

PROGRESSIVE
COMPANIES



PROJECT MANUAL FOR:

**CAPITAL AREA TRANSPORTATION AUTHORITY
GRAND AVENUE BUS LANE
420 SOUTH GRAND AVE.
LANSING, MI 48933
PROJECT NO. 75820025
ISSUED FOR BID
MAY 12, 2026**

This page intentionally left blank

**PROJECT MANUAL FOR:
CAPITAL AREA TRANSPORTATION AUTHORITY
GRAND AVENUE BUS LANE
420 S. GRAND AVE.
LANSING, MI 48933**

**PREPARED FOR:
CAPITAL AREA TRANSPORTATION AUTHORITY
4615 TRANTER STREET
LANSING, MI 48910**

**PREPARED BY:
(PROGRESSIVE COMPANIES)
616/361-2664 (TELEPHONE)**

PROJECT NO: 75820025

MAY 12, 2026 - ISSUED FOR BID

THIS DOCUMENT HAS BEEN PREPARED BY PROGRESSIVE COMPANIES AS AN INSTRUMENT OF SERVICE, AND PROGRESSIVE COMPANIES SHALL RETAIN ALL COMMON LAW, STATUTORY AND OTHER RESERVED RIGHTS, INCLUDING THE COPYRIGHT THERETO.

This page intentionally left blank

TABLE OF CONTENTS

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

00 0102	PROJECT INFORMATION
00 1113	ADVERTISEMENT FOR BIDS
00 2113	INSTRUCTIONS TO BIDDERS
00 4000	PROCUREMENT FORMS AND SUPPLEMENTS
00 4100	BID FORM
00 4325	SUBSTITUTION REQUEST FORM
00 4336	PROPOSED SUBCONTRACTORS FORM
00 5000	CONTRACTING FORMS AND SUPPLEMENTS
00 5433	AVAILABILITY OF DIGITAL DATA
00 6313	REQUEST FOR INTERPRETATION FORM

DIVISION 01 - GENERAL REQUIREMENTS

01 1000	SUMMARY
01 2000	PRICE AND PAYMENT PROCEDURES
01 2500	SUBSTITUTION PROCEDURES
01 3000	ADMINISTRATIVE REQUIREMENTS
01 3219	SUBMITTALS SCHEDULE
01 4000	QUALITY REQUIREMENTS
01 4100	REGULATORY REQUIREMENTS
01 4533	CODE-REQUIRED SPECIAL INSPECTIONS AND PROCEDURES
01 5713	TEMPORARY EROSION AND SEDIMENT CONTROL
01 6000	PRODUCT REQUIREMENTS
01 7000	EXECUTION AND CLOSEOUT REQUIREMENTS

DIVISION 02 - EXISTING CONDITIONS

02 4100	DEMOLITION
---------	------------

DIVISION 03 - CONCRETE

03 1000	CONCRETE FORMING AND ACCESSORIES
03 2000	CONCRETE REINFORCING
03 3000	CAST-IN-PLACE CONCRETE

DIVISION 31 - EARTHWORK

31 2200	GRADING
31 2316	EXCAVATION
31 2323	FILL

DIVISION 32 - EXTERIOR IMPROVEMENTS

32 1120	SUBBASE AND AGGREGATE BASE COURSES
32 1216	ASPHALT PAVING
32 1313	CONCRETE PAVING
32 1723	PAVEMENT MARKINGS

DIVISION 33 - UTILITIES

33 4230	STORMWATER DRAINS
---------	-------------------

This page intentionally left blank

SECTION 00 0102 PROJECT INFORMATION

PART 1 GENERAL

1.01 PROJECT IDENTIFICATION

- A. The Owner, hereinafter referred to as Owner: Capital Area Transportation Authority

1.02 PROJECT DESCRIPTION

- A. Summary Project Description: Construction of a new bus lane on S Grand Avenue adjacent to CATA Transportation Center.
- B. Contract Terms: Lump sum (fixed price, stipulated sum).
- C. The currently occupied premises at the project site are open for examination by bidders only during the at all hours.

1.03 PROJECT CONSULTANTS

- A. The Architect, hereinafter referred to as Architect.
 - 1. Address: 1811 4 Mile Road NE.
 - 2. City, State, Zip: Grand Rapids MI 49525.
 - 3. Phone/Fax: 616.361.2664.

1.04 PROCUREMENT TIMETABLE

- A. Pre-Bid Meeting: 511 Washington Avenue, Lansing MI to be held on Monday, May 18th 2026 at 2:00 PM.
- B. Last Request for Substitution Due: End of day on June 1, 2026.
- C. Last Request for Interpretation Due: End of day on June 1, 2026.
- D. Bid Due Date: 06-30-2026, before 2 PM local time.
- E. Bid Opening: Same day, 2 PM local time.
- F. Notice to Proceed: Within 14 days after contract execution.
- G. Bids May Not Be Withdrawn Until: 90 days after due date.
- H. Contract Time: To be stated in bid documents.
- I. Anticipated Construction Start: Not later than 09-28-2026.
- J. Desired Final Completion Date: Not later than 56 calendar days from Notice to Proceed.
- K. The Owner reserves the right to change the schedule or terminate the entire procurement process at any time.

1.05 PROCUREMENT DOCUMENTS

- A. Availability of Documents: Complete sets of procurement documents may be obtained:
 - 1. From the Architect at the address listed above.

1.06 BID SECURITY

- A. Bids shall be accompanied by a security deposit as follows:
 - 1. Bid Bond of a sum no less than 5 percent of the Bid Amount on AIA A310 Bid Bond Form.
 - 2. Security made payable to Owner in an amount of five percent of proposer's maximum proposal sum.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

This page intentionally left blank

SECTION 00 1113 ADVERTISEMENT FOR BIDS

FROM:

1.01 THE OWNER (HEREINAFTER REFERRED TO AS OWNER):

- A. Capital Area Transportation Authority

1.02 AND THE ARCHITECT (HEREINAFTER REFERRED TO AS ARCHITECT):

- A. Progressive Companies

1.03 DATE: MAY 12, 2026

1.04 TO: POTENTIAL BIDDERS

- A. Your firm is invited to submit an offer under seal to Owner for construction of a a new bus lane located at 420 S Grand Ave, Lansing, MI 48933 before 2:00 pm local standard time on the 30 day of June, 2026, for:
- B. Project: Capital Area Transportation Authority Grand Avenue Bus Lane
- C. Architect's Project Number: Design Professional's Project Number 75820025.
- D. Project Description: Construction of a new bus lane and sidewalk..
- E. Bid Documents for a Stipulated Sum contract may be obtained from the office of the Owner free of charge upon receipt of a refundable deposit, by cash, in the amount of \$0 for one set.
- F. Bidders will be required to provide Bid security in the form of a Bid Bond of a sum no less than 5 percent of the Bid Amount.
- G. Submit your offer on the Bid Form provided. Bidders may supplement this form as appropriate.
- H. Your offer will be required to be submitted under a condition of irrevocability for a period of 90 days after submission.
- I. The Owner reserves the right to accept or reject any or all offers.

END OF SECTION

This page intentionally left blank

SECTION 00 2113 INSTRUCTIONS TO BIDDERS

SUMMARY

1.01 THE INSTRUCTIONS IN THIS DOCUMENT AMEND OR SUPPLEMENT THE INSTRUCTIONS TO BIDDERS AND OTHER PROVISIONS OF THE BIDDING AND CONTRACT DOCUMENTS.

1.02 DOCUMENT INCLUDES

- A. Bid Documents and Contract Documents
 - 1. Definitions
 - 2. Contract Documents Identification
 - 3. Availability
 - 4. Examination
 - 5. Inquiries/Addenda
- B. Bid Submission
- C. Bid Enclosures/Requirements
 - 1. Security Deposit
 - 2. Bid Form Requirements

INVITATION

2.01 BID SUBMISSION

- A. Bids signed and under seal, executed, and dated will be received at the office of the Owner at 4615 Tranter Street, Lansing, MI 48910 before 2:00 p.m. local standard time on 30th day of June, 2026. Sealed envelopes to be labeled: Attention Nicole Wilson, Purchasing Department, Grand Ave. Bus Lane.

2.02 INTENT

- A. The intent of this Bid request is to obtain an offer to perform work to complete project named Capital Area Transportation Authority Grand Avenue Bus Lane for a Stipulated Sum contract, in accordance with Contract Documents.

2.03 WORK IDENTIFIED IN THE CONTRACT DOCUMENTS

- A. Work of this proposed Contract comprises site development and demolition, including general construction Work.

2.04 CONTRACT TIME

- A. Perform the Work in 56 calendar days.

BID DOCUMENTS AND CONTRACT DOCUMENTS

3.01 CONTRACT DOCUMENTS IDENTIFICATION

- A. Contract Documents are identified as Owner's Project Number 75820025, as prepared by Architect, and with contents as identified in the Project Manual.

3.02 AVAILABILITY

- A. Bid Documents may be obtained at the office of Architect, electronically. Contact Gary Runions at grunions@weareprogressive.com and Pam Young at pyoung@weareprogressive.com.

3.03 INQUIRIES/ADDENDA

- A. Direct questions to Gary Runions grunions@weareprogressive.com and Steve Teitsma at Steitsma@weareprogressive.com. Provide project name in email heading and subject matter.
- B. Addenda may be issued during the bidding period. All Addenda become part of Contract Documents. Include resultant costs in the Bid Amount.
- C. Verbal answers are not binding on any party.
- D. Clarifications requested by bidders must be in writing no later than the end of day, June 1, 2026. The reply will be in the form of an Addendum, a copy of which will be forwarded to known recipients and plan holders..

3.04 PRODUCT/ASSEMBLY/SYSTEM SUBSTITUTIONS

- A. General Requirements for Substitution Requests:
- B. Substitution Request Time Restrictions:
 - 1. Where the Bid Documents stipulate a particular product, substitutions will be considered no later than the end of day, June 1, 2026.
- C. Substitution Request Form:

SECTION 00 2113 INSTRUCTIONS TO BIDDERS

1. Submit substitution requests by completing the form in Section 00 4325; see this section for additional information and instructions. Use only this form; other forms of submission are unacceptable.
- D. Review and Acceptance of Request:
 1. Architect may or may not approve the proposed substitution. If approved, the request will issue an Addendum to known bidders.
 2. For approved substitutions, include representation of changes in the bid, if any, required in the work and changes to Contract Time and Contract Sum to accommodate such substitutions. A later claim by the bidder for an addition to the Contract Time or Contract Sum because of changes in work necessitated by use of substitutions will not be considered.

SITE ASSESSMENT

4.01 SITE EXAMINATION

- A. Examine the project site before submitting a bid.
- B. A visit to the project site has been arranged for bidders as follows: Immediately following the Pre-bid Meeting

4.02 PREBID CONFERENCE

- A. A bidders conference has been scheduled for 2:00 p.m. on the 9th day of June at the location of 511 Washington Ave, Lansing, MI.
- B. All general contract bidders and suppliers are invited.
- C. Representatives of Architect will be in attendance.
- D. Summarized minutes of this meeting will be circulated to attendees. These minutes will not form part of Contract Documents.
- E. Information relevant to the Bid Documents will be recorded in an Addendum, issued to Bid Document recipients.

QUALIFICATIONS

5.01 EVIDENCE OF QUALIFICATIONS

- A. To demonstrate qualification for performing the Work of this Contract, bidders may be requested to submit written evidence of financial position, license to perform work in the State of MI.

5.02 SUBCONTRACTORS/SUPPLIERS/OTHERS

- A. Owner reserves the right to reject a proposed subcontractor for reasonable cause.
- B. Refer to General Conditions.

BID SUBMISSION

6.01 SUBMISSION PROCEDURE

- A. Bidders shall be solely responsible for the delivery of their bids in the manner and time prescribed.
- B. Submit one copy of the executed offer on the Bid Forms provided, signed and sealed with the required security in a closed opaque envelope, clearly identified with bidder's name, project name, and Owner's name on the outside, Attention Nicole Wilson, Purchasing Department, Grand Ave. Bus Lane.

6.02 BID INELIGIBILITY

- A. Bids that are unsigned, improperly signed or sealed, conditional, illegible, obscure, contain arithmetical errors, erasures, alterations, or irregularities of any kind, may at the discretion of the Owner, be declared unacceptable.

BID ENCLOSURES/REQUIREMENTS

7.01 SECURITY DEPOSIT

- A. Bids shall be accompanied by a security deposit as follows:
 1. Bid Bond of a sum no less than 5 percent of the Bid Amount on AIA A310 Bid Bond Form.
- B. Endorse the Bid Bond in the name of the Owner as obligee, signed and sealed by the principal (Contractor) and surety.
- C. The security deposit will be returned after delivery to the Owner of the required Performance and Payment Bond(s) by the accepted bidder.

SECTION 00 2113 INSTRUCTIONS TO BIDDERS

- D. Include the cost of bid security in the Bid Amount.
- E. After a bid has been accepted, all securities will be returned to the respective bidders and other requested enclosures.
- F. If no contract is awarded, all security deposits will be returned.

7.02 PERFORMANCE ASSURANCE

- A. Include the cost of performance assurance bonds in the Bid Amount.

7.03 FEDERAL CERTIFICATIONS

- A. Bidders must submit the following with their bid if it is considered to be responsive:
 - 1. Bid Bond
 - 2. DBE Participation Form
 - 3. Certification of Primary Contractor Regarding Debarment, Suspension and Other Responsibility Matters
 - 4. Certification of Lower-Tier Participants (Sub-Contractors) Regarding Debarment, Suspension and Other Responsibility Matters
 - 5. Iran Economic Sanctions Act Certificate
 - 6. Bidders List Data Form
 - 7. Bidders Information Form
 - 8. Terms and Conditions
 - 9. Certificate Regarding Lobbying
 - 10. Build America Buy America Certification
 - 11. David-Bacon Act Wage Rates

OFFER ACCEPTANCE/REJECTION

8.01 DURATION OF OFFER

- A. Bids shall remain open to acceptance and shall be irrevocable for a period of 90 days after the bid closing date.

8.02 ACCEPTANCE OF OFFER

- A. Owner reserves the right to accept or reject any or all offers.
- B. After acceptance by Owner, Architect on behalf of Owner, will issue to the successful bidder, a written Bid Acceptance.

END OF SECTION

DBE PARTICIPATION FORM

INSTRUCTIONS FOR DBE FORM COMPLETION IS ON THE FOLLOWING PAGE

BLANK forms are NOT acceptable. If DBE subcontractor opportunities are available, please fill out sections 1 thru 5.
If no subcontractor opportunities are available fill out section 6. **SIGNATURES ARE REQUIRED.**
Separate forms are required for each DBE subcontractor. This form may be duplicated as necessary.

1. DBE Firm Name: _____

Address: _____

2. Dollar amount awarded: _____

3. Description of work to be performed:

4. CONTRACTOR'S COMMITMENT TO USE DBE FIRM

_____, is committed to utilize the DBE contractor to utilize the above named
(Name of Contractor) DBE subcontractor/supplier in the manner and amount described on this form.

Dated _____ (Authorized Signature)

5. DBE'S COMMITMENT TO PARTICIPATE

_____, as a DBE firm, is committed to perform the work as described above for the
(Name of subcontractor/supplier) amount specified.

Dated _____ (Authorized Signature)

6. NO SUBCONTRACT OPPORTUNITIES AVAILABLE

_____, has no subcontractor opportunities available for work to be performed.
(Name of subcontractor/supplier)

Dated _____ (Authorized Signature)

DBE PARTICIPATION FORM - INSTRUCTIONS

1. **DBE Firm Name:** _____
Address: _____
_____ Sub-contractor name and address _____

2. **Dollar amount awarded:** _____ Amount awarded to Sub contractor _____

3. **Description of work to be performed:** _____
_____ Work description _____

4. **CONTRACTOR'S COMMITMENT TO USE DBE FIRM** Prime contractor fills out
_____, is committed to utilize the DBE contractor to utilize the above-named DBE
(Name of Contractor) subcontractor/supplier in the manner and amount described on this form.
Dated _____ (Authorized Signature)

5. **DBE'S COMMITMENT TO PARTICIPATE** Sub-contractor fills out
_____, as a DBE firm, is committed to perform the work as described above for the
(Name of subcontractor/supplier) amount specified.
Dated _____ (Authorized Signature)

6. **NO SUBCONTRACT OPPORTUNITIES AVAILABLE.** Prime contractor fills out
_____, has no subcontractor opportunities available for work to be performed
(Name of subcontractor/supplier)
Dated _____ (Authorized Signature)

CERTIFICATION OF PRIMARY CONTRACTOR REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS

The Primary Contractor, _____, certifies to the best of its knowledge and belief, that it and its principals:

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
2. Have not within a three (3) year period preceding this proposal 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;
3. 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 offense enumerated in paragraph (2) of this certification; and
4. Have not within a three (3) year period preceding this application/proposal had one (1) or more public transactions (Federal, State, or Local) terminated for cause or default.

If the above named Primary Contractor is unable to certify to any of the statements in this certification, the Primary Contractor shall attach an explanation to this certification.

The Primary Contractor, _____, certifies or affirms the truthfulness and accuracy of the contents of the statements submitted on or with this certification and understands that the provision of 31 U.S.C. Section 3801 et seq. are applicable thereto.

Bidder: _____

Signature: _____

Printed Name: _____

Title: _____

Date: _____

CERTIFICATION OF LOWER-TIER PARTICIPANTS (SUB-CONTRACTORS) REGARDING DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY MATTERS

Debarment and Suspension Certification (Lower-Tier Covered Transaction)

This form is to be submitted by each Subcontractor receiving an amount exceeding \$25,000.

The prospective lower-tier participant (Proposer) certifies, by submission of this Proposal, that neither it nor its "principals" as defined at 49 CFR § 29.105(p) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

If the prospective Proposer is unable to certify to the statement above, it shall attach an explanation, and indicate that it has done so by placing an "X" in the following space: _____

THE PROPOSER, _____, CERTIFIES OR AFFIRMS THE TRUTHFULNESS AND ACCURACY OF EACH STATEMENT OF ITS CERTIFICATION AND EXPLANATION, IF ANY. IN ADDITION, THE PROPOSER UNDERSTANDS AND AGREES THAT THE PROVISIONS OF 31 USC §§ 3801 ET SEQ. APPLY TO THIS CERTIFICATION AND EXPLANATION, IF ANY.

Name and title of the Proposer's authorized official:

Authorized signature

Date

IRAN ECONOMIC SANCTIONS ACT CERTIFICATE

In accordance with the Iran Economic Sanctions Act, Michigan 2012 PA 517, effective April 1, 2013, (MCL 129.311, *et seq.*), the undersigned certifies in support of its bid or proposal that it is not an Iran linked business as such is defined in the Act.

Bidder: _____

Signature: _____

Printed Name: _____

Title: _____

Date: _____

BIDDERS LIST DATA FORM

CATA is required pursuant to 49 CFR Part 26(c) to create and maintain a comprehensive Bidders List. The information provided on this Bidders List Data Form will be used to determine the relative availability of Disadvantaged Business Enterprises (DBE's) and non-DBE's and will assist with establishing CATA's annual DBE goal. CATA's Bidders List is a compilation of bidders, proposers, quoters, sub-contractors, and suppliers of materials and services who have submitted bids during the advertising periods of a solicitation for services and/or goods.

Please provide the following information:

1. Firm Name: _____
2. Firm Address: _____

3. Firm Phone Number: _____
4. Name of firm's majority owner: _____
5. Title of firm's majority owner: _____
6. Race of firm's majority owner: _____
7. Gender of firm's majority owner: _____
8. Phone number of firm's majority owner: _____
9. Email address of firm's majority owner: _____
10. Age of Firm: _____ Years _____ Months
11. Provide North American Industry Classification System (NAICS) code(s) that best defines your firm:

(NAICS code applicable to each scope of work the firm sought to perform in its bid)
12. Is the firm a certified DBE under Michigan's Department of Transportation (MDOT) Unified certification Program (UCP)? Yes No
13. For certified DBE's under the MDOT UPC is/are the NAICS code(s) above the NAICS code(s) which you are certified as a DBE? Yes No
14. Will the firm subcontract any work, service and/or materials? Yes* No
*If yes, please have all subcontractor(s) complete their own Bidders List Data Form.
15. Firm's annual gross receipts:
 - Less than \$1 Million
 - \$1-3 Million
 - \$3-6 Million
 - \$6-10 Million
 - Over \$10 Million

Authorized Signature: _____ Date: _____

Printed Name: _____ Title: _____

THIS FORM MUST BE COMPLETED AND RETURNED WITH YOUR PROPOSAL.

SUPPLIER INFORMATION FORM

Instructions: This form is to be completed and included in the proposal submission.
Attach additional pages if necessary.

