimen Identification			D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay	
●	B-03 / SS-2	3.5	9.525	0.035	0.004		1.4	24.4	51.4	22.8	

GRAIN SIZE - GINT STD US LAB.GDT - 8/18/18 16:20 - W:\PROJECTS\PROJECTS A-EIC5760001\ADMIN\GEO\TECH\LAB\IC5760001_SOIL BORINGS.GPJ



Project No.	C5760001
Date	6/11/201
Tested by:	MJG
Checked by:	FRK

[illegible]