<p>1. Name of firm: _____</p> <p>2. Address: _____</p> <p>3. <input type="checkbox"/> Individual <input type="checkbox"/> Partnership <input type="checkbox"/> Corporation <input type="checkbox"/> Joint Venture</p> <p>4. Date organized: _____ State in which incorporated: _____</p> <p>5. Names of officers or partners:</p> <p style="margin-left: 20px;">a. _____</p> <p style="margin-left: 20px;">b. _____</p> <p style="margin-left: 20px;">c. _____</p> <p style="margin-left: 20px;">d. _____</p> <p>6. How long has your firm been in business under its present name? _____</p>
<p>7. Have you been terminated or defaulted in the past five (5) years on any contract you were awarded? Have you been barred by Federal process or any State? Has your firm ever defaulted on a performance bond? <input type="checkbox"/> Yes <input type="checkbox"/> No If YES, then attach as SCHEDULE ONE the full particulars regarding each occurrence.</p> <p>8. In the past five (5) years, have you failed to complete any contract on which you were awarded? <input type="checkbox"/> Yes <input type="checkbox"/> No If YES, then attach as SCHEDULE TWO the full particulars regarding each occurrence.</p> <p>9. Have you had any litigation within the past (5) years involving any current or former projects with clients or government agencies? <input type="checkbox"/> Yes <input type="checkbox"/> No If YES, then attach as SCHEDULE THREE the findings of any litigation including the status of each case.</p>
<p>The undersigned certifies the accuracy of all information:</p> <p>Name and title: _____</p> <p>Company: _____</p>
<p>Authorized signature: _____ Date: _____</p>

STANDARD TERMS AND CONDITIONS OF PROCUREMENT

1. **CHANGES.** CATA, at any time, by a written order, and without notice to the sureties, may make changes within the general scope of this contract, in (a) drawings, designs or specifications where the supplies to be furnished are specifically manufactured for CATA in accordance therewith; (b) method of shipment or packing; and (c) place of delivery. If any such change causes a substantial increase or decrease in the cost of, or the time required for performance of this contract, whether changed or not changed by such order, the parties shall agree to an equitable adjustment by written modification of the contract. If the parties cannot so agree, CATA shall have the option to terminate the contract. Any claim by the Contractor for adjustment under this clause must be asserted within thirty (30) days from the date of receipt by the Contractor of the notification of change.
2. **TERMINATION FOR DEFAULT.** CATA, by written notice, may terminate the contract, in whole or in part, for failure of the Contractor to perform any of the provisions of the contract. In such event, the Contractor shall be liable for all damages CATA incurs, including the excess cost of reprocurring similar supplies or services, provided, that if (a) it is determined for any reason that the Contractor was not in default or, (b) the Contractor's failure to perform is without his control, fault or negligence, the termination shall be deemed to be a termination for convenience under the following Paragraph 3.
3. **TERMINATION FOR CONVENIENCE.** CATA, by written notice, may terminate the contract, in whole or in part, for any reason when it determines it is in the best interest of CATA. If this contract is so terminated, the Contractor shall be compensated only for costs actually incurred and/or services actually performed prior to the time of notification of termination.
4. **TRANSITION RESPONSIBILITIES.** Upon termination of the contract for any reason, if CATA requests Contractor must reasonably assist with restoring CATA's data and/or materials to CATA and with any mandatory activities required for transition.
5. **ADDITIONAL INFORMATION.** The Contractor shall promptly furnish any additional information requested by CATA.
6. **CONTRACTOR RESPONSIBILITY.** The Contractor shall assume responsibility to ensure all materials used are suitable for CATA's needs whether the same is manufactured by the Contractor or purchased ready made from a source outside Contractor's company.
7. **DELIVERY.** Service and/or equipment will be delivered to Capital Area Transportation Authority, 4615 Tranter Street, Lansing, Michigan 48910. Invoices shall be furnished with the delivery of each item, service, or as otherwise specified in the contract. CATA reserves the right to inspect, but is not required to so inspect, all deliveries or services before acceptance.
8. **BREACH OF CONTRACT.** If the Contractor shall fail, refuse or neglect to comply with the terms of these contract conditions, such failure shall be deemed a total and material breach of the contract. Contractor shall be subject to all legal causes of actions, rights, and remedies that CATA may have and CATA may recover, in addition to any damages or costs relating to Contractor's breach , its reasonable attorneys' fees resulting from Contractor's breach.
9. **DISPUTES (AFTER BID AWARD).** Except as otherwise provided in the contract, any dispute concerning a question of fact arising under the contract which is not disposed of by agreement between CATA and Contractor shall be decided by CATA's Program Manager in writing, with a copy mailed or otherwise furnished to the Contractor. The decision of CATA shall be final and conclusive unless within ten (10) days from the date of receipt of such copy, the Contractor mails or otherwise furnishes to CATA a written appeal addressed to CATA's Chief Executive Officer for the determination of such appeal, which shall be final and conclusive, unless determined by a court of competent jurisdiction to have been fraudulent or capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or not supported by substantial evidence. In connection with any appeal proceeding under this clause, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of its appeal. Pending a final decision of the dispute, the Contractor shall proceed diligently with the performance of the contract and in accordance with CATA's decision.
10. **DELIVERY EXTENSION AND DELAYS.** CATA reserves the right to extend, postpone or reschedule delivery in case the delivery of service equipment, under this contract, shall be necessarily delayed because of strike, injunction, civil disturbance, pandemic/endemic, force majeure, government controls, or by reason of any cause or circumstance beyond the control of the Contractor. In the

event of such a delay, Contractor must notify CATA in writing. CATA shall reasonably extend the time of completion or a delivery by a number of days to be determined in each instance by CATA.

11. **INSTALLATION.** If specified in the contract, the Contractor shall install and place in operation, subject to approval by CATA, the equipment at the Contractor's expense within thirty (30) days from issuance of a notice to install issued by CATA.
12. **INSTALLATION EXTENSION AND DELAYS.** CATA reserves the right to extend, postpone, or reschedule installation in case the installation of equipment under this contract shall be necessarily delayed because of strike, injunction, civil disturbance, pandemic/endemic, force majeure, government controls, or by reason or cause or circumstances beyond the control of the Contractor. The time of completion or installation shall be extended by a reasonable number of days to be determined in each instance by CATA.
13. **ASSEMBLY.** If required for the equipment to be operational and suitable for CATA's purposes, the Contractor shall assemble the equipment at its expense prior to installation.
14. **ACCESSORIES.** The Contractor shall furnish, without additional cost, all accessories required to permit CATA to operate any equipment being provided.
15. **COMMUNICATION AND TRAINING.** Contractor shall confer as necessary and cooperate with CATA in order that the services performed under the contract may proceed in an efficient and satisfactory manner. Contractor's work will include all conferences, consultations, hearings, or appearances deemed necessary by CATA to ensure that Contractor will be able to properly and fully perform the objectives as set forth in the contract. The Contractor, without additional cost, shall properly train CATA personnel in the operation and maintenance of the equipment provided.
16. **SERVICE MANUAL AND WIRING SCHEMATIC.** If specified, the Contractor will provide at least one copy of a service manual and at least one copy of a wiring schematic for individual components and other schematics and drawings.
17. **WARRANTY.** Contractor unconditionally guarantees that the quality of its work and warrants all work, services, and equipment it performs and/or provides under the contract will meet or exceed CATA's requirements and expectations. In addition to any other warranty, Contractor shall perform all obligations under the contract in a satisfactory manner as shall be determined within the sole and reasonable discretion of CATA. If CATA is dissatisfied with the quality of Contractor's work or Contractor's performance under the contract for any reason, CATA shall provide written notice to Contractor. If Contractor fails to remedy any quality or performance issue within 30 days from the date of this written notice, CATA shall have the right to immediately terminate the contract with no further obligations to Contractor, financial or otherwise. The Contractor shall describe its policy or warranty(s) both on workmanship and material as applying to the equipment, along with the method or adjustment, and shall be further subject to warranty requirements of CATA as set forth in the following Paragraph 17. The Contractor agrees that the supplies or services furnished under this contract shall be covered by the most favorable warranties the Contractor gives any customer for such equipment and that the rights and remedies provided herein are in addition to and do not limit any rights afforded to CATA by any other clause of this contract.
18. **PERFORMANCE GUARANTY.** Contractor must at all times have financial resources sufficient, in the opinion of CATA to ensure performance of the contract and must provide proof upon request. CATA may require a performance bond if, in the opinion of the CATA, it is necessary to ensure performance of the contract. If required, as provided in federal regulations and modified by FTA guidance, for each Project or related activities implementing the Underlying Agreement that involve construction, it will provide bid guarantee bonds, contract performance bonds, and payment bonds.
19. **INSURANCE.** The Contractor shall place and maintain with responsible insurance carriers the following insurance. The Contractor shall deliver to CATA, upon request, certificates of insurance which shall provide thirty (30) days' written notice to be given to CATA in the event of cancellation. Contractor shall require all Subcontractors to maintain adequate insurance coverage.

(a) Workers' Compensation and Employer's Liability Insurance.

- (1) Workers' Compensation in compliance with the applicable state and federal laws.
- (2) Employer's Liability. Limit \$1,000,000.

- (b) Commercial General Liability Insurance, including Professional Liability, Blanket contractual, XCU Hazards, Broad Form Property Damage, Completed Operations, and Independent Contractor's Liability, all applicable to Personal Injury, Bodily Injury and Property Damage to a combined single limit of \$1,000,000 each occurrence/claim, subject to a \$2,000,000 annual aggregate for Professional Liability, Completed Operations and Personal Injury other than Bodily Injury.
- (c) Automobile Liability Insurance, including owned, hired and non-owned automobiles, Bodily Injury and Property Damage, to a combined single limit of \$1,000,000 each occurrence.
- (d) Cyber Liability Insurance, to a combined single limit of \$1,000,000 each occurrence/claim.

Occurrence-based policies must be maintained for the duration of the contract. Claims-made policies must be maintained for that period and until all applicable statutes of limitations have expired. Contractor's insurance must be primary so that any CATA insurance is excess, secondary, and non-contributing. Contractor agrees to name CATA as an additional insured on any applicable policies including, but not limited to the liability insurance policy, to provide the fullest insurance and indemnification to CATA allowed by the policy and applicable law. Contractor's insurance must be written by carrier's authorized to write insurance in Michigan and having at least an A- rating in the most recently published version of A.M. Best Company Insurance Ratings. Contractor's insurance must be endorsed to provide that the policy will not be canceled or materially changed without 30 days written notice to CATA (or if this endorsement cannot be obtained, Contractor will give CATA at least 30 days' advance notice before any policy is cancelled or its terms are materially altered). Each of Contractor's insurance policies must waive all of their subrogation rights with respect to losses payable under the policy.

Contractor must provide a copy of its insurance policies complying with the terms of the contract to CATA if CATA so requests. CATA is under no obligation to request such policies.

20. INDEMNIFICATION, HOLD HARMLESS, DEFENSE, AND WAIVER OF CLAIMS. While insurance can be used to satisfy this obligation, not limited by the protection afforded by any policy of insurance, to the fullest extent permitted by law Contractor agrees to indemnify, defend, and hold harmless CATA and, if applicable, the Michigan Department of Transportation, the Federal Transit Administration, and all of each of their officers, agents, and employees thereof, without reservation, from and against any and all liabilities, obligations, penalties, claims, charges, demands, causes of action, losses, damages, costs and expenses, whether determined to be valid or only alleged, in any way related to Contractor's obligations and/or performance of the contract including, but not limited to: (a) any breach by Contractor (or any of Contractor's employees, agents, subcontractors, or by anyone else for whose acts any of them may be liable) of any of the promises, agreements, representations, warranties, or insurance requirements contained in the contract; (b) any infringement, misappropriation, or other violation of any intellectual property right or other right of any third party; (c) any bodily injury, death, or damage to real or tangible personal property occurring wholly or in part due to action or inaction by Contractor (or any of Contractor's employees, agents, subcontractors, or by anyone else for whose acts any of them may be liable); and (d) any acts or omissions of Contractor (or any of Contractor's employees, agents, subcontractors, or by anyone else for whose acts any of them may be liable).

CATA shall promptly notify Contractor of any claim as to which it seeks defense and indemnification and provide reasonable cooperation. Contractor shall have the right to select counsel and to control the defense, so long as CATA consents and agrees to the counsel, such approval within the sole discretion of CATA.

To the fullest extent permitted by law, Contractor hereby waives any and all claims against CATA and agrees not to hold CATA liable for any damages including, but not limited to, personal injury or property damage incurred by Contractor or its employees while performing services under the contract.

21. CATA will not be subject to any obligations or liabilities by Subcontractors of the Contractor or their Subcontractors or any other person not a party to this contract without its specific consent and notwithstanding its concurrence in or approval of the award of any contract or subcontract or the solicitation thereof.

22. ACCEPTANCE OF MATERIAL - NO RELEASE. Unless CATA otherwise agrees in writing, acceptance of any portion of the material prior to final acceptance shall not release the Contractor from liability for faulty workmanship or materials or for failure to fully comply with all of the terms of this contract. CATA reserves the right and shall be at liberty to inspect all materials and workmanship at any time during the manufacturing process, and shall have the right to reject all materials and workmanship which do not conform with the contract requirements and specifications; provided, however, that CATA is under no duty to make such inspection and no inspection so made shall relieve Contractor from any obligation to furnish materials and workmanship in accordance with the contract requirements and specifications.
23. FINAL ACCEPTANCE. All services performed by Contractor under the contract are subject to review and approval of CATA for completeness and fulfillment of the requirements of the contract. CATA's review, approval, or payment for any services shall never be construed to operate as a waiver of any rights under the contract, and Contractor shall be and will remain liable in accordance with applicable law for all damages to CATA caused by Contractor's negligent performance or nonperformance of any services furnished under the contract or any representations made under or in performance of the contract. Final undisputed payment for services or equipment under the contract shall commence the warranty period.
24. NO ASSIGNMENT OF CONTRACT. The contract is only with Contractor and may not be assigned by Contractor to any other person or entity without CATA's written consent. Any assignment in violation of this paragraph shall be void and shall provide the opportunity to CATA to void the contract, at its sole choice and election.
25. DEFECTIVE WORKMANSHIP AND MATERIAL. When and as often as CATA determines that the work done or being done under the contract or the kind of quality or materials supplied in connection therewith are not fully and completely in accordance with any requirement of the contract documents, it may give notice of such noncompliance to the Contractor in writing and the Contractor shall immediately upon receipt of such notice do all things required to remedy such noncompliance without additional cost to CATA. If the Contractor fails to comply with such written notice, then CATA, upon written notice to the Contractor, shall deduct the cost of repair, replacement or correction of defective or damaged work from the compensation due or to become due to the Contractor, or terminate the contract in its sole discretion.
26. WAIVER. No failure by CATA to insist upon the strict performance of any covenant, duty, obligation, agreement, or condition of the contract or to exercise any right or remedy consequent upon a breach thereof shall constitute waiver of any such breach of any other covenant, duty, obligation, agreement, or condition. Neither the assessment of liquidated damages or penalties nor any failure to assess liquidated damages or penalties shall be construed to waive or excuse performance requirements or any rights CATA has to damages or penalties under the contract
27. CONFIDENTIALITY AND OWNERSHIP OF DATA AND DOCUMENTS.
- (a) All original documents, calculations, and work product produced by Contractor, whether produced on paper or electronic media or otherwise in performance of the contract, and all data gathered through provision of services shall be the sole and exclusive property of CATA. Contractor shall make available to CATA copies of all Contractor correspondence, notes, and other papers relating to the work, upon request of CATA. All works of original authorship created in the scope of the contract are "works made for hire," as that term is used in connection with the U.S. Copyright Act.
 - (b) To the extent that by operation of law Contractor retains any intellectual property rights to any work product, Contractor hereby irrevocably assigns and licenses to CATA all right, title, and interest in such work product, including copyrights and patents, and agrees to execute such assignments and licenses as may be required in the opinion of CATA's legal counsel to confirm this provision.
 - (c) To the extent that the work product produced by Contractor contains standard design or construction details or other standardized material previously developed by Contractor in its professional practice, then Contractor shall have the right to reuse any such material on other

projects for other clients or persons without the prior knowledge or permission of CATA and without the payment of any compensation to CATA, provided that the reuse or continued use of such material contains no CATA identifying information or confidential information.

- (d) In order that the Contractor may effectively fulfill its obligations under the contract, it may be necessary or desirable for CATA to disclose confidential and/or proprietary information to the Contractor. Since it is difficult to separate confidential and proprietary information from that which is not, the Contractor shall regard, and shall instruct its employees to regard, all information gained from CATA as confidential and such information shall not be disclosed to any organization or individual without court order or the prior written consent of CATA. With respect to a subpoena, court order or other legal process, Contractor shall notify CATA of the demand for information before responding, and shall comply with this provision to the extent practicable. The above obligation shall not apply to information already in the public domain or information required to be disclosed by a court order. Contractor agrees to take appropriate action with respect to its employees to ensure that the foregoing obligations of non-use and non-disclosure of confidential information shall be fully satisfied.
- (e) PATENT RIGHTS. Contractor agrees that:
 - a. (1) Depending on the nature of the Underlying Agreement, the Federal Government may acquire patent rights when the Contractor produces a patented or patentable invention, improvement, or discovery; (2) The Federal Government's rights arise when the patent or patentable information is conceived or reduced to practice with federal assistance provided through the Underlying Agreement; or (3) When a patent is issued or patented information becomes available as described in the preceding section 17(a)(2) of this Master Agreement, the Contractor will notify FTA immediately and provide a detailed report satisfactory to FTA.
 - b. Federal Rights. Contractor agrees that: (1) Its rights and responsibilities in that federally assisted invention, improvement, or discovery will be determined as provided in applicable federal laws, regulations, requirements, and guidance, including any waiver thereof; and (2) Unless the Federal Government determines otherwise in writing, irrespective of its status or the status of Contractor as a large business, small business, state government, state instrumentality, local government, Indian tribe, nonprofit organization, institution of higher education, or individual, the Contractor will transmit the Federal Government's patent rights to FTA, as specified in 35 U.S.C. § 200, et seq., and U.S. Department of Commerce regulations, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," 37 CFR Part 401.
 - c. License Fees and Royalties. Consistent with the applicable U.S. DOT Common Rules, the Contractor agrees that license fees and royalties for patents, patent applications, and inventions produced with federal assistance provided through the Underlying Agreement are program income, and must be used in compliance with applicable federal requirements.

28. COMPUTATION OF TIME. In computing a period of time prescribed by these conditions, the following rules apply:

- (a) "Day" means days of the week (e.g., Monday through Friday), not business days.
- (b) The day of the act or event after which the designated period of time begins is not included.
- (c) The last day of the period is included, unless it is a Saturday, Sunday, or legal holiday. In that event, the period runs until the end of the next day that is not a Saturday, Sunday or legal holiday.

29. JURISDICTION. This Contract will be governed by the internal laws of the State of Michigan without reference to its choice of law rules. Exclusive jurisdiction and venue of any suit, action or claim relating to this contract will be in the Ingham County Circuit Court or the Federal District Court for the Western District of Michigan.

30. **COST COMPUTATION.** The Federal Acquisition Regulation, 48 CFR, Chapter 1, Part 31.2, as now existing or hereinafter amended, shall be used, in all instances, to determine the amount of costs incurred by Contractor that CATA shall be required to pay, or reimburse, to Contractor, including, without limitation, where the contract requires CATA to pay Contractor's costs as part of the contract price, where the contract price is adjusted resulting from changes to the requirements of the contract, and when calculating the amount due Contractor pursuant to Termination for Convenience clause.
31. **TRAVEL EXPENSES.** CATA shall not reimburse Contractor for travel costs, including accommodations, meals, transportation and fuel costs, unless the travel activity and the travel costs have been approved in advance by an authorized representative of CATA. All travel costs to be paid by CATA shall not exceed amounts determined in conformance with the Federal Acquisition Regulation, 48 CFR Section 31.205-46, Travel Costs.
32. **EXTENSION.** CATA has the right, in its sole discretion, to extend the term of the contract beyond the term and subsequent options outlined in the contract. Any such extension after the options outlined above must be in writing and upon terms mutually agreed between CATA and Contractor.
33. **TIME IS OF THE ESSENCE.** Contractor agrees time is of the essence in the performance of the contract. Failure to perform as required may, in CATA's sole discretion, be declared a material breach of contract.
34. **CONTRACTOR EMPLOYEES.** Contractor warrants and represents that its employees who will perform work under the contract are properly educated, trained and/or licensed to perform the services under the contract. Contractor shall perform all its obligations under the contract without the use of a subcontractor, unless CATA grants express written approval for the use of a subcontractor before such services are performed. Approval of a subcontractor is in CATA's sole discretion and is not required under any circumstance. In the event any such subcontractor is approved, Contractor's invoices and subcontractor receipts/invoices should clearly show that no mark-up costs, commissions or sales taxes were incurred. CATA will not pay mark-up or tax on any outside services which are obtained by Contractor.
35. **INDEPENDENT CONTRACTOR.** Contractor's relationship to CATA is independent-contractor-to-client. None of Contractor's personnel are employees of CATA, and CATA is not a partner of Contractor. Contractor expressly acknowledges and agrees that it and its employees are not and will not for any purposes be considered employees, agents, or representatives of CATA. Contractor shall be responsible for any and all taxes, worker's compensation insurance, and any other work-related expenses, including but not limited to work performed under contract for CATA. Contractor shall be solely responsible for the actions of its employees and/or contractors and agrees to fully defend, indemnify, and hold CATA harmless, without reservation for any claims or causes of action which arise as a result of their actions.
36. **MEDIA CONTACT AND RELEASES.** Contractor will not issue any public announcement or media release of any kind regarding the contract, the services performed or additional services or projects which relate to the contract, or any incident that occurs while performing services under the contract without the prior written approval of CATA, and then only to the extent of and in accordance with instructions given with such approval. CATA will be responsible for providing all public information materials on the services performed under the contract.
37. **INVOICING.** CATA shall not incur any expense until and only to the extent that services are provided by Contractor and such services are properly invoiced. If Contractor satisfactorily performs the required work under the contract. CATA will pay Contractor for the work performed as outlined in the Proposal, if the same is properly invoiced. Contractor is responsible to submit a complete, proper, and timely invoice to CATA for any orders under the contract. Failure to do so will relieve CATA of the obligation to pay. Each invoice must include invoice number, time period covered by the invoice, description of work completed, contact person and phone number, and payment remit address. CATA will pay each undisputed invoice within 30 days after receipt if that invoice meets the itemization and other requirements described in the contract. CATA may withhold from one or more invoices all amounts disputed in reasonable detail by CATA within 90 days of the date of invoice. Payment does not waive claims that CATA may have against Contractor. Contractor must continue to provide services regardless of any fee, price, or charge dispute.
38. **INTERPRETATION.**
 - (a) References to laws, documents and other written materials include amendments that may be

made from time to time.

- (b) References to days mean calendar days. Any deadline or end of any time period that does not fall on a business day extends through the next business day. Business day means any calendar day other than a Saturday, Sunday or other day on which financial institutions close.
 - (c) If any provision of these General Terms and Conditions conflicts with a provision required by law or contract, including, but not limited to those mandated by MDOT, FTA, US DOT, or other mandatory provision, the mandatory provision shall prevail.
39. RISK OF LOSS. Until final acceptance, title and risk of loss or damage to any materials remains with Contractor. Contractor is responsible for filing, processing, and collecting all damage claims. CATA will record and report to Contractor any evidence of visible damage. If the CATA rejects any equipment or materials, Contractor must remove them from the premises within 10 calendar days after notification of rejection. The risk of loss of rejected or non-conforming equipment or materials remains with Contractor. Rejected equipment or materials not removed by Contractor within 10 calendar days will be deemed abandoned by Contractor, and CATA will have the right to dispose of it as its own property. Contractor must reimburse CATA for costs and expenses incurred in storing or effecting removal or disposition of rejected equipment or materials.
40. SURVIVAL. The provisions of the contract that impose continuing obligations, including warranties and representations, termination, transition, insurance coverage, indemnification, and confidentiality, will survive the expiration or termination of the contract.
41. DISCLOSURE. Contractor specifically and expressly understands that CATA is subject to public disclosures including the Freedom of Information Act and as such the contents of any contract with CATA, any information Contractor provides to CATA, payments made to Contractor, etc. may be disclosed by CATA without any prior notice to Contractor.
42. COMPLIANCE WITH GRANT TERMS. Contractor understands and agrees that CATA's funding to pay Contractor compensation for the contract may come from grant dollars or funding sources that have terms which need to be met. Contractor agrees that upon notification by CATA of these terms, Contractor will conduct itself in accordance with and abide by any such terms, without condition, to ensure CATA does not lose the funding source.
- a. Contractor agrees that the Federal Government may suspend, suspend then terminate, or terminate all or any part of the federal assistance for the Award if: (1) CATA or Contractor has failed to make reasonable progress implementing the Award; (2) The Federal Government determines that continuing to provide federal assistance to support the Award does not adequately serve the purposes of the law authorizing the Award; or (3) CATA or Contractor has violated the terms of the Underlying Agreement, especially if that violation would endanger substantial performance of the Underlying Agreement.
 - b. Financial Implications. In general, termination of federal assistance for the Award will not invalidate obligations properly incurred before the termination date to the extent that those obligations cannot be canceled. The Federal Government may recover the federal assistance it has provided for the Award, including the federal assistance for obligations properly incurred before the termination date, if it determines that CATA or Contractor has misused its federal assistance by failing to make adequate progress, failing to make appropriate use of the Project property, or failing to comply with the Underlying Agreement, and require CATA or Contractor to refund the entire amount or a lesser amount, as the Federal Government may determine including obligations properly incurred before the termination date.
 - c. Expiration of the Period of Performance. Except for a Full Funding Grant Agreement, expiration of any period of performance established for the Award does not, by itself, constitute an expiration or termination of the Award; FTA may extend the period of performance to assure that each Formula Project or related activities and each Project or related activities funded with "no year" funds can receive FTA assistance to the extent FTA deems appropriate.
 - d. Uniform Administrative Requirements. These termination rights are in addition to and in no way limit the Federal Government's rights to terminate described in 2 CFR § 200.340.

43. MDOT AND FTA TERMS. All contractual provisions that the Michigan Department of Transportation ("MDOT"), the Federal Transit Administration ("FTA"), and/or the US Department of Transportation ("US DOT") by law or regulation, require to be included in contracts supported by state or federal financial assistance, including the requirements set forth in FTA Circular 4220.1 and the Clause Matrix (last updated September 2023), as updated and amended, and the Master Agreement between CATA and FTA and the Master Agreement between CATA and MDOT as it may be amended, all of which are hereby incorporated by reference. FTA required terms and MDOT required terms shall be deemed to control in the event of a conflict with other provisions contained in this contract. Contractor shall not refuse to comply with any CATA request to conform this contract to include MDOT or FTA required contractual provisions. The Contractor shall not perform any act, fail to perform any act, or refuse to comply with any CATA requests which would cause CATA to be in violation of the mandated contractual provisions.
44. FEDERALLY ASSISTED CONSTRUCTION CONTRACTS. Pursuant to the FTA Master Agreement, Section 16, Paragraph (4):

During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States. The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, That if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract. The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance. The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

45. ETHICS. Contractor agrees it has or it will establish and maintain written Standards of Conduct covering conflicts of interest that:

(1) Apply to the following individuals who have a present or potential financial interest, or other significant interest, such as a present or potential employment interest in the selection, award, or administration of a third party contract or subcontract: (i) The Recipient or its Subrecipients' officers, employees, board members, or agents engaged in the selection, award, or administration of any third party agreement; (ii) The immediate family members or partners of those listed above in section 4(a)(1)(i) of this Master Agreement; and (iii) An entity or organization that employs or is about to employ any person that has a relationship with the Recipient or its Subrecipient listed above in sections 4(a)(1)(i) and (ii) of this Master Agreement;

(2) Prohibit those individuals listed above from: (i) Engaging in any activities involving the Recipient's or any of its Subrecipients' present or potential Third Party Participants at any tier, including selection, award, or administration of a third party agreement in which the individual has a present or potential financial or other significant interest; and (ii) Accepting a gratuity, favor, or anything of monetary value from a present or potential Third Party Participant in the Recipient's Underlying Agreement, unless the gift is unsolicited and has an insubstantial financial or nominal intrinsic value; and

(3) Establish penalties, sanctions, or other disciplinary actions for violations, as permitted by state or local law or regulations, that apply to those individuals listed above for violations.

46. CHANGE IN CONTROL. Contractor will notify CATA within 30 days of any public announcement or otherwise once legally permitted to do so, of a material change in Contractor's organizational structure or ownership. For purposes of the contract, a material change in control means any of the following: (a) a sale of more than 50% of Contractor's stock; (b) a sale of substantially all of Contractor's assets; (c) a change in a majority of Contractor's board members; (d) consummation of a merger or consolidation of Contractor with any other entity; (e) a change in ownership through a transaction or series of transactions; (f) or the board (or the stockholders) approves a plan of complete liquidation. A change of control does not include any consolidation or merger effected exclusively to change the domicile of Contractor, or any transaction or series of transactions principally for bona fide equity financing purposes. In the event of a change of control, Contractor must require the successor to

assume this Contract and all of its obligations under this Contract. If CATA is not satisfied for any reason with the new control, CATA has the option to terminate the contract.

47. CHANGE IN CIRCUMSTANCES. Contractor agrees that changed circumstances may occur that may impact CATA's ability to comply with the FTA terms and conditions such as: (i) A change in federal requirements or guidance; (ii) A change in state, territorial, local, or tribal requirements; (iii) A change in CATA or Contractor's circumstances, including: (A) Its legal, financial, technical, or managerial capacity; (B) Its continuing control of Project property; or (C) Another similar situation; and (iv) Any current or prospective legal matter with potentially serious consequences, including a major dispute, default, breach, or litigation, or knowledge that the Contractor's principal, official, employee, agent, or another third party, or other person has submitted a false claim under the False Claims Act, 31 U.S.C. § 3729, et seq., or has committed a criminal or civil violation of law pertaining to fraud, conflict of interest, bribery, gratuity, or similar misconduct involving federal assistance; suspension, debarment, or other similar administrative or enforcement action against CATA or the Contractor; or any matter or situation, including any other change or legal action that may adversely affect the Federal Government's interest in a Project or related activities. In the circumstances described above, Contractor agrees to provide immediate written notice to CATA so it can provide appropriate notice to the interested parties.
48. NOTICE OF DISPUTES, BREACHES, DEFAULTS, AND LITIGATION. If a current or prospective legal matter that may affect CATA or the federal government emerges, the Contractor must notify CATA. The Contractor must include a similar notification requirement in each of its subcontracts for twenty-five thousand dollars (\$25,000) or more.
- (a) Legal disputes that require notification under this provision include, but are not limited to, a major dispute, breach, default, litigation, or naming CATA or naming the federal government as a party to litigation or a legal disagreement in any forum for any reason.
 - (b) Matters that may affect the federal government (and thereby CATA) include, but are not limited to, the or the federal government's interests in the award, the accompanying underlying agreement, and any amendments thereto, or the federal government's administration or enforcement of federal laws, regulations, and requirements.
 - (c) Additional notice to U.S. DOT Inspector General. The Contractor must promptly notify the U.S. DOT Inspector General in addition to the FTA chief counsel or regional counsel for FTA's appropriate region, if the Contractor has knowledge of potential fraud, waste, or abuse occurring on a project receiving assistance from FTA. The notification provision applies if a person has or may have submitted a false claim under the false claims act, 31 U.S.C. § 3729, et seq., or has or may have committed a criminal or civil violation of law pertaining to such matters as fraud, conflict of interest, bid rigging, misappropriation or embezzlement, bribery, gratuity, or similar misconduct involving federal assistance. This responsibility occurs whether the project is the subject of this contract, another contract funded by the FTA, or an agreement involving a principal, officer, employee, or agent of the Contractor. It also applies to subcontractors at any tier. Knowledge, as used in this paragraph, includes, but is not limited to, knowledge of a criminal or civil investigation by a federal, state, or local law enforcement or other investigative agency, a criminal indictment or civil complaint, or probable cause that could support a criminal indictment, or any other credible information in the possession of the Contractor. In this paragraph, "promptly" means to refer information without delay and without change.
49. EQUAL EMPLOYMENT OPPORTUNITY. Contractor agrees to, and assures that each of its employees, agents, or subcontractors will, prohibit discrimination based on race, color, religion, sex, sexual orientation, gender identity, or national origin, and: (i) Comply with Title VII of the Civil Rights Act of 1964, as amended, 42 U.S.C. § 2000e, et seq.; (ii) Comply with Title I of the Americans with Disabilities Act of 1990, as amended, 42 U.S.C. §§ 12101, et seq.; (iii) Facilitate compliance with Executive Order No. 11246, "Equal Employment Opportunity" September 24, 1965 (42 U.S.C. § 2000e note), as amended by any later Executive Order that amends or supersedes it in part and is applicable to federal assistance programs; 53 (iv) Comply with federal transit law, specifically 49 U.S.C. § 5332; (v) FTA Circular 4704.1 "Equal Employment Opportunity (EEO) Requirements and Guidelines for Federal Transit Administration Recipients;" and (vi) Follow other federal guidance pertaining to EEO laws, regulations, and requirements. And, if required to do so by U.S. DOT regulations (49 CFR Part 21) or U.S. Department of Labor regulations (41 C.F.R. chapter 60), Contractor agrees to take affirmative action that includes, but is not limited to: (A) Recruitment advertising, recruitment, and

employment; (B) Rates of pay and other forms of compensation; (C) Selection for training, including apprenticeship, and upgrading; and (D) Transfers, demotions, layoffs, and terminations. Contractor also recognizes that Title VII of the Civil Rights Act of 1964, as amended, exempts Indian Tribes under the definition of "Employer."

50. NONDISCRIMINATION.

- (a) Compliance with Regulations. Contractor shall comply with all applicable laws, rules, and regulations relative to nondiscrimination including, but not limited to the Department of Transportation, Title 49, Code of Federal Regulations, Part 21, and Title 23, Code of Federal Regulations, Part 710.405(b), as they may be amended from time to time (hereinafter referred to as the Regulations), and with Executive Order 11246 titled Equal Employment opportunity, as amended by Executive Order 11375, and as supplemented by Department of Labor Regulation (41 CFR 60) which are herein incorporated by reference and made a part of this contract. Contractor agrees that it will comply with the requirements of U.S. Equal Employment Opportunity Commission, "Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act," 29 C.F.R. Part 1630, pertaining to employment of persons with disabilities. In addition, Contractor agrees to comply with any implementing requirements MDOT, FTA, or other governing authority may issue.
- (b) Nondiscrimination. With regard to the work performed by it during this contract, Contractor shall not discriminate on any grounds prohibited by applicable law against any employee or applicant for employment, or in the selection and retention of Subcontractors, including procurement of materials and leases of equipment. Contractor shall not participate either directly or indirectly in discrimination prohibited by Section 21.5 and Part 710.405(b) of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.
- (c) In connection with the performance of services under this contract, Contractor agrees to comply with the State of Michigan provisions for "Prohibition of Discrimination in State Contracts" as set forth in the Elliott-Larsen Civil Rights Act (Public Act 453 of 1976) and the Persons with Disabilities Civil Rights Act (Public Act 220 of 1976) incorporated herein by reference, and as stated in Appendix B. Contractor further covenants that it will comply with the Civil Rights Act of 1964, being P.L. 88-352, 78 Stat. 241, as amended, being Title 42 U.S.C. Sections 1971, 1975a-1975d, and 2000a-2000h-6 and will require similar covenants on the part of any subcontractor employed in the performance of this contract.
- (d) ADA Access. All work performed and all services provided pursuant to this contract shall be in compliance with all policies to ensure that elderly individuals and individuals with disabilities have an equal right to use of public transportation services and facilities. To the extent this Contract requires planning and design of services and facilities, special efforts shall be made to implement the transportation and accessibility rights of elderly individuals and individuals with disabilities. The work performed and services provided in this Contract shall be in compliance with all State and Federal statutes and laws ensuring equal access of transportation services and facilities for the elderly and individuals with disabilities, including, but not limited to, 49 U.S.C. § 5301(d), § 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. § 794, The Americans with Disabilities Act of 1990, as amended, 42 U.S.C. § 12101 *et seq.*, and the Architectural Barriers Act of 1968, as amended, 42 U.S.C. § 4151 *et seq.*, and any applicable implementing regulations or directives as they may from time to time be promulgated or amended.
- (e) Contractor assures that neither it nor any of its employees or subcontractors will discriminate on the basis of race, color, national origin, creed, disability, or sex in the performance of this contract. Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of US DOT-assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.
- (f) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of

September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

51. DBE REQUIREMENTS.

- (a) Contractor will carry out the applicable requirements of the Michigan Department of Transportation's and/or the FTA's Disadvantaged Business Enterprise ("DBE") program, Section 11101(3) of the Infrastructure Investment and Jobs Act, all US DOT regulations, 49 CFR 26 including, but not limited to those requirements set forth in Appendix D, attached hereto and made a part hereof, and federal transit law specifically including, but not limited to 49 USC § 5332. Failure by the Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract or such other remedy as CATA deems appropriate, which may include, but is not limited to, withholding monthly progress payments, assessing sanctions, liquidated damages and/or disqualifying the Contractor from future bidding as non-responsible.
- (b) Contractor agrees that it and each of its employees, agents, and subcontractors must not discriminate based on race, color, national origin, or sex in the award and performance of any FTA or U.S. DOT-assisted subagreement, third party contract, and third party subcontract, as applicable, and the administration of its DBE program or the requirements of 49 CFR Part 26.
- (c) Contractor agrees to take all necessary and reasonable steps under 49 CFR part 26 to ensure nondiscrimination in the award and administration of US DOT-assisted subagreements, third party contracts, and third party subcontracts as applicable.
- (d) Failure by Contractor to carry out the requirements of this subparagraph is a material breach of the contract, and CATA, MDOT, and or the FTA may impose any of the following remedies, or such other remedy as CATA deems appropriate, including, but are not limited to, withholding monthly progress payments, assessing sanctions, liquidated damages, and/or disqualifying the Contractor from future bidding as non-responsible.
- (e) Consistent with the requirements of 49 CFR 26.29, Contractor shall pay its subcontractors performing work related to this contract for satisfactory performance of that work no later than thirty (30) days after the Contractor's receipt of payment for that work from CATA. In addition, Contractor shall return any retainage payments to those subcontractors within thirty (30) days after the subcontractor's work related to this contract is satisfactorily completed. Contractor must promptly notify CATA whenever a DBE subcontractor performing work related to this contract is terminated or fails to complete the work, and must make good faith efforts to engage another DBE subcontractor to perform at least the same amount of work. The Contractor may not terminate any DBE subcontractor and perform that work through its own forces or those of an affiliate without prior written consent of CATA.

52. CONTINGENT FEES. The Contractor warrants that it has not employed or retained any company or person, other than a bonafide employee working solely for the Contractor, to solicit or secure this contract and that it has not paid or agreed to pay any company or person, other than a bonafide employee working solely for the Contractor, any fee, commission, percentage, brokerage fee, gifts or any other consideration, contingent upon or resulting from the award or making of this contract. For breach or violation of this warranty, CATA shall have the right to annul this contract without liability.

53. ACCESS TO RECORDS/AUDITS.

- a. The Contractor shall maintain and retain, and shall require all its subcontractors to maintain and retain, complete and accurate books, documents, papers, accounting records, contracts, and other evidence with respect to allowable costs incurred and manpower expended under this contract. All such records shall be maintained on the basis of generally-accepted accounting principles and shall be clearly identified and readily accessible. Contractor's books, documents, and all other records of work performed under the contract and/or at any CATA facility shall be made available during normal business hours to CATA upon request. The Contractor shall also provide during regular business hours to the U.S. Secretary of Transportation, the FTA Administrator, the Comptroller General of the United States, or their duly authorized representatives, and any representatives from MDOT, access to such data and records, and the right to inspect and audit all data and records of the Contractor relating to its performance under the contract, and to make transcripts therefrom as necessary. Unless a longer period is required by law or other provision of these Standard Terms and Conditions, Contractor shall retain all work data, documents, proceedings, and activities related to this

contract for a period of three (3) years from the date of final payment under this contract or from expiration or other termination of this contract. In the event of a dispute as to allowable costs or any other issue under this contract, Contractor will thereafter continue to maintain such records until the dispute has been resolved.

- b. Contractor further agrees to provide: (1) The U.S. Secretary of Transportation and the Comptroller General of the United States, the state, or their duly authorized representatives, access to all contract records as required under 49 U.S.C. § 5325(g); and (2) Sufficient access to all contract records as needed for compliance with applicable federal laws, regulations, and requirements or to assure proper management of the contract as determined by FTA.
 - c. The Contractor certifies that it will comply with the record retention requirements detailed in 2 C.F.R. § 200.333. The Contractor further certifies that it will retain all records as required by 2 C.F.R. § 200.333 for a period of 3 years after termination of the contract.
 - d. To the extent required under federal law, Contractor agrees to provide the following information about federal assistance: 93 (1) The Identification of FTA as the federal agency providing the federal assistance for a State Program or Project; (2) The Catalog of Federal Domestic Assistance Number of the program from which the federal assistance for a State Program or Project is authorized; and (3) The amount of federal assistance FTA has provided for a State Program or Project. (b) Documents. The State agrees to provide the information required under this provision in the following documents: (1) applications for federal assistance, (2) requests for proposals or solicitations, (3) forms, (4) notifications, (5) press releases, and (6) other publications.
54. ACCESS TO THE SITES OF PERFORMANCE. The Contractor agrees to permit FTA and the State of Michigan and its contractors access to the sites of performance under this contract as reasonably may be required.
55. CONFLICT OF INTEREST. The Contractor certifies that, to the best of its knowledge, no CATA employee or office of any public agency interested in this contract has any pecuniary interest in the business of the Contractor and that no person associated with the Contractor has any interest that would conflict in any manner or degree with the performance of this contract. Contractor further covenants that it presently has no interest and shall not acquire any interest, direct or indirect, that would conflict in any manner or degree with the performance of services under the contract. Contractor further covenants in the performance of the contract that no person having any such interest shall be employed by Contractor.
56. INTEREST OF MEMBER OF CONGRESS OR DELEGATES TO CONGRESS. No member of Congress or delegates to the Congress of the United States shall be admitted to any share or part of the contract, or to any benefit arising therefrom. This shall not be construed to prevent any such person from owning stock in a publicly owned corporation.
57. INTEREST OF MEMBERS OF THE STATE LEGISLATURE: No member of the State Legislature shall be admitted to any share or any part of a contract or any benefit arising there from.
58. COMPLIANCE WITH LAWS. The Contractor shall at all times observe and comply with all laws, ordinances, and regulations of the state, federal, local, and city government which may, in any manner, affect the performance of the contract.
59. DEBARMENT AND SUSPENSION. The Contractor shall comply and facilitate compliance with U.S. DOT regulations, "Nonprocurement Suspension and Debarment," 2 C.F.R. part 1200, which adopts and supplements the U.S. Office of Management and Budget (U.S. OMB) "Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement)," 2 C.F.R. part 180. These provisions apply to each contract at any tier of \$25,000 or more, and to each contract at any tier for a federally required audit (irrespective of the contract amount), and to each contract at any tier that must be approved by an FTA official irrespective of the contract amount. As such, the Contractor shall verify that its principals, affiliates, and subcontractors are eligible to participate in this federally funded contract and are not presently declared by any Federal department or agency to be:
- (a) Debarred from participation in any federally assisted Award;
 - (b) Suspended from participation in any federally assisted Award;
 - (c) Proposed for debarment from participation in any federally assisted Award;
 - (d) Declared ineligible to participate in any federally assisted Award;

- (e) Voluntarily excluded from participation in any federally assisted Award; or
- (f) Disqualified from participation in any federally assisted Award.

Contractor certifies as follows: The certification in this clause is a material representation of fact relied upon by CATA. If it is later determined by CATA that Contractor knowingly rendered an erroneous certification, in addition to remedies available to the CATA, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The bidder or proposer agrees to comply with the requirements of 2 C.F.R. part 180, subpart C, as supplemented by 2 C.F.R. part 1200. Contractor further agrees to include a provision requiring such compliance in its lower tier covered transactions.

- 60. FEDERAL CHANGES. Contractor shall at all times comply with all applicable FTA regulations, policies, procedures and directives, including without limitation those listed directly or by reference in the Master Agreement between CATA and FTA, as they may be amended or promulgated from time to time during the term of this contract. Contractor shall not, by action or by inaction, cause CATA to be in violation of FTA regulations, policies, terms, procedures, or directives. Contractor's failure to comply with this paragraph shall constitute a material breach of this contract.
- 61. STATE CHANGES. Contractor shall at all times comply with all applicable MDOT regulations, policies, procedures and directives, including without limitation those listed directly or by reference in the Master Agreement between CATA and MDOT, as they may be amended or promulgated from time to time during the term of this contract. Contractor shall not, by action or by inaction, cause CATA to be in violation of MDOT regulations, policies, terms, procedures, or directives. Contractor's failure to comply with this paragraph shall constitute a material breach of this contract.
- 62. GOVERNMENT APPROVAL. If any item required by the contract requires approval for the sale and/or use thereof by statute or regulations, Contractor certifies it has or will obtain an approval for their sale and/or use from the appropriate agency. Contractor will submit to CATA a copy of each such approval for sale and/or use.
- 63. NO GOVERNMENT OBLIGATION. Notwithstanding any concurrence by the Federal Government or MDOT in, or approval of, the solicitation or award of the contract, absent the express written consent by the Federal Government or by MDOT, neither the Federal Government nor the State of Michigan is a party to the contract, and neither shall be subject to any obligations or liabilities to CATA, the Contractor or any other party (whether or not a party to the contract) pertaining to any matter resulting from the contract. The Contractor agrees to include this clause in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.
- 64. ENERGY CONSERVATION. The Contractor agrees to comply with mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.
- 65. FLY AMERICA REQUIREMENTS. Contractor agrees to comply with 49 U.S.C. 40118 ("Fly America Act") in accordance with the General Services Administration's regulations at 41 CFR Part 301-10, which provide that recipients and subrecipients of federal funds and their contractors are required to use United States Flag air carriers for U.S. Government financed international air travel and transportation of their personal effects or property, to the extent such service is available, unless travel by foreign air carrier is a matter of necessity, as defined by the Fly America Act. The Contractor shall submit, if a foreign air carrier was used, an appropriate certification or memorandum adequately explaining why service by a United States Flag air carrier was not available or why it was necessary to use a foreign air carrier and shall, in any event, provide a certificate of compliance with the Fly America requirements. The Contractor agrees to include the requirements of this section in all subcontracts that may involve international air transportation.
- 66. FRAUD AND FALSE OR FRAUDULENT STATEMENTS OR RELATED ACTS.
 - (a) Civil Fraud. The Contractor acknowledges and agrees that: (i) Federal laws, regulations, and requirements apply to itself and to CATA's Agreement with the FTA, including the Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. § 3801, et seq., and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 CFR Part 31. (ii) Contractor certifies and affirms to CATA and the Federal Government the truthfulness and accuracy of any claim, statement, submission, certification, assurance, affirmation, or representation that the Contractor provides to CATA and/or the Federal Government. (iii) The Federal Government may impose the penalties of the Program Fraud Civil Remedies Act of 1986, as amended, and

other applicable penalties if the Contractor presents, submits, or makes available any false, fictitious, or fraudulent information.

- (b) Criminal Fraud. The Contractor acknowledges that 49 U.S.C. § 5323(l)(1) authorizes the Federal Government to impose the penalties under 18 U.S.C. § 1001 if the Contractor provides a false, fictitious, or fraudulent claim, statement, submission, certification, assurance, or representation in connection with a federal public transportation program under 49 U.S.C. chapter 53 or any other applicable federal law.
- (c) The Contractor agrees to include the above two clauses in each subcontract financed in whole or in part with Federal assistance by FTA. It is further agreed that the clauses shall not be modified, except to identify the subcontractor who will be subject to the provisions.

67. SAFE OPERATION OF MOTOR VEHICLES

- (a) Seat Belt Use - Contractor is encouraged to adopt and promote on-the-job seat belt use policies and programs for its employees and other personnel that operate company-owned vehicles, company-rented vehicles, or personally operated vehicles. The terms "company-owned" and "company-leased" refer to vehicles owned or leased either by the Contractor or CATA.
- (b) Distracted Driving - Contractor agrees to adopt and enforce workplace safety policies to decrease crashes caused by distracted drivers, including policies to ban text messaging while using an electronic device supplied by an employer and driving a vehicle the driver owns or rents, a vehicle either Contractor or CATA owns, leases, or rents, or a privately-owned vehicle when on official business in connection with the work performed under the contract.

68. SEISMIC SAFETY. The Contractor agrees that any new building or addition to an existing building will be designed and constructed in accordance with the standards for Seismic Safety required in Department of Transportation Seismic Safety Regulations 49 CFR Part 41 and will certify to compliance to the extent required by the regulation. The Contractor also agrees to ensure that all work performed under this Contract including work performed by a subcontractor is in compliance with the standards required by the Seismic Safety Regulations and the certification of compliance issued on the project.

69. VETERANS EMPLOYMENT. As provided in 49 USC §5325(k), Contractor is encouraged, to the extent practicable, give a hiring preference to veterans (as defined in 5 USC 2108) who have the requisite skills and abilities to perform the construction work required under the contract. This subsection shall not be understood, construed, or enforced in any manner that would require an employer to give a preference to any veteran over any equally qualified applicant who is a member of any racial or ethnic minority, female, an individual with a disability, or a former employee.

70. FEDERAL WAGE REQUIREMENTS FOR CONSTRUCTION CONTRACTS.

(a) This procurement is subject to the Davis-Bacon Act, 40 USC § 3141, *et seq*, and to the Copeland Anti-Kickback Act, 18 USC § 874, and to the regulations promulgated thereunder ("the Acts"). As required by federal regulations promulgated under the Acts, the following provisions set forth in Paragraph 13(b) and (c) are incorporated into the Agreement, with the understanding that the term "contracting officer" refers to the appointed representative of CATA.

(b) Davis-Bacon and Copeland Anti-Kickback Acts

(1) Minimum wages

- i. All laborers and mechanics employed or working under the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any

contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph (1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

ii. (A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) Except with respect to helpers as defined as 29 CFR 5.2(n)(4), the work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) With respect to helpers as defined in 29 CFR 5.2(n)(4), such a classification prevails in the area in which the work is performed.

(B) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so

advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

iii. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

iv. If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

v. (A) The contracting officer shall require that any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination with 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(v) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(2) Withholding - Owner shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the contract, Owner may, after written notice to the Contractor, sponsor, applicant, or agency, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) Payrolls and basic records

(i) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractor's employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii) (A) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to Owner for transmission to the Federal Transit Administration. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under section 5.5(a)(3)(i) of Regulations, 29 CFR part 5. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), U.S. Government Printing Office, Washington, DC 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be maintained under section 5.5(a)(3)(i) of Regulations, 29 CFR part 5 and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full

wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the Contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The Contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the Federal Transit Administration or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the Contractor, sponsor, applicant, or agency, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and trainees

(i) Apprentices - Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator of the Wage and Hour Division of the U.S. Department of Labor determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees - Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity - The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

(5) Compliance with Copeland Act requirements - The Contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

(6) Subcontracts - The Contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the Federal Transit Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) Contract termination: debarment - A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a Contractor and a subcontractor as provided in 29 CFR 5.12.

(8) Compliance with Davis-Bacon and Related Act requirements - All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) Disputes concerning labor standards - Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

(10) Certification of eligibility

(i) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

(c) Contract Work Hours and Safety Standards Act. The Contractor shall comply with all federal laws, regulations, and requirements providing wage and hour protections for non-construction employees, in accordance with 40 U.S.C. § 3702, Contract Work Hours and Safety Standards Act, and other relevant parts of that Act, 40 U.S.C. § 3701 et seq., and U.S. DOL regulations, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction (also Labor Standards Provisions Applicable to Non-construction Contracts Subject to the Contract Work Hours and Safety Standards Act)," 29 C.F.R. part 5.

(1) Overtime requirements - No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages - In the event of any violation of the clause set forth in paragraph (1) of this section the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.

(3) Withholding for unpaid wages and liquidated damages - Capital Area Transportation Authority shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this section.

(4) Subcontracts - The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this section.

71. RECOVERED/RECYCLED PRODUCTS AND MATERIALS. The Contractor agrees to comply with all requirements of Section 6002 of the Resource Conservation and Recovery Act ("RCRA"), as amended (42 USC 6962), including but not limited to the regulatory provisions of 40 CFR Part 247, and Executive Order 12873, as they apply to the procurement of the items designated in subpart B of 40 CFR Part 247.

72. INSPECTION: All material shall be received is subject to CATA's right of inspection and rejection, within CATA's sole discretion. Defective material or materials not in accordance with CATA's specifications will be held for Contractor's instructions and at Contractor's expense. Payment for material on an order prior to inspection shall not constitute an acceptance thereof, nor will acceptance remove Contractor's responsibility for latent defects.

73. BID BOND. A bid bond must be included with all bid documents as set forth in CATA's bid requests. For projects exceeding \$250,000, the bid guarantee bond shall be no less than 5%.

74. PERFORMANCE & PAYMENT BONDS. The successful bidder on a construction contract shall furnish at its own expense performance and payments bonds. These bonds shall be furnished to CATA within ten (10) calendar days after contract award. Bond requirements are as follows:

(a) A performance bond for construction contracts shall be payable to CATA in the amount of 100 percent (100%) of the full contract amount as a guarantee of good faith on behalf of the Contractor that the Contractor will perform all of its obligations under the contract.

- (b) A payment bond shall be payable to CATA in the amount of 100 percent (100%) of the full amount of any construction contract to assure payment as required by law of all persons supplying labor and material in the execution of work provided for in the contract.
75. PROTESTS. Any protests shall be filed timely in accordance with the CATA Procurement Protest Procedures. These Procedures are available from the CATA Purchasing & Contracts Manager and the CATA CEO/Executive Director, at the following address: Capital Area Transportation Authority, 4615 Tranter Street, Lansing, MI 48910.
76. CARGO PREFERENCE. The Contractor agrees (a) to use privately owned United States Flag commercial vessels to ship at least 50% of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to the underlying contract to the extent such vessels are available at fair and reasonable rates for United States Flag commercial vessels; (b) to furnish within twenty (20) working days following the date of loading of shipments originating within the United States or within thirty (30) working days following the date of loading for shipments originating outside the United States, a legible copy of the rated, "on-board" commercial ocean bill of lading, in English, for each shipment of cargo described in the preceding paragraph to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, D.C., 20590. CATA (through the Contractor in the case of a subcontractor's bill of lading); and (c) to include these requirements in all subcontracts issued pursuant to this contract where the subcontract may involve the transport of equipment, material, or commodities by ocean vessel.
77. ACTIONS INVOLVING COMMERCE. Contractor agrees to comply with the Fair Labor Standards Act (FLSA), 29 U.S.C. § 201, et seq. to the extent that the FLSA applies to employees performing work with federal assistance involving commerce, and as the Federal Government otherwise determines applicable.
78. PATENT RIGHTS.
- (a) Contractor agrees that: (1) the Federal Government may acquire patent rights when Contractor produces a patented or patentable invention, improvement, or discovery; (2) The Federal Government's rights arise when the patent or patentable information is conceived or reduced to practice with federal assistance provided; or (3) When a patent is issued or patented information becomes available as described in the preceding section 17(a)(2) of the FTA Master Agreement, Contractor will notify CATA so it can make the appropriate disclosures and notifications.
- (b) Contractor agrees that: (1) Its rights and responsibilities in that federally assisted invention, improvement, or discovery will be determined as provided in applicable federal laws, regulations, requirements, and guidance, including any waiver thereof; and (2) Unless the Federal Government determines otherwise in writing, irrespective of its status or the status of any participant as a large business, small business, state government, state instrumentality, local government, Indian tribe, nonprofit organization, institution of higher education, or individual, CATA will transmit the Federal Government's patent rights to FTA, as specified in 35 U.S.C. § 200, et seq., and U.S. Department of Commerce regulations, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," 37 CFR Part 401.
- (c) License Fees and Royalties. Consistent with the applicable U.S. DOT Common Rules, Contractor agrees that license fees and royalties for patents, patent applications, and inventions produced with federal assistance are program income, and must be used in compliance with applicable federal requirements.
79. RIGHTS IN DATA AND COPYRIGHTS.
- (a) Definition of "Subject Data." As used in this section, "subject data" means recorded information, whether or not copyrighted, that is delivered or specified to be delivered as required by the contract. Examples of subject data include, but are not limited to computer software, standards, specifications, engineering drawings and associated lists, process sheets, manuals, technical reports, catalog item identifications, and related information, but do not include financial reports, cost analyses, or other similar information used for performance or administration of the contract.
- (b) The following restrictions apply to all subject data first produced in the performance of the contract:

- (1) Prohibitions. Contractor may not publish or reproduce any subject data, in whole, in part, or in any manner or form, or permit others to do so.
- (2) Exceptions. The prohibitions do not apply to publications or reproductions for the Contractor's own internal use, an institution of higher learning, the portion of subject data that the Federal Government has previously released or approved for release to the public, or the portion of data that has the Federal Government's prior written consent for release.

(c) Contractor agrees that:

- (1) General. It must provide a license to its subject data to the Federal Government that is royalty-free, non-exclusive, and irrevocable. The Federal Government's license must permit the Federal Government to reproduce, publish, or otherwise use the subject data or permit other entities or individuals to use the subject data provided those actions are taken for Federal Government purposes; and
- (2) U.S. DOT Public Access Plan – Copyright License. Contractor grants to U.S. DOT a worldwide, non-exclusive, non-transferable, paid-up, royalty free copyright license, including all rights under copyright, to any and all Publications and Digital Data Sets as such terms are defined in the U.S. DOT Public Access plan, resulting from scientific research funded either fully or partially by this funding agreement. Contractor herein acknowledges that the above copyright license grant is first in time to any and all other grants of a copyright license to such Publications and/or Digital Data Sets, and that U.S. DOT shall have priority over any other claim of exclusive copyright to the same.

80. NO OBLIGATION BY THE FEDERAL GOVERNMENT. Contractor acknowledges and agrees that, notwithstanding any concurrence by the Federal Government in or approval of the solicitation of award of the underlying Contract, absent the express written consent by the Federal Government, the Federal Government is not a party to this Contract and shall not be subject to any obligations or liabilities to CATA, Contractor, or any other party (whether or not a party to that Contract) pertaining to any matter resulting to the underlying Contract. The Contractor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance provided by the FTA. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will subject to its provisions.

81. PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT. Pursuant to the FTA requirements, Contractor understands CATA is prohibited from obligating or expending any loan or grant funds to: 1. Procure or obtain; 2. Extend or renew a contract to procure or obtain; or 3. Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, Or systems that users covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities). For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities). II. Telecommunications or video surveillance services provided by such entities or using such equipment. III. Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country

In implementing the prohibition under Public Law 115232, section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained. See Public Law 115232, section 889 for additional information.

82. CLEAN AIR. The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. 7401, et seq. If state or local air

pollution regulations are in force, the more restrictive criteria shall govern. The Contractor and any subcontractors or suppliers must submit evidence to CATA that the governing air pollution criteria will be met. The Contractor agrees to report each violation to CATA and understands and agrees that CATA will, in turn, report each violation as required to FTA and the appropriate EPA Regional Office. The Contractor also agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FTA.

83. CLEAN WATER. The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 *et seq.* The Contractor agrees to report each violation to CATA and understands and agrees that CATA will, in turn, report each violation as required to FTA and the appropriate EPA Regional Office. The Contractor also agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided by FTA.

84. BUILD AMERICA BUY AMERICA PROVISIONS. For purposes of these Standard Terms and Conditions, the "Build America Buy America Requirements" means all requirements imposed by 49 U.S.C. § 5323(j) and 49 C.F.R. Part 661, as those provisions may be amended from time to time.

(a) Each contract utilizing FTA assistance must comply with section 165 of the Surface Transportation Assistance Act of 1982, as amended by section 337 of the Surface Transportation and Uniform Relocation Assistance Act of 1987, and FTA regulations at 49 C.F.R. Part 661 and any guidance issued by FTA.

(b) For all contracts meeting the threshold at 49 U.S.C. §5323(j)(13):

i. Contractor agrees to comply all Build America Buy America Requirements and shall take all steps necessary and appropriate to ensure that no aspect of the work under the contract would put CATA out of compliance with any of the Build America Buy America Requirements. These require that iron, steel, manufactured products, and construction materials used in FTA funded projects be produced in the United States, with specific provisions that apply to rolling stock procurements, unless a waiver has been granted by FTA or the product is subject to a general waiver (see 49 C.F.R. §661.7). Separate requirements for rolling stock are set out at 49 U.S.C. §5323(j)(2)(C) and 49 C.F.R. §661.11. Contractor shall provide CATA with all certifications that may be requested from time to time by CATA or the federal government in any way related to Contractor's compliance with the Build America Buy America Requirements. The continued accuracy of the certificate, attached as Appendix I, entitled " Build America Buy America Certification", submitted with Contractor's proposal/bid is a term and condition of this Agreement.

ii. Contractor shall also ensure that each subcontractor (of every tier) and each supplier providing any material, equipment, or other product for this contract (1) fully complies with the Build America Buy America Requirements, (2) provides CATA and/or the federal government all certifications that may be requested or required from time to time, and (3) fully complies with all other requirements that the Build America Buy America Requirements contemplate for, or impose on, subcontractors or suppliers. Contractor shall ensure that each subcontract (at every tier) and each supplier contract includes provisions requiring that the subcontractor or the supplier fully comply with all Build America Buy America Requirements and this provision.

(c) Any violation of the Build America Buy America Requirements or of these Terms and Conditions by the Contractor, by any subcontractor, or by any supplier will be deemed a material breach of this contract by the Contractor. If such a breach happens, CATA may terminate this contract for default and/or may pursue any and all other remedies that CATA has under this contract or under the law. To avoid any doubt, Contractor's obligations under this contract includes an obligation to defend, indemnify, and hold harmless CATA against any liability arising out of or related to any violation of the Build America Buy America Requirements or of this section by the Contractor, by any subcontractor, or any supplier.

(d) Build America Buy America Act. Construction materials used in the Project are subject to the domestic preference requirement of the Build America Buy America Act, Pub. L. 117-58, div. G, tit. IX, §§ 70911 – 70927 (2021), as implemented from time to time by the U.S. Office of Management and Budget, the U.S. Department of Transportation, and FTA. The VENDOR acknowledges that this agreement is neither a waiver of § 70914(a) nor a finding under § 70914(b).

85. RESTRICTIONS ON LOBBYING. Contractor shall fully comply with 31 U.S.C. § 1352, as amended; with any regulations implementing that statute; and with any non-superseded guidance about that statute issued by the federal government (this statute, those regulations, and that guidance together are the "Byrd Anti-Lobbying Amendment"). No Federal appropriated funds shall be paid or will be paid, by or on behalf of the Contractor, subcontractor, sub-grantee or sub-recipient, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, contractor, subcontractor sub-grantee or sub-recipient shall complete and submit to CATA an appropriate disclosure.

This procurement is subject to the Federal Transportation Administration Lobbying requirements. The attached certificate, entitled Certificate Regarding Lobbying (Appendix H), must be signed and returned as a term and condition of the procurement.

86. NATIONAL INTELLIGENT TRANSPORTATION SYSTEMS ARCHITECTURE AND STANDARDS. Contactor agrees to conform to the National Intelligent Transportation Systems (ITS) Architecture requirements of 23 U.S.C. § 517(d), unless it obtains an exemption from those requirements, and to follow FTA Notice, "FTA National ITS Architecture Policy on Transit Projects," 66 Fed. Reg. 1455, January 8, 2001, and all other applicable federal guidance.

APPENDIX B

PROHIBITION OF DISCRIMINATION IN STATE CONTRACTS

In connection with the performance of work under this contract, Contractor agrees as follows:

1. In accordance with Act 453, Public Acts of 1976, Contractor hereby agrees not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or as a matter directly or indirectly related to employment, because of race, color, religion, national origin, age, sex, height, weight, or marital status. Further, in accordance with Act No. 220, Public Acts of 1976 as amended by Act No. 478, Public Acts of 1980, Contractor hereby agrees not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of a disability that is unrelated to the individual's ability to perform the duties of a particular job or position. A breach of the above covenants shall be regarded as a material breach of this contract.
2. Contractor hereby agrees that any and all subcontracts to this contract, whereby a portion of the work set forth in this contract is to be performed, shall contain a covenant the same as hereinabove set forth in Section 1 of this Appendix.
3. Contractor will take affirmative action to insure that applicants for employment and employees are treated without regard to their race, color, religion, national origin, age, sex, height, weight, marital status or a disability that is unrelated to the individual's ability to perform the duties of a particular job or position. Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer, recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.
4. Contractor will, in all solicitations or advertisements for employees placed by or on behalf of Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, age, sex, height, weight, marital status or disability that is unrelated to the individual's ability to perform the duties of a particular job or position.
5. Contractor or its collective bargaining representative will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice advising the said labor union or workers' representative of the Contractor's commitments under this appendix.
6. Contractor will comply with all relevant published rules, regulations, directives, and orders of the Michigan Civil Rights Commission which may be in effect prior to the taking of bids for any individual state project.
7. Contractor will furnish and file compliance reports within such time and upon such forms as provided by the Michigan Civil Rights Commission, said forms may also elicit information as to the practices, policies, program, and employment statistics of each subcontractor as well as Contractor itself, and said Contractor will permit access to its books, records, and accounts by the Michigan Civil Rights Commission and/or its agent, for purposes of investigation to ascertain compliance with this contract and relevant with rules, regulations, and orders of the Michigan Civil Rights Commission.
8. In the event that the Civil Rights Commission finds, after a hearing held pursuant to its rules, that Contractor has not complied with the contractual obligations under this Agreement, the Civil Rights Commission may, as part of its order based upon such findings, certify said findings to the Administrative Board of the State of Michigan, which Administrative Board may order the cancellation of the contract found to have been violated and/or declare Contractor ineligible for future contracts with the state and its political and civil subdivisions, departments, and officers, and including the governing boards of institutions of higher education, until Contractor complies with said order of the Civil Rights Commission. Notice of said declaration of future ineligibility may be given to any or all of the persons with whom Contractor is declared ineligible to contract as a contracting party in future contracts. In any case before the Civil Rights Commission in which cancellation of an

existing contract is a possibility, the contracting agency shall be notified of such possible remedy and shall be given the option by the Civil Rights Commission to participate in such proceedings.

9. Contractor will include, or incorporate by reference, the provisions of the foregoing paragraphs (1) through (8) in every subcontract or purchase order unless exempted by the rules, regulations or orders of the Michigan Civil Rights Commission, and will provide in every subcontract or purchase order that said provisions will be binding upon each subcontractor or seller.

The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions,

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: *Provided*, That if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings, including sanctions for noncompliance.

APPENDIX C

ASSURANCES THAT CONTRACTORS AND SUBCONTRACTORS MUST MAKE PURSUANT TO US DOT REGULATION 49 CFR § 26, et seq

- A. Contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex, in the performance of this contract. Contractor shall carry out applicable requirements of 49 CFR § 26 in the award and administration of DOT-assisted contracts. Failure of the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:
1. Withholding monthly progress payments;
 2. Assessing sanctions;
 3. Liquidated damages; and/or
 4. Disqualifying the Contractor from further bidding as non-responsible.
- B. Each contract Contractor signs with a subcontractor must include the preceding assurance.

APPENDIX D

CATA Board Policy No. 204

DISADVANTAGED BUSINESS ENTERPRISE POLICY

The Capital Area Transportation Authority (CATA) has established a Disadvantaged Business Enterprise (DBE) program in accordance with regulations of the U.S. Department of Transportation (DOT), 49 CFR Part 26. CATA has received Federal financial assistance from the Department of Transportation, and as a condition of receiving this assistance, CATA has signed an assurance that it will comply with 49 CFR Part 26.

It is the policy of CATA to ensure that DBEs are defined in part 26, have an equal opportunity to receive and participate in DOT-assisted contracts. It is also our policy:

1. To ensure nondiscrimination in the award and administration of DOT - assisted contracts;
2. To create a level playing field on which DBEs can compete fairly for DOT - assisted contracts;
3. To ensure that the DBE Program is narrowly tailored in accordance with applicable law;
4. To ensure that only firms that fully meet 49 CFR Part 26 eligibility standards are permitted to participate as DBEs;
5. To help remove barriers to the participation of DBEs in DOT-assisted contracts;
6. To assist the development of firms that can compete successfully in the market place outside the DBE Program.

The Purchasing and Contracts Manager has been delegated as the DBE Liaison Officer. In that capacity, the Purchasing and Contracts Manager is responsible for implementing all aspects of the DBE program. Implementation of the DBE program is accorded the same priority as compliance with all other legal obligations incurred by CATA in its financial assistance agreements with the Department of Transportation.

CATA has disseminated this policy statement to the Board of Directors and all of the components of our organization. We have distributed this statement to DBE and non-DBE business communities that perform work for us on DOT-assisted contracts. CATA will give public notice of DBE goals, how the goals were determined, and contact information for public comment.

Adopted: 04/20/2022

APPENDIX H
CERTIFICATE REGARDING LOBBYING

The undersigned Contractor certifies to the best of his or her knowledge and belief that:

1. No federal appropriated funds have been paid or will be paid by or on behalf of the undersigned to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.
2. If any funds other than federal appropriated funds have been paid or will be paid to any person for making lobbying contacts to an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of congress in connection with this federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form LLL, Disclosure Form to Report Lobbying, in accordance with its instructions (as amended by "Government Wide Guidance for New Restrictions on Lobbying", 61 Fed. Reg. 1413 (11/19/96). Note: Language in paragraph (2) herein has been modified in accordance with Section 10 of the Lobbying Disclosure Act of 1995 (P.L. 104-65, to be codified at 2 USC § 1601, et seq.).
3. The undersigned shall require that the language of this Certification be included in the award documents for all sub-awards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This Certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this Certification is a prerequisite for making or entering into this transaction imposed by 31 USC § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required Certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

[Note: Pursuant to 31 USC § 1352(c)(1)-(2)(A), any person who makes a prohibited expenditure or fails to file or amend a required Certification or disclosure form shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such expenditure or failure.]

The Contractor, _____ certifies or affirms to the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 USC § 3801, et seq., apply to this certification and disclosure, if any.

Signature of Contractor's Authorized Official

Name & Title of Contractor's Authorized Official

Date

APPENDIX I

BUILD AMERICA BUY AMERICA CERTIFICATION

This procurement is subject to federal "Build America Buy America" Requirements set forth in 49 U.S.C. 5323(j) and in Federal Transit Administration ("FTA") regulations at 49 CFR Part 661, and in the Build America Buy America Act, Public Law 117-58, div G, tit. IX, section 70911-70927 (2021) as implemented by the US Office of Management and Budget, including, as applicable, 2 C.F.R. Part 184, which require that steel, iron, manufactured products, and construction materials used in FTA-funded procurements be produced in the United States. Special requirements apply to rolling stock, as defined in the regulations. See 49 U.S.C. 5323(j)(2)(C), 49 CFR 661.11. In some cases, the requirement may be waived (49 CFR 661.7). For further information on the Build America Buy America preference, please visit www.doi.gov/grants/BuyAmerica. Additional information can also be found at the White House Made in America Office website: www.whitehouse.gov/omb/management/made-in-america/.

The "Build America Buy America" Certificate below must be completed and submitted with your bid/proposal. A bid/proposal which does not include the Certificate or where both certificates are signed will be considered non-responsive.

****PLEASE SIGN ONLY ONE OF THE TWO CERTIFICATES BELOW ****

<p>CERTIFICATE ONE:</p> <p style="text-align: center;">BUILD AMERICA BUY AMERICA CERTIFICATE</p> <p>The bidder hereby certifies that it <u>WILL</u> comply with the requirements of 49 U.S.C. 5323(j)(l) and applicable regulations in 49 CFR 661.</p> <p>Signature: _____</p> <p>Title: _____</p> <p>Date: _____</p>

<p>CERTIFICATE TWO:</p> <p style="text-align: center;">BUILD AMERICA BUY AMERICA CERTIFICATE</p> <p>The bidder hereby certifies that it <u>CANNOT</u> comply with the requirements of 49 U.S.C. 5323(j), but it may qualify for an exception to the requirement pursuant to 49 U.S.C. 5323(j)(2)(C), as amended, and the applicable regulations in 49 CFR 661.7.</p> <p>Signature: _____</p> <p>Title: _____</p> <p>Date: _____</p>

"General Decision Number: MI20260084 01/02/2026

Superseded General Decision Number: MI20250084

State: Michigan

Construction Type: Building

County: Ingham County in Michigan.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Modification Number 0 Publication Date 01/02/2026

ASBE0047-002 07/01/2025

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR.....	\$ 40.00	23.65

BOIL0169-001 07/01/2025

	Rates	Fringes
BOILERMAKER.....	\$ 43.50	36.74

BRMI0009-009 08/01/2024

	Rates	Fringes
BRICKLAYER		
Bricklayer.....	\$ 36.10	26.22
Terrazzo and Tile Finisher..	\$ 32.20	20.74
Terrazzo and Tile Setter....	\$ 32.20	23.46

FOOTNOTE:

Paid Holiday: Fourth of July, if the worker was employed by the contractor in any period of seven working days before said holiday within the current calendar year.

CARP1004-004 06/01/2025

	Rates	Fringes
CARPENTER (Soft Floor Layer, Including Carpet & Resilient Flooring).....	\$ 36.21	21.06

CARP1004-018 06/01/2025

	Rates	Fringes
CARPENTER, Includes Acoustical Ceiling Installation, Drywall Hanging, Form Work, and Metal Stud Installation.....	\$ 36.21	21.06

CARP1102-002 06/01/2025

	Rates	Fringes
MILLWRIGHT.....	\$ 42.92	39.13

ELEC0252-001 06/01/2025

Townships of Bunker Hill, Leslie, Onodaga & Stockbridge

	Rates	Fringes
ELECTRICIAN		
Alarm Installation & Low Voltage Wiring.....	\$ 38.79	19%+12.50
Excludes Alarm Installation and Low Voltage Wiring.....		
	\$ 56.05	27.25%+15.25

ELEC0665-004 05/31/2021

Townships of Alaiedon, Aurelius, Delhi, Ingham, Lansing, Leroy, Locke, Meridian, Vevay, Wheatfield, White Oak and Williamson

	Rates	Fringes
ELECTRICIAN		
Alarm Installation & Low Voltage Wiring.....	\$ 30.00	9.25+5.5%
Excludes Alarm Installation & Low Voltage Wiring.....		
	\$ 36.90	25.19

ENGI0324-012 06/01/2024

	Rates	Fringes
OPERATOR: Power Equipment		
GROUP 1.....	\$ 47.28	25.25
GROUP 2.....	\$ 43.93	25.25
GROUP 3.....	\$ 41.28	25.25
GROUP 4.....	\$ 39.57	25.25
GROUP 5.....	\$ 39.57	25.25
GROUP 6.....	\$ 33.71	25.25
GROUP 7.....	\$ 31.23	25.25

FOOTNOTES:

Crane operator with main boom and jib 300' or longer: \$1.50 per hour above the group 1 rate. Crane operator with main boom and jib 400' or longer: \$3.00 per hour above the group 1 rate.

PAID HOLIDAYS: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day.

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Crane operator with main boom and jib 400', 300', or 220' or longer.

GROUP 2: Crane operator with main boom and jib 140' or longer, tower crane, gantry crane, whirley derrick

GROUP 3: Concrete Pump; Crane; Highlift; Hoist; Loader; Roller; Scraper; Stiff Leg Derrick; Trencher

GROUP 4: Bobcat/Skid Loader; Broom/Sweeper; Fork Truck (over 20' lift)

GROUP 5: Boom Truck (non-swinging)

GROUP 6: Fork Truck (20' lift and under for masonry work)

GROUP 7: Oiler

IRON0025-001 06/01/2025

	Rates	Fringes
IRONWORKER		
REINFORCING.....	\$ 36.55	33.37
STRUCTURAL (Excluding Metal Building Erection)....	\$ 36.55	35.60

LABO0499-012 06/01/2025

	Rates	Fringes
LABORER		
Common or General; Grade Checker; Mason Tender - Brick; Mason Tender - Cement/Concrete; Pipelayer; Sandblaster.....	\$ 32.53	13.45

PAIN0845-001 06/01/2025

	Rates	Fringes
PAINTER: Brush, Roller, Spray and Paperhanging.....	\$ 28.75	18.68
PAINTER: Drywall Finishing/Taping.....	\$ 28.32	16.88

PLAS0016-011 04/01/2014

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 24.64	12.88

PLUM0333-006 06/01/2025

	Rates	Fringes
PIPEFITTER, Includes HVAC Pipe and Unit Installation.....	\$ 46.29	25.43
PLUMBER, Excludes HVAC Pipe and Unit Installation.....	\$ 46.29	25.43

FOOTNOTE:

Paid Holidays: Memorial Day, Independence Day and Labor Day, if the employee works the work day preceding and following the holiday unless proven illness or injury prevents the employee from working.

ROOF0070-003 06/01/2023

	Rates	Fringes
ROOFER.....	\$ 33.18	17.22

SFMI0669-001 01/01/2025

	Rates	Fringes
SPRINKLER FITTER (Fire Sprinklers).....	\$ 41.34	27.39

SHEE0007-004 05/01/2024

	Rates	Fringes
SHEET METAL WORKER (Including HVAC Duct Installation; Excluding HVAC System Installation).....	\$ 42.74	21.53

SUMI2011-009 02/01/2011

	Rates	Fringes
IRONWORKER, ORNAMENTAL.....	\$ 18.48	7.93
LABORER: Landscape & Irrigation.....	\$ 8.00	0.00
METAL BUILDING ERECTOR.....	\$ 16.92	6.32
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 21.34	7.57
OPERATOR: Bulldozer.....	\$ 20.63	8.21
OPERATOR: Grader/Blade.....	\$ 22.00	6.29
OPERATOR: Tractor.....	\$ 19.10	8.48
TRUCK DRIVER: Dump Truck.....	\$ 16.00	7.26
TRUCK DRIVER: Lowboy Truck.....	\$ 14.50	0.44
TRUCK DRIVER: Tractor Haul Truck.....	\$ 13.57	1.18

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is

like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Note: Executive Order 13658 generally applies to contracts subject to the Davis-Bacon Act that were awarded on or between January 1, 2015 and January 29, 2022, and that have not been renewed or extended on or after January 30, 2022. Executive Order 13658 does not apply to contracts subject only to the Davis-Bacon Related Acts regardless of when they were awarded. If a contract is subject to Executive Order 13658, the contractor must pay all covered workers at least \$13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025. The applicable Executive Order minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under Executive Order 13658 is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for

those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

- a) a survey underlying a wage determination
- b) an existing published wage determination
- c) an initial WHD letter setting forth a position on a wage determination matter
- d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests

for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

=====

END OF GENERAL DECISION

..

SECTION 00 4000 PROCUREMENT FORMS AND SUPPLEMENTS

PART 1 GENERAL

1.01 FORMS

- A. Use the following forms for the specified purposes unless otherwise indicated elsewhere in the procurement requirements.
- B. Instructions to Bidders: Section 00 2113.
- C. Bid Form: Section 00 4100 - Bid Form.
- D. Procurement Form Supplements:
 - 1. Bid Security Form: AIA A310.
 - 2. Allowance Form: _____.
 - 3. Unit Prices Form: Section 00 4322 - Unit Prices Form.
 - 4. Alternates Form: Section 00 4323 - Alternates Form.
 - 5. Separate Prices Break-Out Form: Section 00 4327 - Separate Prices Break-Out Form.
 - 6. Proposed Products Form: Section 00 4333 - Proposed Products Form.
 - 7. Proposed Subcontractors Form: Section 00 4336 - Proposed Subcontractors Form.
 - 8. Proposed Schedule of Values Form: AIA G703.

1.02 REFERENCE STANDARDS

- A. AIA A310 - Bid Bond; 2010.
- B. AIA G703 - Continuation Sheet; 1992.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

This page intentionally left blank

SECTION 00 4100 BID FORM

THE PROJECT AND THE PARTIES

1.01 FOR: CAPITAL AREA TRANSPORTATION AUTHORITY GRAND AVENUE BUS LANE

1.02 DATE: _____ (BIDDER TO ENTER DATE)

1.03 SUBMITTED BY: (BIDDER TO ENTER NAME AND ADDRESS)

- A. Bidder's Full Name _____
 - 1. Address _____
 - 2. City, State, Zip _____

1.04 OFFER

A. Having examined the Place of The Work and all matters referred to in the Instructions to Bidders and the Contract Documents prepared by Progressive Companies for the above mentioned project, we, the undersigned, hereby offer to enter into a Contract to perform the Work for the Sum of:

B. Grand Avenue Bus Lane:

_____ dollars
(\$ _____), in lawful money of the United States of America.

C. We have included the required security deposit as required by the Instruction to Bidders.

D. The performance assurance bonds are not included in the Bid Amount. The cost of the performance assurance bonds are a sum of:

_____ dollars (\$ _____)

E. All applicable federal taxes are included and State of Michigan taxes are included in the Bid Sum.

1.05 ACCEPTANCE

- A. This offer shall be open to acceptance and is irrevocable for 90 days from the bid closing date.
- B. In the event our bid is not accepted within the time stated above, the required security deposit shall be returned to the undersigned, in accordance with the provisions of the Instructions to Bidders; unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

1.06 CONTRACT TIME

A. Complete the Work in 56 calendar days from Notice to Proceed.

1.07 CHANGES TO THE WORK

A. When Architect establishes that the method of valuation for Changes in the Work will be net cost plus a percentage fee in accordance with General Conditions, our percentage fee will be:

- 1. 10 percent overhead and profit on the net cost of our own Work;
- 2. 5 percent on the cost of work done by any Subcontractor.

B. On work deleted from the Contract, our credit to Owner shall be Architect-approved net cost plus 0 of the overhead and profit percentage noted above.

1.08 BID FORM SUPPLEMENTS

- A. The following Supplements are attached to this Bid Form and are considered an integral part of this Bid:
 - 1. DBE Participation Form
 - 2. Certification of Primary Contractor Regarding Debarment, Suspension and Other Responsibility Matters
 - 3. Certification of Lower-Tier Participants (Sub-Contractors) Regarding Debarment, Suspension and Other Responsibility Matters
 - 4. Iran Economic Sanctions Act Certificate
 - 5. Bidders List Data Form
 - 6. Bidders Information Form
 - 7. Terms and Conditions
 - 8. Certificate Regarding Lobbying
 - 9. Build America Buy America Certification
 - 10. Davis-Bacon Wage Rate
 - 11. Certificate of Insurance

SECTION 00 4100 BID FORM

1.09 BID FORM SIGNATURE(S)

- A. The Corporate Seal of
- B. _____
- C. (Bidder - print the full name of your firm)
- D. was hereunto affixed in the presence of:
- E. _____
- F. (Authorized signing officer, Title)
- G. (Seal)
- H. _____
- I. (Authorized signing officer, Title)

1.10 IF THE BID IS A JOINT VENTURE OR PARTNERSHIP, ADD ADDITIONAL FORMS OF EXECUTION FOR EACH MEMBER OF THE JOINT VENTURE IN THE APPROPRIATE FORM OR FORMS AS ABOVE.

END OF BID FORM

SECTION 00 4325 SUBSTITUTION REQUEST FORM

TO: ARCHITECT

**PROJECT: CAPITAL AREA TRANSPORTATION AUTHORITY GRAND AVENUE BUS LANE
PROJECT NO. 75820025**

Phase during which this Substitution Request is submitted:

INDICATE WITH "X" BELOW	PHASE
	Bidding.
	Construction.

WE PROPOSE AND SUBMIT FOR YOUR CONSIDERATION THE FOLLOWING ITEM IN LIEU OF THE SPECIFIED ITEM FOR THE ABOVE PROJECT:

SPECIFIED ITEM DOCUMENTS REFERENCED

Drawing:	
Specification Section No.:	
Specification Section Title:	
Specified Item:	

PROPOSED SUBSTITUTION

Description of proposed substitution:

By:

Manufacturer:	
Trade Name:	
Address:	
City, State Zip:	
Telephone:	
Email Address:	

Installer:	
Company Name:	
Address:	
City, State, Zip	
Telephone:	
Email Address:	

Attach additional sheets if additional space is needed to fully explain the answer to any question below.

REASON FOR REQUEST

INDICATE WITH "X"	REASON
	Substitution for Cause.
	Substitution for Convenience.

If for cause, explain. Attach additional sheets if necessary:

--

SECTION 00 4325 SUBSTITUTION REQUEST FORM

HISTORY OF PROPOSED SUBSTITUTION

INDICATE WITH "X"	AGE OF ITEM
	New.
	1-4 years old.
	5-10 years old.
	Over 10 years old.

SPECIFIED PRODUCT TO PROPOSED SUBSTITUTION COMPARISON

Provide itemized comparison for review. Attach additional sheets.

REASON FOR NOT PROVIDING SPECIFIED ITEM

SIMILAR INSTALLATION

Provide an example of a similar installation of this item that is most representative of its attributes and is located 100 miles or less from the Project location..

Project:	
Owner:	
Designer:	
Address:	
City, State Zip:	

AFFECT ON OTHER WORK

Does proposed substitution affects other parts of the Work?

INDICATE WITH "X"	SELECT
	YES.
	NO.

If no, fully explain:

AFFECT ON CODE REQUIREMENTS

A. What effect does the substitution have on applicable code requirements?

AFFECT ON MANUFACTURER'S WARRANTY

Manufacturer's warranty of the proposed and specified items are:

INDICATE WITH "X"	SELECT
	Same.
	Different.

If different explain:

AFFECT ON SCHEDULE

What effect does the substitution have on the construction schedule?

SECTION 00 4325 SUBSTITUTION REQUEST FORM

COST DATA COMPARISON

Provide accurate cost data comparing proposed substitution with specified item.

RESPONSIBILITY FOR COST OF DESIGN CHANGES

Will the undersigned pay for changes to the building design, including engineering and detailing costs caused by the requested substitution?

INDICATE WITH "X"	SELECT
	YES.
	NO.

If no, fully explain:

FROM:

WE CERTIFY THAT THE FUNCTION, APPEARANCE AND QUALITY ARE EQUIVALENT OR SUPERIOR TO THE SPECIFIED ITEM.

Company:	
Address:	
City, State Zip	
Submitted By (print name):	
Title:	
Signature:	
Date:	
Telephone:	

Signer above must be an officer of the Firm who possesses the authority to legally bind the Firm to the terms stated herein. The Owner's Spec Term reserves the right to reject or retract approval for failure to provide a legally binding signature.

SECTION 00 4325 SUBSTITUTION REQUEST FORM

ARCHITECT'S REVIEW AND RECOMMENDATION

THE ARCHITECT HAS REVIEWED THE INFORMATION SUBMITTED AND MAKES THE FOLLOWING RECOMMENDATION:

MARK	ACTION	COMMENTS
	No Exceptions Taken	Submit in accordance with Specification Section 01 3000.
	Make Corrections Noted	Submit in accordance with Specification Section 01 3000.
	Rejected	Provide specified item.
	Received Too Late	Provide specified item.

Reviewed By (print name):	
Title:	
Signature:	
Date:	

OWNER'S REVIEW AND ACTION

THE OWNER HAS REVIEWED THE INFORMATION SUBMITTED AND TAKES THE FOLLOWING ACTION:

MARK	ACTION	COMMENTS
	Substitution Approved	Submit in accordance with Specification Section 01 3300.
	Substitution Approved As Noted	Submit in accordance with Specification Section 01 3300.
	Substitution Rejected	Provide specified item.
	Received Too Late	Provide specified item.

Reviewed By (print name):	
Title:	
Signature:	
Date:	

END OF SECTION

SECTION 00 4336 PROPOSED SUBCONTRACTORS FORM

PARTICULARS

1.01 HERewith IS THE LIST OF SUBCONTRACTORS REFERENCED IN THE BID SUBMITTED BY:

1.02 (BIDDER) _____

1.03 DATED _____ AND WHICH IS AN INTEGRAL PART OF THE BID FORM.

1.04 THE FOLLOWING WORK WILL BE PERFORMED (OR PROVIDED) BY SUBCONTRACTORS AND COORDINATED BY US:

LIST OF SUBCONTRACTORS

WORK SUBJECT SUBCONTRACTOR NAME

- A. _____
- B. _____
- C. _____
- D. _____
- E. _____
- F. _____
- G. _____

END OF SECTION

This page intentionally left blank

SECTION 00 5000 CONTRACTING FORMS AND SUPPLEMENTS

PART 1 GENERAL

1.01 CONTRACTOR IS RESPONSIBLE FOR OBTAINING A VALID LICENSE TO USE ALL COPYRIGHTED DOCUMENTS SPECIFIED BUT NOT INCLUDED IN THE PROJECT MANUAL.

1.02 AGREEMENT AND CONDITIONS OF THE CONTRACT

- A. The Agreement is based on CATA Standard Contract of Construction.
- B. The General Conditions are based on the Standard Terms and Conditions of Procurement as stipulated in 00 2113 Instructions.

1.03 FORMS

- A. Post-Award Certificates and Other Forms:
 - 1. Application for Payment Forms: AIA G702 with AIA G703 (for Contractors).

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

This page intentionally left blank

SECTION 00 5433 AVAILABILITY OF DIGITAL DATA

PART 1 GENERAL

1.01 DEFINITIONS

- A. The following terms for the purposes of this section are excerpted from the Digital Data Licensing Agreement, AIA C106 and are defined below.
- B. Agreement: The Digital Data Licensing Agreement.
- C. Receiving Party: The Party Receiving Digital Data.
- D. Transmitting Party: Architect, who is the Party Transmitting the Digital Data.

1.02 AVAILABILITY

- A. The Transmitting Party will make Digital Data available to the Receiving Party upon receipt of an executed Agreement.
 - 1. A sample Agreement document is provided for information and review in Section 00 5433.13 - Sample Digital Data Licensing Agreement.
- B. The Transmitting Party requires the Receiving Party to thoroughly review the sample Digital Data Licensing Agreement prior to execution, and if in basic agreement, contact the Transmitting Party to request a formal, project-specific version of the Agreement to execute and return to the Transmitting Party for counter signature.
 - 1. If a fee or other compensation is required by and stated in the Agreement, that fee or compensation must be received by the Transmitting Party before Digital Data can be released to the Receiving Party.
- C. Once the Agreement is fully executed and any required compensation paid to the Transmitting Party, the Transmitting Party will provide the requested Digital Data and a copy of the fully-executed Agreement to the Receiving Party.
 - 1. Provide contact information for the designated recipient for the Receiving Party, including full name, title, email address and telephone number.
- D. Take steps to ensure all desired Digital Data files are indicated in the initial request. Once the Agreement is fully executed and returned, any subsequent request for additional Digital Data files or copies of the originally transmitted Digital Data files will not be accepted.
- E. The Transmitting Party reserves the right to limit the type of Digital Data files, when they will be made available, and to whom in the Receiving Party they will be made available.

1.03 LIMITATIONS

- A. The Digital Data Licensing Agreement neither forms a part of, nor modifies, the Bid Documents and the Contract Documents.
- B. The Digital Data Licensing Agreement terms and conditions are not subject to, nor are superseded by, any provisions of the Contract Documents.
- C. The Digital Data Licensing Agreement, and the Receiving Party's use of the Digital Data, is not subject to any Uniform Commercial Code, and the Digital Data Licensing Agreement shall not be construed to be a sale of any goods or products under any provision of any Uniform Commercial Code, or another statute, law or regulation and shall further not be construed as an agreement for performance by the Transmitting Party on behalf of the Receiving Party.

1.04 DIGITAL DATA REQUEST SCHEDULE

- A. List all documentation being requested in the Schedule below.
- B. Attach additional sheets if necessary to fully describe the request.
- C. Clearly identify the purpose for the request (e.g., CAD files for use in preparation of shop drawings).
- D. Place a check mark in the tables below next to the files requested.
- E. Indicate the file format being requested (i.e., .dwg, .rvt, .docx, etc.) and the version, if applicable.
- F. Some of the files indicated in the Schedule below may not be applicable to this project and therefore cannot be provided.
- G. Schedules:

SECTION 00 5433 AVAILABILITY OF DIGITAL DATA

√	DIGITAL DATA FILE TYPE	FORMAT	AVAILABLE TO	TIME AVAILABLE
	BIM Model(s)	REVIT	C	After Bidding
	Drawings	Scans	C	After Bidding
	Project Manual/Specifications	Scans	C	After Bidding

H.

√	DIGITAL DATA FILE TYPE	FORMAT	AVAILABLE TO	TIME AVAILABLE
	Civil Grading and Layout Plans	CAD	SS and C	During and After Bidding
	Architectural Floor Plans	CAD	C	After Bidding
	Reflected Ceiling Plans	CAD	C	After Bidding
	Structural Plans	CAD	C	After Bidding
	Fire Protection Plans	CAD	C	After Bidding
	Plumbing Plans	CAD	C	After Bidding
	Mechanical Plans	CAD	C	After Bidding
	Electrical Plans	CAD	C	After Bidding

I. KEY: C = Contractor SS = Site Subcontractor (Division 30+)

1.05 LICENSING FEE OR OTHER COMPENSATION

- A. No Licensing Fee for Digital Data provided will be assessed.
- B. Compensation for Digital Data provided: One Hundred Dollars USD (\$100.00) per sheet with a maximum cost of Five Hundred Dollars USD (\$500.00).
 - 1. Submit a check payable to “Progressive Companies” for the agreed sum. Identify the Project Name and Number on the check, and reference “Digital Data” on the Memo line.

1.06 SUPPLEMENTARY CONDITIONS TO THE DIGITAL DATA LICENSING AGREEMENT

- A. These Supplementary Conditions are set forth and hereby modify, change, delete from or add to requirements of the sample Digital Data Licensing Agreement. It expressly understood and agreed by the Transmitting Party and the Receiving Party that the Supplementary Conditions listed below will be incorporated into and become part of the final Agreement prior to execution.
- B. Where requirements of the Supplementary Conditions conflict with or are at variance from those of the Agreement, they shall take precedence over the Agreement and modify such requirements to the extent of such conflict or variations

C. ARTICLE 3 LICENSE CONDITIONS

- 1. The Receiving Party agrees to use the Digital Data expressly and solely for no other purpose than to support of the construction of this project.
- 2. The Receiving Party agrees not to return Digital Data provided by the Transmitting Party as a submittal requested in individual technical specification sections.
- 3. Revit model files will only contain elements and content that the Transmitting Party deems necessary and appropriate to share. No specific Level of Detail is implied nor should be expected. The Receiving Party agrees that it will not remove proprietary Revit families or Revit content shall be removed from the model and/or used for any other purposes but to support this specific project.
- 4. The Receiving Party agrees that neither it nor its agents will remove proprietary Revit families or Revit content from the model and use those families and content any other purposes except in direct support of this project.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 00 6313 REQUEST FOR INTERPRETATION FORM

**PROJECT: CAPITAL AREA TRANSPORTATION AUTHORITY GRAND AVENUE BUS LANE
PROJECT NO: 75820025**

To Progressive Companies: Attention; Pam Young email: pyoung@weareprogressive.com

Progressive Companies

1811 4 Mile Road, NE
Grand Rapids, MI 49525

616-361-2664 VOICE
616-361-1493 FAX

From: Contractor: _____ RFI No: _____

Phone No: _____

Fax No: _____

Date: _____

Submitted By: _____

Name/Trades Contractor: _____

Question Is: Civil ___ Architectural ___ Interiors ___ Structural ___ Mechanical ___
Electrical ___ Communications ___ Other (specify) _____

Re: Project Manual/Drawing/Detail No: _____

Question: _____

Contractor Recommendation and advise of any cost/schedule impacts.: _____

Signed (Contractor Project Manager): _____

Progressive Companies Reply: _____

Signed (AE): _____ Date _____

Distribution:

Owner: _____

Progressive Companies: _____

Contractor: _____

END OF SECTION

This page intentionally left blank

SECTION 01 1000 SUMMARY

PART 1 GENERAL

1.01 PROJECT

- A. Project Name: Capital Area Transportation Authority Grand Avenue Bus Lane
- B. The Project consists of the construction of Construction of a new bus lane along S Grand Avenue adjacent to the CATA Transportation Center.

1.02 CONTRACT DESCRIPTION

- A. Contract Type: A single prime contract based on a Stipulated Price as described in Document 00 5200 - Agreement Form.

1.03 DBE PARTICIPATION

- A. DBE Subcontractor participation: CATA project goal is 1.28% of total project cost.

1.04 OWNER OCCUPANCY

- A. Owner intends to continue to occupy adjacent existing CATA Transportation Center and exterior functions there of during the entire construction period.
- B. Owner intends to occupy the Project upon Substantial Completion.
- C. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- D. Schedule the Work to accommodate Owner occupancy.

1.05 CONTRACTOR USE OF SITE AND PREMISES

- A. Construction Operations: Limited to areas noted on Drawings.
- B. Arrange use of site and premises to allow:
 - 1. Owner occupancy.
- C. Provide access to and from site as required by law and by Owner:
 - 1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
 - 2. Do not obstruct roadways, sidewalks, or other public ways without permit.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

This page intentionally left blank

SECTION 01 2000 PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Procedures for preparation and submittal of applications for progress payments.
- B. Documentation of changes in Contract Sum and Contract Time.
- C. Change procedures.
- D. Correlation of Contractor submittals based on changes.
- E. Procedures for preparation and submittal of application for final payment.

1.02 RELATED REQUIREMENTS

- A. Section 00 5000 - Contracting Forms and Supplements: Forms to be used.

1.03 SCHEDULE OF VALUES

- A. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit draft to Architect for approval.
- B. Forms filled out by hand will not be accepted.
- C. Submit Schedule of Values in duplicate within 15 days after date of Owner-Contractor Agreement.
- D. Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the specification section. Identify site mobilization and de-mobilization .
- E. Include in each line item, the amount of Allowances specified in this section. For unit cost Allowances, identify quantities taken from Contract Documents multiplied by the unit cost to achieve the total for the item.
- F. Include separately from each line item, a direct proportional amount of Contractor's overhead and profit.
- G. Revise schedule to list approved Change Orders, with each Application For Payment.

1.04 APPLICATIONS FOR PROGRESS PAYMENTS

- A. Payment Period: Submit at intervals stipulated in the Agreement.
- B. Use Form AIA G702 and Form AIA G703, edition stipulated in the Agreement.
- C. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Architect for approval.
- D. Forms filled out by hand will not be accepted.
- E. Execute certification by signature of authorized officer.
- F. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored products.
- G. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of work.
- H. Submit one electronic and 0 hard-copies of each Application for Payment.
- I. Include the following with the application:
 - 1. Transmittal letter as specified for submittals in Section 01 3000.
 - 2. Construction progress schedule, revised and current as specified in Section 01 3000.
 - 3. Current construction photographs specified in Section 01 3000.
 - 4. Partial release of liens from major subcontractors and vendors.
 - 5. Affidavits attesting to off-site stored products.
 - 6. Retainage: 10 percent through substantial completion and 5 percent thereafter until final payment
- J. When Architect requires substantiating information, submit data justifying dollar amounts in question. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.

1.05 MODIFICATION PROCEDURES

- A. For minor changes not involving an adjustment to the Contract Sum or Contract Time, Architect will issue instructions directly to Contractor.

SECTION 01 2000 PRICE AND PAYMENT PROCEDURES

- B. For other required changes, Architect will issue a document signed by Owner instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.
 - 1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
 - 2. Promptly execute the change.
- C. For changes for which advance pricing is desired, Architect will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit a fixed price quotation within 10 days.
- D. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.
 - 1. For change requested by Architect for work falling under a fixed price contract, the amount will be based on Contractor's price quotation.
 - 2. For change requested by Contractor, the amount will be based on the Contractor's request for a Change Order as approved by Architect.
 - 3. For pre-determined unit prices and quantities, the amount will be based on the fixed unit prices.
 - 4. For change ordered by Architect without a quotation from Contractor, the amount will be determined by Architect based on the Contractor's substantiation of costs as specified for Time and Material work.
- E. Substantiation of Costs: Provide full information required for evaluation.
 - 1. On request, provide the following data:
 - a. Quantities of products, labor, and equipment.
 - b. Taxes, insurance, and bonds.
 - c. Overhead and profit.
 - d. Justification for any change in Contract Time.
 - e. Credit for deletions from Contract, similarly documented.
 - 2. Support each claim for additional costs with additional information:
 - a. Origin and date of claim.
 - b. Dates and times work was performed, and by whom.
 - c. Time records and wage rates paid.
 - d. Invoices and receipts for products, equipment, and subcontracts, similarly documented.
 - 3. For Time and Material work, submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.
- F. Execution of Change Orders: Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.
- G. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.
- H. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
- I. Promptly enter changes in Project Record Documents.

1.06 APPLICATION FOR FINAL PAYMENT

- A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.
- B. Application for Final Payment will not be considered until the following have been accomplished:
 - 1. All closeout procedures specified in Section 01 7000.
 - 2. Requirements of Owner - Contractor Agreement..

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 2500 SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Procedural requirements for proposed substitutions.

1.02 RELATED REQUIREMENTS

- A. Section 00 4325 - Substitution Request Form - During Procurement: Required form for substitution requests made prior to award of contract (During procurement).
- B. Section 00 6325 - Substitution Request Form - During Construction: Required form for substitution requests made after award of contract (During construction).
- C. Section 01 6000 - Product Requirements: Fundamental product requirements, product options, delivery, storage, and handling.

1.03 DEFINITIONS

- A. Substitutions: Changes from Contract Documents requirements proposed by Contractor to materials, products, assemblies, and equipment.
 - 1. Substitutions for Cause: Proposed due to changed Project circumstances beyond Contractor's control.
 - a. Unavailability.
 - b. Regulatory changes.
 - 2. Substitutions for Convenience: Proposed due to possibility of offering substantial advantage to the Project.
 - a. Substitution requests offering advantages solely to the Contractor will not be considered.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 GENERAL REQUIREMENTS

- A. A Substitution Request for products, assemblies, materials, and equipment constitutes a representation that the submitter:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product, equipment, assembly, or system.
 - 2. Agrees to provide the same warranty for the substitution as for the specified product.
 - 3. Agrees to provide same or equivalent maintenance service and source of replacement parts, as applicable.
 - 4. Agrees to coordinate installation and make changes to other work that may be required for the work to be complete, with no additional cost to Owner.
 - 5. Waives claims for additional costs or time extension that may subsequently become apparent.
 - 6. Agrees to reimburse Owner and Architect for review or redesign services associated with re-approval by authorities.
- B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Burden of proof is on proposer.
 - 1. Note explicitly any non-compliant characteristics.
- C. Content: Include information necessary for tracking the status of each Substitution Request, and information necessary to provide an actionable response.
 - 1. Forms included in the Project Manual are adequate for this purpose, and must be used.
- D. Limit each request to a single proposed substitution item.

3.02 SUBSTITUTION PROCEDURES DURING PROCUREMENT

- A. Submittal Time Restrictions:
 - 1. Instructions to Bidders specifies time restrictions and the documents required for submitting substitution requests during the bidding period.
- B. Submittal Form (before award of contract):
 - 1. Submit substitution requests by completing the form in Section 00 4325; see this section for additional information and instructions. Use only this form; other forms of submission are unacceptable.

3.03 SUBSTITUTION PROCEDURES DURING CONSTRUCTION

- A. Submittal Form (after award of contract):

SECTION 01 2500 SUBSTITUTION PROCEDURES

1. Submit substitution requests by completing the form in Section 00 6325; see this section for additional information and instructions. Use only this form; other forms of submission are unacceptable.
- B. Submit request for Substitution for Cause within 14 days of discovery of need for substitution, but not later than 14 days prior to time required for review and approval by Architect, in order to stay on approved project schedule.
- C. Substitutions will not be considered under one or more of the following circumstances:
 1. When they are indicated or implied on shop drawing or product data submittals, without having received prior approval.
 2. Without a separate written request.
 3. When acceptance will require revisions to Contract Documents.

3.04 RESOLUTION

- A. Architect may request additional information and documentation prior to rendering a decision. Provide this data in an expeditious manner.

3.05 ACCEPTANCE

- A. Accepted substitutions change the work of the Project. They will be documented and incorporated into work of the project by Change Order, Construction Change Directive, Architectural Supplementary Instructions, or similar instruments provided for in the Conditions of the Contract.

3.06 CLOSEOUT ACTIVITIES

- A. See Section 01 7800 - Closeout Submittals, for closeout submittals.
- B. Include completed Substitution Request Forms as part of the Project record. Include both approved and rejected Requests.

END OF SECTION

SECTION 01 3000 ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General administrative requirements.
- B. Preconstruction meeting.
- C. Progress meetings.
- D. Construction progress schedule.
- E. Number of copies of submittals.
- F. Requests for Interpretation (RFI) procedures.
- G. Submittal procedures.

1.02 RELATED REQUIREMENTS

- A. Section 00 7200 - General Conditions: Dates for applications for payment.
- B. Section 01 6000 - Product Requirements: General product requirements.
- C. Section 01 7000 - Execution and Closeout Requirements: Additional coordination requirements.
- D. Section 01 7800 - Closeout Submittals: Project record documents; operation and maintenance data; warranties and bonds.

1.03 GENERAL ADMINISTRATIVE REQUIREMENTS

- A. Comply with requirements of Section 01 7000 - Execution and Closeout Requirements for coordination of execution of administrative tasks with timing of construction activities.
- B. Make the following types of submittals to Architect:
 - 1. Requests for Interpretation (RFI).
 - 2. Requests for substitution.
 - 3. Shop drawings, product data, and samples.
 - 4. Test and inspection reports.
 - 5. Design data.
 - 6. Manufacturer's instructions and field reports.
 - 7. Applications for payment and change order requests.
 - 8. Progress schedules.
 - 9. Coordination drawings.
 - 10. Correction Punch List and Final Correction Punch List for Substantial Completion.
 - 11. Closeout submittals.

1.04 PROJECT COORDINATOR

- A. Project Coordinator: Design-Builder.
- B. Cooperate with the Project Coordinator in allocation of mobilization areas of site; for field offices and sheds, for site access, traffic, and parking facilities.
- C. During construction, coordinate use of site and facilities through the Project Coordinator.
- D. Comply with Project Coordinator's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
- E. Comply with instructions of the Project Coordinator for use of temporary utilities and construction facilities. Responsibility for providing temporary utilities and construction facilities is identified in Section 01 1000 - Summary.
- F. Coordinate field engineering and layout work under instructions of the Project Coordinator.
- G. Make the following types of submittals to Architect through Procore Construction Management Software under Design-Builder's license:
 - 1. Requests for Interpretation.
 - 2. Requests for substitution.
 - 3. Shop drawings, product data, and samples.
 - 4. Test and inspection reports.
 - 5. Design data.
 - 6. Manufacturer's instructions and field reports.

SECTION 01 3000 ADMINISTRATIVE REQUIREMENTS

7. Applications for payment and change order requests.
8. Progress schedules.
9. Coordination drawings.
10. Closeout submittals.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PRECONSTRUCTION MEETING

- A. Attendance Required:
 1. Architect.
 2. Subcontractors.
- B. Agenda:
 1. Execution of Design Builder - Subcontractor Agreement.
 2. Submission of executed bonds and insurance certificates.
 3. Distribution of Contract Documents.
 4. Submission of list of subcontractors, list of products, schedule of values, and progress schedule.
 5. Designation of personnel representing the parties to Contract, owner and Architect.
 6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
 7. Scheduling.

3.02 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the work at maximum bi-monthly intervals.
- B. Attendance Required: Job superintendent, major Subcontractors and suppliers, Owner, Design-Builder, as appropriate to agenda topics for each meeting.
- C. Agenda:
 1. Review minutes of previous meetings.
 2. Review of work progress.
 3. Field observations, problems, and decisions.
 4. Identification of problems that impede, or will impede, planned progress.
 5. Review of submittals schedule and status of submittals.
 6. Review of RFIs log and status of responses.
 7. Review of off-site fabrication and delivery schedules.
 8. Maintenance of progress schedule.
 9. Corrective measures to regain projected schedules.
 10. Planned progress during succeeding work period.
 11. Coordination of projected progress.
 12. Maintenance of quality and work standards.
 13. Effect of proposed changes on progress schedule and coordination.
 14. Other business relating to work.

3.03 CONSTRUCTION PROGRESS SCHEDULE

- A. Within 10 days after date of the Agreement, submit preliminary schedule defining planned operations for the first 60 days of work, with a general outline for remainder of work.
- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.

3.04 REQUESTS FOR INTERPRETATION (RFI)

- A. Definition: A request seeking one of the following:
 1. An interpretation, amplification, or clarification of some requirement of Contract Documents arising from inability to determine from them the exact material, process, or system to be installed; or when the elements of construction are required to occupy the same space (interference); or when an item of work is described differently at more than one place in Contract Documents.
 2. A resolution to an issue which has arisen due to field conditions and affects design intent.
- B. Whenever possible, request clarifications at the next appropriate project progress meeting, with response entered into meeting minutes, rendering unnecessary the issuance of a formal RFI.

SECTION 01 3000 ADMINISTRATIVE REQUIREMENTS

- C. Preparation: Prepare an RFI immediately upon discovery of a need for interpretation of Contract Documents. Failure to submit a RFI in a timely manner is not a legitimate cause for claiming additional costs or delays in execution of the work.
 - 1. Prepare a separate RFI for each specific item.
 - a. Review, coordinate, and comment on requests originating with subcontractors and/or materials suppliers.
 - b. Do not forward requests which solely require internal coordination between subcontractors.
- D. Reason for the RFI: Prior to initiation of an RFI, carefully study all Contract Documents to confirm that information sufficient for their interpretation is definitely not included.
 - 1. Include in each request Contractor's signature attesting to good faith effort to determine from Contract Documents information requiring interpretation.
 - 2. Unacceptable Uses for RFIs: Do not use RFIs to request the following:
 - a. Approval of submittals (use procedures specified elsewhere in this section).
 - b. Approval of substitutions (see Section - 01 6000 - Product Requirements)
 - c. Changes that entail change in Contract Time and Contract Sum (comply with provisions of the Conditions of the Contract).
 - d. Different methods of performing work than those indicated in the Contract Drawings and Specifications (comply with provisions of the Conditions of the Contract).
 - 3. Improper RFIs: Requests not prepared in compliance with requirements of this section, and/or missing key information required to render an actionable response. They will be returned without a response, with an explanatory notation.
 - 4. Frivolous RFIs: Requests regarding information that is clearly indicated on, or reasonably inferable from, Contract Documents, with no additional input required to clarify the question. They will be returned without a response, with an explanatory notation.
 - a. The Owner reserves the right to assess the Contractor for the costs (on time-and-materials basis) incurred by the Architect, and any of its consultants, due to processing of such RFIs.
- E. Content: Include identifiers necessary for tracking the status of each RFI, and information necessary to provide an actionable response.
 - 1. Official Project name and number, and any additional required identifiers established in Contract Documents.
 - 2. Submit on form found in Section 00 6313 - Request for Interpretation, providing all information requested or through Procure Project Management Software.
- F. Attachments: Include sketches, coordination drawings, descriptions, photos, submittals, and other information necessary to substantiate the reason for the request.
- G. Review Time: Architect will respond and return RFIs to Contractor within three calendar days of receipt, excluding Saturday and Sunday. For the purpose of establishing the start of the mandated response period, RFIs received after 12:00 noon will be considered as having been received on the following regular working day.
 - 1. Response period may be shortened or lengthened for specific items, subject to mutual agreement, and recorded in a timely manner in progress meeting minutes.
- H. Responses: Content of answered RFIs will not constitute in any manner a directive or authorization to perform extra work or delay the project. If in Contractor's belief it is likely to lead to a change to Contract Sum or Contract Time, promptly issue a notice to this effect, and follow up with an appropriate Change Order request to Owner.
 - 1. Response may include a request for additional information, in which case the original RFI will be deemed as having been answered, and an amended one is to be issued forthwith. Identify the amended RFI with an R suffix to the original number.
 - 2. Do not extend applicability of a response to specific item to encompass other similar conditions, unless specifically so noted in the response.
 - 3. Notify Architect within two calendar days if an additional or corrected response is required by submitting an amended version of the original RFI, identified as specified above.

3.05 SUBMITTALS FOR REVIEW

- A. When the following are specified in individual sections, submit them for review:
 - 1. Product data.

SECTION 01 3000 ADMINISTRATIVE REQUIREMENTS

2. Shop drawings.
 3. Samples for selection.
 4. Samples for verification.
- B. Submit to Architect for review for the limited purpose of checking for compliance with information given and the design concept expressed in Contract Documents.
- C. Samples will be reviewed for aesthetic, color, or finish selection.
- D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01 7800 - Closeout Submittals.
1. Design data.
 2. Certificates.
 3. Test reports.
 4. Inspection reports.
 5. Manufacturer's instructions.
 6. Manufacturer's field reports.
 7. Material Safety Data Sheets (MSDS).
 8. Other types indicated.
- E. Submit for Architect's knowledge as contract administrator or for Owner. No action will be taken.

3.06 SUBMITTALS FOR PROJECT CLOSEOUT

- A. Submit Correction Punch List for Substantial Completion.
- B. Submit Final Correction Punch List for Substantial Completion.
- C. When the following are specified in individual sections, submit them at project closeout in compliance with requirements of Section 01 7800 - Closeout Submittals:
1. Project record documents.
 2. Operation and maintenance data.
 3. Warranties.
 4. Bonds.
 5. Other types as indicated.
- D. Submit for Owner's benefit during and after project completion.

3.07 NUMBER OF COPIES OF SUBMITTALS

- A. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.
- B. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect.
1. Retained samples will not be returned to Contractor unless specifically so stated.

3.08 SUBMITTAL PROCEDURES

- A. General Requirements:
1. Use a separate transmittal for each item.
 2. Submit separate packages of submittals for review and submittals for information, when included in the same specification section.
 3. Transmit using approved form.
 - a. Use Contractor's form, subject to prior approval by Architect.
 4. Sequentially identify each item. For revised submittals use original number and a sequential numerical suffix.
 5. Identify: Project; Contractor; subcontractor or supplier; pertinent drawing and detail number; and specification section number and article/paragraph, as appropriate on each copy.
 6. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and Contract Documents.
 - a. Submittals from sources other than the Contractor, or without Contractor's stamp will not be acknowledged, reviewed, or returned.
 7. Schedule submittals to expedite the Project, and coordinate submission of related items.

SECTION 01 3000 ADMINISTRATIVE REQUIREMENTS

- a. For each submittal for review, allow 10 days excluding delivery time to and from the Contractor.
 - b. For sequential reviews involving Architect's consultants, Owner, or another affected party, allow an additional 7 days.
 8. Provide space for Contractor and Architect review stamps.
 9. When revised for resubmission, identify all changes made since previous submission.
 10. Distribute reviewed submittals. Instruct parties to promptly report inability to comply with requirements.
 11. Incomplete submittals will not be reviewed, unless they are partial submittals for distinct portion(s) of the work, and have received prior approval for their use.
 12. Submittals not requested will be recognized, and will be returned "Not Reviewed",
- B. Product Data Procedures:
1. Submit only information required by individual specification sections.
 2. Collect required information into a single submittal.
 3. Do not submit (Material) Safety Data Sheets for materials or products.
- C. Shop Drawing Procedures:
1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting Contract Documents and coordinating related work.
 2. Do not reproduce Contract Documents to create shop drawings.
 3. Generic, non-project-specific information submitted as shop drawings do not meet the requirements for shop drawings.
- D. Samples Procedures:
1. Transmit related items together as single package.
 2. Identify each item to allow review for applicability in relation to shop drawings showing installation locations.
 3. Include with transmittal high-resolution image files of samples to facilitate electronic review and approval. Provide separate submittal page for each item image.
 - a. Photographs of each sample submitted for electronic filing for record purposes.
 - b. Digital Photographs: 24 bit color, minimum resolution of 1024 by 768, in JPG format; provide files unaltered by photo editing software.
 - c. Delivery Medium: Via email.
 - d. File Naming: Include project identification.

3.09 SUBMITTAL REVIEW

- A. Submittals for Review: Architect will review each submittal, or take other appropriate action.
- B. Submittals for Information: Architect will acknowledge receipt and review. See below for actions to be taken or an actual stamp on hard copies of submittals.
- C. Architect's actions will be reflected by marking each returned submittal using virtual stamp on electronic submittals.
- D. Architect's Action: General: Except for submittals for the record and similar purposes, where action and return on submittals are required or requested, the Architect will review each submittal and mark with appropriate "action" within 10 working days. Where the submittal must be held for coordination, the Architect will so advise the Contractor without delay. The Architect's review of a specific item shall not indicate review of an assembly of which the item is a component.
 1. Architect's Action Stamp: The Architect will stamp each submittal to be returned with a uniform, self explanatory action stamp, appropriately marked and executed. It shall read as follows:

SECTION 01 3000 ADMINISTRATIVE REQUIREMENTS

- a. "This submittal is reviewed for general conformance with the design concept of the project and with information given in the Contract Documents. This review shall not constitute approval of safety precautions and is not conducted for substantiating instructions for installation or performance of equipment or systems. This review does not relieve the contractor of responsibility for conformance with the Contract Documents and applicable codes, all of which have priority over this submittal. The Architect/Engineer does not warrant or represent that the information within the submittal is either accurate or complete. The contractor is responsible for coordinating and verifying all quantities, dimensions, tolerances, clearances, fabrication processes, techniques, sequences, means, methods of construction and compatibility of materials. It is also understood that the contractor has reviewed and coordinated all related trades and components of an assembly prior to issuing a submittal for review."
- b. Marking X No Exceptions Taken
 - 1) Final unrestricted release. Where the submittals are marked as above, the work covered by the submittal may proceed, provided it complies with the requirements of the contract documents; acceptance of the work will depend upon that compliance.
- c. Marking X Make Corrections Noted
 - 1) Final but restricted release. When submittals are marked as above, work covered by submittal may proceed, provided it complies with both Architect's notations or corrections on the submittal and with the requirements of the contract documents; acceptance of the work will depend on that compliance.
- d. Marking X Revise and Resubmit
 - 1) Returned for resubmittal. When submittal is marked as above, revise or prepare new submittal in accordance with Architect's notations stating reasons for returning submittal; cloud all revisions to expedite review; resubmit submittal without delay. Repeat if necessary to obtain a different action marking. Do not permit submittals with the above marking to be used at the project site or elsewhere where work is in progress.
- e. Marking X Rejected
 - 1) Returned for resubmittal. When the submittal is marked as above, do not proceed with the work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise the submittal, or prepare a new submittal in accordance with the Architect's notations stating the reasons for returning the submittal. Resubmit the submittal without delay. Repeat if necessary to obtain a different action marking. Do not permit submittals with the above marking to be used at the project site or elsewhere where work is in progress."
- f. Marking X For Record Purposes Only
 - 1) No Action Taken/Required or Not Required for Review. When a submittal is marked as above, the A/E has retained submittal for their record keeping purposes or to track informational submittals that do not require review or approval. These submittals are processed only as a record of the construction.

END OF SECTION

SECTION 01 3219 SUBMITTALS SCHEDULE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Submittal schedule.

1.02 RELATED REQUIREMENTS

- A. Section 01 1000 - Summary: Submittals Schedule.

1.03 SUBMITTALS

- A. Within 10 days after date of Agreement, provide schedule of submittal submissions.
- B. Submit in PDF format.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 CONTENT

- A. Identify each item by specification section number, following the numbering in Procore. Include, as applicable, submittal dates for shop drawings, product data, samples, products identified under Allowances, and dates reviewed submittals will be required from Design-Builder. Indicate decision dates for selection of finishes.

3.02 REVIEW AND EVALUATION OF SCHEDULE

- A. Participate in joint review and evaluation of initial schedule with Architect.

3.03 SCHEDULE

- A. Preliminary submittal schedule attached following this section as a starting point for contractor generated submittal schedule.

END OF SECTION

This page intentionally left blank

SECTION 01 4000 QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Submittals.
- B. References and standards.
- C. Testing and inspection agencies and services.
- D. Control of installation.
- E. Manufacturers' field services.
- F. Defect Assessment.

1.02 RELATED REQUIREMENTS

- A. Section 01 4216 - Definitions.
- B. Section 01 6000 - Product Requirements: Requirements for material and product quality.

1.03 REFERENCE STANDARDS

- A. ASTM C1021 - Standard Practice for Laboratories Engaged in Testing of Building Sealants; 2008 (Reapproved 2023).
- B. ASTM C1077 - Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation; 2024.
- C. ASTM C1093 - Standard Practice for Accreditation of Testing Agencies for Masonry; 2023.
- D. ASTM D3740 - Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction; 2012a.
- E. ASTM E329 - Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection; 2018.
- F. ASTM E543 - Standard Specification for Agencies Performing Nondestructive Testing; 2015.
- G. ASTM E699 - Standard Specification for Agencies Involved in Testing, Quality Assurance, and Evaluating of Manufactured Building Components; 2016.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Test Reports: After each test/inspection, promptly submit 1 copies of report to Architect and to Contractor.
 - 1. Include:
 - a. Date issued.
 - b. Project title and number.
 - c. Name of inspector.
 - d. Date and time of sampling or inspection.
 - e. Identification of product and specifications section.
 - f. Location in the Project.
 - g. Type of test/inspection.
 - h. Date of test/inspection.
 - i. Results of test/inspection.
 - j. Compliance with Contract Documents.
 - k. When requested by Architect, provide interpretation of results.
 - 2. Test report submittals are for Architect's knowledge as contract administrator for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents, or for Owner's information.
- C. Manufacturer's Field Reports: Submit reports for Architect's benefit as contract administrator or for Owner.
 - 1. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents.

SECTION 01 4000 QUALITY REQUIREMENTS

1.05 REFERENCES AND STANDARDS

- A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Comply with reference standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.
- C. Obtain copies of standards where required by product specification sections.
- D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.
- E. Should specified reference standards conflict with Contract Documents, request clarification from Architect before proceeding.
- F. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of Architect shall be altered from Contract Documents by mention or inference otherwise in any reference document.

1.06 TESTING AND INSPECTION AGENCIES AND SERVICES

- A. Contractor shall employ and pay for services of an independent testing agency to perform other specified testing.
- B. Design-Builder shall employ and pay for services of an independent testing agency to perform other specified
- C. Employment of agency in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.
- D. Contractor Employed Agency:
 - 1. Testing agency: Comply with requirements of ASTM E329, ASTM E543, ASTM E699, ASTM C1021, ASTM C1077, ASTM C1093, ASTM D3740, and _____.
 - 2. Inspection agency: Comply with requirements of ASTM D3740, ASTM E329, and _____.
 - 3. Laboratory: Authorized to operate in the State in which the Project is located.
 - 4. Laboratory Staff: Maintain a full time registered Engineer on staff to review services.
 - 5. Testing Equipment: Calibrated at reasonable intervals either by NIST or using an NIST established Measurement Assurance Program, under a laboratory measurement quality assurance program.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.
- D. Comply with specified standards as minimum quality for the work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Have work performed by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

3.02 TESTING AND INSPECTION

- A. Testing Agency Duties:
 - 1. Provide qualified personnel at site. Cooperate with Design-Builder and Subcontractors in performance of services.

SECTION 01 4000 QUALITY REQUIREMENTS

2. Perform specified sampling and testing of products in accordance with specified standards.
 3. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 4. Promptly notify Architect and Contractor of observed irregularities or non-compliance of Work or products.
 5. Perform additional tests and inspections required by Architect.
 6. Submit reports of all tests/inspections specified.
- B. Limits on Testing/Inspection Agency Authority:
1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 2. Agency may not approve or accept any portion of the Work.
 3. Agency may not assume any duties of Contractor.
 4. Agency has no authority to stop the Work.
- C. Contractor Responsibilities:
1. Deliver to agency at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.
 2. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
 3. Provide incidental labor and facilities:
 - a. To provide access to Work to be tested/inspected.
 - b. To obtain and handle samples at the site or at source of Products to be tested/inspected.
 - c. To facilitate tests/inspections.
 - d. To provide storage and curing of test samples.
 4. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
 5. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
- D. Re-testing required because of non-compliance with specified requirements shall be performed by the same agency on instructions by Architect.
- E. Re-testing required because of non-compliance with specified requirements shall be paid for by Contractor.

3.03 MANUFACTURERS' FIELD SERVICES

- A. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

3.04 DEFECT ASSESSMENT

- A. Replace Work or portions of the Work not complying with specified requirements.
- B. If, in the opinion of Architect, it is not practical to remove and replace the work, Architect will direct an appropriate remedy or adjust payment.

END OF SECTION

This page intentionally left blank

SECTION 01 4100 REGULATORY REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY OF REFERENCE STANDARDS

- A. Regulatory requirements applicable to this project are the following:
1. 28 CFR 36 - Nondiscrimination by Public Accommodations and in Commercial Facilities; Final Rule; Department of Justice; current edition.
 2. 29 CFR 1910 - Occupational Safety and Health Standards; Current Edition.
 3. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines; current edition.
 4. ICC (IFC) - International Fire Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
 5. NFPA 101 - Life Safety Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
 6. Building Code: Michigan Building Code 2015.
 7. Plumbing Code: Michigan Plumbing Code 2015.
 8. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
 9. Electrical Code: NEC 2014 (State of Michigan Electrical Code) 2014 National Electrical Code with Part 8 amendments 2015.
 10. Electrical Residential Code (1 and 2 family dwellings and townhouses): Michigan Residential Code 2015.
 11. Energy Code: Michigan Uniform Energy Code 2015.
 12. Erosion and Sedimentation Control Regulations:.
 13. Inland Lakes and Streams: Inland Lakes and Streams Act 346, 1972, and all subsequent amendments.
 14. Construction Lien Laws:
 15. Wage Rates:
 16. Equal Opportunity for Employment (Michigan): comply with all applicable provisions of the Federal Civil rights Act and the Michigan Fair Employment Practices Act.

1.02 RELATED REQUIREMENTS

- A. Section 01 4000 - Quality Requirements.

1.03 PERMITS, FEES, AND NOTICES

- A. Contractor(s) responsibilities shall be in accordance with Article 3.7 of the General Conditions of the Contract [except as noted below].

1.04 QUALITY ASSURANCE

- A. Contractor's Designer Qualifications: Refer to Section - 01 4000 - Quality Requirements.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

This page intentionally left blank

SECTION 01 4533 CODE-REQUIRED SPECIAL INSPECTIONS AND PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Code-required special inspections.
- B. Testing services incidental to special inspections.

1.02 RELATED REQUIREMENTS

- A. Section 01 3000 - Administrative Requirements: Submittal procedures.
- B. Section 01 4000 - Quality Requirements.

1.03 DEFINITIONS

- A. Code or Building Code: ICC (IBC), International Building Code, Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements and specifically, Chapter 17 - Special Inspections and Tests.
- B. Code or Building Code: ICC (IBC), 2015 Edition of the International Building Code and specifically, Chapter 17 - Special Inspections and Tests.
- C. Special Inspection:

1.04 REFERENCE STANDARDS

- A. ACI CODE-318 - Building Code for Structural Concrete—Code Requirements and Commentary; 2025.
- B. ASTM C31/C31M - Standard Practice for Making and Curing Concrete Test Specimens in the Field; 2026a.
- C. ASTM C172/C172M - Standard Practice for Sampling Freshly Mixed Concrete; 2025.
- D. ASTM D3740 - Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction; 2012a.
- E. ASTM E329 - Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection; 2018.
- F. ICC (IBC) - International Building Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- G. SDI QA/QC - Standard for Quality Control and Quality Assurance for Installation of Steel Deck; 2022.
- H. SJI 100 - Standard Specifications for K-Series, LH-Series, and DLH-Series Open Web Steel Joists, and for Joist Girders; 2020.

1.05 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Testing Agency Qualifications: Prior to the start of work, the Testing Agency is required to:
- C. Test Reports: After each test or inspection, promptly submit at least two copies of report; one to Architect and one to AHJ.

1.06 TESTING AND INSPECTION AGENCIES

- A. Owner or Architect may employ services of an independent testing agency to perform additional testing and sampling associated with special inspections but not required by the building code.
- B. Employment of agency in no way relieves Contractor of obligation to perform work in accordance with requirements of Contract Documents.

1.07 QUALITY ASSURANCE

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 SPECIAL INSPECTIONS FOR CONCRETE CONSTRUCTION

- A. Reinforcement, Including Prestressing Tendons, and Verification of Placement: Verify compliance with ACI CODE-318, Chapters 20, 25.2, 25.3, 26.6.1-26.6.3; periodic.
- B. Reinforcing Bar Welding: Verify compliance with AWS D1.4/D1.4M and ACI CODE-318, 26.6.4; periodic.
- C. Anchors Cast in Concrete: Verify compliance with ACI CODE-318; periodic.

SECTION 01 4533 CODE-REQUIRED SPECIAL INSPECTIONS AND PROCEDURES

- D. Bolts Installed in Concrete: Where allowable loads have been increased or where strength design is used, verify compliance with approved Contract Documents and ACI CODE-318, Sections 8.1.3 and 21.2.8 prior to and during placement of concrete; continuous.
- E. Anchors Post-Installed in Hardened Concrete: Verify compliance with ACI CODE-318.
- F. Design Mix: Verify plastic concrete complies with the design mix in approved Contract Documents and with ACI CODE-318, Chapter 19, 16.4.3, 26.4.4; periodic.
- G. Concrete Sampling Concurrent with Strength Test Sampling: Each time fresh concrete is sampled for strength tests, verify compliance with ASTM C172/C172M, ASTM C31/C31M, and ACI CODE-318, Chapter 26.5, 26.12, and record the following, continuous:
 - 1. Slump.
 - 2. Air content.
 - 3. Temperature of concrete.

3.02 SPECIAL INSPECTIONS FOR SOILS

- A. Materials and Placement: Verify each item below complies with approved construction documents and approved geotechnical report.
 - 1. Design bearing capacity of material below shallow foundations; periodic.
 - 2. Design depth of excavations and suitability of material at bottom of excavations; periodic.
 - 3. Materials, densities, lift thicknesses; placement and compaction of backfill: continuous.
 - 4. Subgrade, prior to placement of compacted fill verify proper preparation; periodic.
- B. Testing: Classify and test excavated material; periodic.

3.03 SPECIAL INSPECTIONS FOR SPRAYED FIRE RESISTANT MATERIALS

- A. Bond Strength: Verify adhesive and cohesive bond strength of sprayed fire resistant materials is no less than 150 pounds per square foot when in-place samples of the cured material are tested according to ASTM E736/E736M and as described below.

3.04 TESTING AGENCY DUTIES AND RESPONSIBILITIES

- A. Testing Agency Duties:
 - 1. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.
 - 2. Perform specified sampling and testing of products in accordance with specified standards.
 - 3. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 - 4. Promptly notify Architect and Contractor of observed irregularities or non-compliance of work or products.
 - 5. Perform additional tests and inspections required by Architect.
 - 6. Submit reports of all tests or inspections specified.
- B. Limits on Testing or Inspection Agency Authority:
 - 1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 - 2. Agency may not approve or accept any portion of the work.
 - 3. Agency may not assume any duties of Contractor.
 - 4. Agency has no authority to stop the work.
- C. On instructions by Architect, perform re-testing required because of non-compliance with specified requirements, using the same agency.
- D. Contractor will pay for re-testing required because of non-compliance with specified requirements.

3.05 CONTRACTOR DUTIES AND RESPONSIBILITIES

- A. Contractor Responsibilities, General:
 - 1. Deliver to agency at designated location, adequate samples of materials for special inspections that require material verification.
 - 2. Cooperate with agency and laboratory personnel; provide access to approved documents at project site, to the work, to manufacturers' facilities, and to fabricators' facilities.
 - 3. Provide incidental labor and facilities:
 - a. To provide access to work to be tested or inspected.

SECTION 01 4533 CODE-REQUIRED SPECIAL INSPECTIONS AND PROCEDURES

- b. To obtain and handle samples at the site or at source of Products to be tested or inspected.
- c. To facilitate tests or inspections.
- d. To provide storage and curing of test samples.
- 4. Notify Architect and laboratory 24 hours prior to expected time for operations requiring testing or inspection services.
- 5. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.

3.06 MANUFACTURERS' AND FABRICATORS' FIELD SERVICES

- A. When specified in individual specification sections, require material suppliers, assembly fabricators, or product manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, to test, adjust, and balance equipment as applicable, and to initiate instructions when necessary.
- B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

END OF SECTION

This page intentionally left blank

SECTION 01 5713 TEMPORARY EROSION AND SEDIMENT CONTROL

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Prevention of erosion due to construction activities.
- B. Prevention of sedimentation of waterways, open drainage ways, and storm and sanitary sewers due to construction activities.
- C. Restoration of areas eroded due to insufficient preventive measures.
- D. Compensation of Owner for fines levied by authorities having jurisdiction due to non-compliance by Contractor.

1.02 RELATED REQUIREMENTS

- A. Section 31 1000 - Site Clearing: Limits on clearing; disposition of vegetative clearing debris.
- B. Section 31 2200 - Grading: Temporary and permanent grade changes for erosion control.
- C. Section 32 9219 - Seeding: Permanent turf for erosion control.

1.03 REFERENCE STANDARDS

- A. ASTM D4355/D4355M - Standard Test Method for Deterioration of Geotextiles by Exposure to Light, Moisture, and Heat in a Xenon Arc-Type Apparatus; 2021.
- B. ASTM D4491/D4491M - Standard Test Methods for Water Permeability of Geotextiles by Permittivity; 2022.
- C. ASTM D4533/D4533M - Standard Test Method for Trapezoid Tearing Strength of Geotextiles; 2015 (Reapproved 2023).
- D. ASTM D4632/D4632M - Standard Test Method for Grab Breaking Load and Elongation of Geotextiles; 2015a (Reapproved 2023).
- E. ASTM D4751 - Standard Test Methods for Determining Apparent Opening Size of a Geotextile; 2021a.
- F. ASTM D4873/D4873M - Standard Guide for Identification, Storage, and Handling of Geosynthetic Rolls and Samples; 2017 (Reapproved 2021).

1.04 PERFORMANCE REQUIREMENTS

- A. Comply with all requirements of _____ for erosion and sedimentation control.
- B. Develop and follow an Erosion and Sedimentation Prevention Plan and submit periodic inspection reports.
- C. Do not begin clearing, grading, or other work involving disturbance of ground surface cover until applicable permits have been obtained; furnish all documentation required to obtain applicable permits.
- D. Provide to Authority Having Jurisdiction (AHJ) a Performance Bond covering erosion and sedimentation preventive measures only, in an amount equal to the amount required by AHJ for cost of erosion and sedimentation control work.
- E. Timing: Put preventive measures in place as soon as possible after disturbance of surface cover and before precipitation occurs.
- F. Storm Water Runoff: Control increased storm water runoff due to disturbance of surface cover due to construction activities for this project.
 - 1. Prevent runoff into storm and sanitary sewer systems, including open drainage channels, in excess of actual capacity or amount allowed by authorities having jurisdiction, whichever is less.
- G. Erosion On Site: Minimize wind, water, and vehicular erosion of soil on project site due to construction activities for this project.
 - 1. Control movement of sediment and soil from temporary stockpiles of soil.
 - 2. Prevent development of ruts due to equipment and vehicular traffic.
 - 3. If erosion occurs due to non-compliance with these requirements, restore eroded areas at no cost to Owner.
- H. Erosion Off Site: Prevent erosion of soil and deposition of sediment on other properties caused by water leaving the project site due to construction activities for this project.
 - 1. Prevent windblown soil from leaving the project site.

SECTION 01 5713 TEMPORARY EROSION AND SEDIMENT CONTROL

2. Prevent tracking of mud onto public roads outside site.
 3. Prevent mud and sediment from flowing onto sidewalks and pavements.
 4. If erosion occurs due to non-compliance with these requirements, restore eroded areas at no cost to Owner.
- I. Sedimentation of Waterways On Site: Prevent sedimentation of waterways on the project site, including rivers, streams, lakes, ponds, open drainage ways, storm sewers, and sanitary sewers.
1. If sedimentation occurs, install or correct preventive measures immediately at no cost to Owner; remove deposited sediments; comply with requirements of authorities having jurisdiction.
 2. If sediment basins are used as temporary preventive measures, pump dry and remove deposited sediment after each storm.
- J. Sedimentation of Waterways Off Site: Prevent sedimentation of waterways off the project site, including rivers, streams, lakes, ponds, open drainage ways, storm sewers, and sanitary sewers.
1. If sedimentation occurs, install or correct preventive measures immediately at no cost to Owner; remove deposited sediments; comply with requirements of authorities having jurisdiction.
- K. Open Water: Prevent standing water that could become stagnant.
- L. Maintenance: Maintain temporary preventive measures until permanent measures have been established.
- M. Temporary vegetation: provide temporary vegetative cover for all areas left exposed greater than 14 days from original disturbance.
- N. Construction Access: Provide stabilized construction access per drawings.

1.05 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Erosion and Sedimentation Control Plan:
1. Obtain the approval of the Plan by authorities having jurisdiction.
- C. Certificate: Mill certificate for silt fence fabric attesting that fabric and factory seams comply with specified requirements, signed by legally authorized official of manufacturer; indicate actual minimum average roll values; identify fabric by roll identification numbers.
- D. Inspection Reports: Submit report of each inspection; identify each preventive measure, indicate condition, and specify maintenance or repair required and accomplished.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Grass Seed For Temporary Cover: Select a species appropriate to climate, planting season, and intended purpose. If same area will later be planted with permanent vegetation, do not use species known to be excessively competitive or prone to volunteer in subsequent seasons.
- B. Silt Fence Fabric: Polypropylene geotextile resistant to common soil chemicals, mildew, and insects; non-biodegradable; in longest lengths possible; fabric including seams with the following minimum average roll lengths:
1. Average Opening Size: 30 U.S. Std. Sieve, maximum, when tested in accordance with ASTM D4751.
 2. Permittivity: 0.05 sec^{-1} , minimum, when tested in accordance with ASTM D4491/D4491M.
 3. Ultraviolet Resistance: Retaining at least 70 percent of tensile strength, when tested in accordance with ASTM D4355/D4355M after 500 hours exposure.
 4. Tensile Strength: 100 pounds-force, minimum, in cross-machine direction; 124 pounds-force, minimum, in machine direction; when tested in accordance with ASTM D4632/D4632M.
 5. Elongation: 15 to 30 percent, when tested in accordance with ASTM D4632/D4632M.
 6. Tear Strength: 55 pounds-force, minimum, when tested in accordance with ASTM D4533/D4533M.
 7. Color: Manufacturer's standard, with embedment and fastener lines preprinted.

SECTION 01 5713 TEMPORARY EROSION AND SEDIMENT CONTROL

- C. Silt Fence Posts: One of the following, minimum 5 feet long:
 - 1. Hardwood, 2 by 2 inches in cross section.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine site and identify existing features that contribute to erosion resistance; maintain such existing features to greatest extent possible.

3.02 PREPARATION

- A. Schedule work so that soil surfaces are left exposed for the minimum amount of time.

3.03 SCOPE OF PREVENTIVE MEASURES

- A. In all cases, if permanent erosion resistant measures have been installed temporary preventive measures are not required.
- B. Construction Entrances: Traffic-bearing aggregate surface.
 - 1. Width: As required; 20 feet, minimum.
 - 2. Length: 50 feet, minimum.
 - 3. Provide at each construction entrance from public right-of-way.
 - 4. Where necessary to prevent tracking of mud onto right-of-way, provide wheel washing area out of direct traffic lane, with drain into sediment trap or basin.
- C. Linear Sediment Barriers: Made of silt fences.
 - 1. Provide linear sediment barriers:
 - a. Along downhill perimeter edge of disturbed areas, including soil stockpiles.
 - 2. Space sediment barriers with the following maximum slope length upslope from barrier:
 - a. Slope of Less Than 2 Percent: 100 feet..
 - b. Slope Between 2 and 5 Percent: 75 feet.
 - c. Slope Between 5 and 10 Percent: 50 feet.
 - d. Slope Between 10 and 20 Percent: 25 feet.
 - e. Slope Over 20 Percent: 15 feet.
- D. Storm Drain Drop Inlet Sediment Traps: As detailed on drawings.
- E. Temporary Splash Pads: Stone aggregate over filter fabric; size to suit application; provide at downspout outlets and storm water outlets.
- F. Soil Stockpiles:
 - 1. Provide silt fencing around the base of the soil stockpiles.
- G. Temporary Seeding: Use where temporary vegetated cover is required.

3.04 INSTALLATION

- A. Temporary Construction Access Aggregate Surface:
 - 1. Excavate minimum of 6 inches.
 - 2. Place geotextile fabric full width and length, with minimum 12 inch overlap at joints.
 - 3. Place and compact at least 6 inches of 1 1/2 to 3 1/2 inch diameter stone.
- B. Silt Fences:
 - 1. Store and handle fabric in accordance with ASTM D4873/D4873M.
 - 2. Where slope gradient is less than 3:1 or barriers will be in place less than 6 months, use nominal 16 inch high barriers with minimum 36 inch long posts spaced at 6 feet maximum, with fabric embedded at least 4 inches in ground.
 - 3. Where slope gradient is steeper than 3:1 or barriers will be in place over 6 months, use nominal 28 inch high barriers, minimum 48 inch long posts spaced at 6 feet maximum, with fabric embedded at least 6 inches in ground.
 - 4. Where slope gradient is steeper than 3:1 and vertical height of slope between barriers is more than 20 feet, use nominal 32 inch high barriers with woven wire reinforcement and steel posts spaced at 4 feet maximum, with fabric embedded at least 6 inches in ground.
 - 5. Install with top of fabric at nominal height and embedment as specified.
 - 6. Do not splice fabric width; minimize splices in fabric length; splice at post only, overlapping at least 18 inches, with extra post.
 - 7. Fasten fabric to wood posts using one of the following:
 - a. Four nails per post with 3/4 inch diameter flat or button head, 1 inch long, and 14 gauge, 0.083 inch shank diameter.

SECTION 01 5713 TEMPORARY EROSION AND SEDIMENT CONTROL

- b. Five staples per post with at least 17 gauge, 0.0453 inch wire, 3/4 inch crown width and 1/2 inch long legs.
- 8. Wherever runoff will flow around end of barrier or over the top, provide temporary splash pad or other outlet protection; at such outlets in the run of the barrier, make barrier not more than 12 inches high with post spacing not more than 4 feet.
- C. Temporary Seeding:
 - 1. When hydraulic seeder is used, seedbed preparation is not required.
 - 2. When surface soil has been sealed by rainfall or consists of smooth undisturbed cut slopes, and conventional or manual seeding is to be used, prepare seedbed by scarifying sufficiently to allow seed to lodge and germinate.
 - 3. If temporary mulching was used on planting area but not removed, apply nitrogen fertilizer at 1 pound per 1000 sq ft.
 - 4. On soils of very low fertility, apply 10-10-10 fertilizer at rate of 12 to 16 pounds per 1000 sq ft.
 - 5. Incorporate fertilizer into soil before seeding.
 - 6. Apply seed uniformly; if using drill or cultipacker seeders place seed 1/2 to 1 inch deep.
 - 7. Irrigate as required to thoroughly wet soil to depth that will ensure germination, without causing runoff or erosion.
 - 8. Repeat irrigation as required until grass is established.

3.05 MAINTENANCE

- A. Inspect preventive measures weekly, within 24 hours after the end of any storm that produces 0.5 inches or more rainfall at the project site, and daily during prolonged rainfall.
- B. Repair deficiencies immediately.
- C. Silt Fences:
 - 1. Promptly replace fabric that deteriorates unless need for fence has passed.
 - 2. Remove silt deposits that exceed one-third of the height of the fence.
 - 3. Repair fences that are undercut by runoff or otherwise damaged, whether by runoff or other causes.
- D. Clean out temporary sediment control structures weekly and relocate soil on site.
- E. Place sediment in appropriate locations on site; do not remove from site.

3.06 CLEAN UP

- A. Remove temporary measures after permanent measures have been installed, unless permitted to remain by Architect.
- B. Remove silt fencing and silt sacks from catch basins.
- C. Clean out temporary sediment control structures that are to remain as permanent measures.
- D. Clean catch basins and storm sewer piping if sediments have accumulated in those structures during construction.
- E. Where removal of temporary measures would leave exposed soil, shape surface to an acceptable grade and finish to match adjacent ground surfaces.

END OF SECTION

SECTION 01 6000 PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General product requirements.
- B. Product option requirements.
- C. Substitution limitations.
- D. Procedures for Owner-supplied products.

1.02 RELATED REQUIREMENTS

- A. Section 01 2500 - Substitution Procedures: Substitutions made during procurement and/or construction phases.
- B. Section 01 4000 - Quality Requirements: Product quality monitoring.
- C. Section 01 7419 - Construction Waste Management and Disposal: Waste disposal requirements potentially affecting product selection, packaging and substitutions.

1.03 SUBMITTALS

- A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
 - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

PART 2 PRODUCTS

2.01 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by Contract Documents.
- B. Use of products having any of the following characteristics is not permitted:
 - 1. Made outside the United States, its territories, Canada, or Mexico.
 - 2. Made using or containing CFC's or HCFC's.
 - 3. Containing lead, cadmium, or asbestos.

2.02 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

PART 3 EXECUTION

3.01 SUBSTITUTION LIMITATIONS

- A. See Section 01 2500 - Substitution Procedures.

3.02 TRANSPORTATION AND HANDLING

- A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.
- B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.
- C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- D. Transport and handle products in accordance with manufacturer's instructions.
- E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.

SECTION 01 6000 PRODUCT REQUIREMENTS

- F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- G. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.
- H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.03 STORAGE AND PROTECTION

- A. Store and protect products in accordance with manufacturers' instructions.
- B. Store with seals and labels intact and legible.
- C. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.
- D. For exterior storage of fabricated products, place on sloped supports above ground.
- E. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.
- F. Comply with manufacturer's warranty conditions, if any.
- G. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- H. Prevent contact with material that may cause corrosion, discoloration, or staining.
- I. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- J. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION

SECTION 01 7000 EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Examination, preparation, and general installation procedures.
- B. Surveying for laying out the work.
- C. Cleaning and protection.
- D. Demonstration and instruction of Owner personnel.
- E. Closeout procedures, including Contractor's Correction Punch List, except payment procedures.

1.02 RELATED REQUIREMENTS

- A. Section 01 1000 - Summary: Limitations on working in existing building; continued occupancy; work sequence; identification of salvaged and relocated materials.
- B. Section 01 3000 - Administrative Requirements: Submittals procedures.
- C. Section 01 4000 - Quality Requirements: Testing and inspection procedures.
- D. Section 01 5000 - Temporary Facilities and Controls: Temporary exterior enclosures.
- E. Section 01 7800 - Closeout Submittals: Project record documents, operation and maintenance data, warranties, and bonds.
- F. Section 02 4100 - Demolition: Demolition of whole structures and parts thereof; site utility demolition.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Survey work: Submit name, address, and telephone number of Surveyor before starting survey work.
 - 1. On request, submit documentation verifying accuracy of survey work.
 - 2. Submit a copy of site drawing signed by the Land Surveyor, that the elevations and locations of the work are in compliance with Contract Documents.
- C. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
 - 1. Structural integrity of any element of Project.
 - 2. Integrity of weather exposed or moisture resistant element.
 - 3. Efficiency, maintenance, or safety of any operational element.
 - 4. Visual qualities of sight exposed elements.
 - 5. Work of Owner or separate Contractor.
- D. Project Record Documents: Accurately record actual locations of capped and active utilities.

1.04 QUALIFICATIONS

- A. For surveying work, employ a land surveyor registered in the State in which the Project is located and acceptable to Architect. Submit evidence of surveyor's Errors and Omissions insurance coverage in the form of an Insurance Certificate. Employ only individual(s) trained and experienced in collecting and recording accurate data relevant to ongoing construction activities,

1.05 PROJECT CONDITIONS

- A. Use of explosives is not permitted.
- B. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.
- C. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.
- D. Perform dewatering activities, as required, for the duration of the project.
- E. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
- F. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.

SECTION 01 7000 EXECUTION AND CLOSEOUT REQUIREMENTS

- G. Erosion and Sediment Control: See Section 01 5713
- H. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.
- I. Rodent Control: Provide methods, means, and facilities to prevent rodents from accessing or invading premises.
- J. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations. Comply with federal, state, and local regulations.

1.06 COORDINATION

- A. See Section 01 1000 for occupancy-related requirements.
- B. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- C. Notify affected utility companies and comply with their requirements.
- D. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- E. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on drawings. Follow routing indicated for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- F. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- G. Coordinate completion and clean-up of work of separate sections.
- H. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

PART 2 PRODUCTS

2.01 PATCHING MATERIALS

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.
- C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 6000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.
- E. Verify that utility services are available, of the correct characteristics, and in the correct locations.
- F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

SECTION 01 7000 EXECUTION AND CLOSEOUT REQUIREMENTS

3.02 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 LAYING OUT THE WORK

- A. Verify locations of survey control points and benchmarks prior to starting work. If existing benchmarks are to be removed during construction, set new benchmarks (minimum of 2).
- B. Promptly notify Architect of any discrepancies discovered.
- C. Control datum for survey is that established by Owner provided survey.
- D. Protect survey control points prior to starting site work; preserve permanent reference points during construction.
- E. Promptly report to Architect the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.
- F. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Architect.
- G. Utilize recognized engineering survey practices.
- H. Establish a minimum of two permanent bench marks on site, referenced to established control points. Record locations, with horizontal and vertical data, on project record documents.
- I. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:
 - 1. Site improvements including pavements; stakes for grading, fill and topsoil placement; utility locations, slopes, and invert elevations.
 - 2. Grid or axis for structures.
 - 3. Building foundation, column locations, ground floor elevations, and associated concrete work.
- J. Periodically verify layouts by same means.
- K. Maintain a complete and accurate log of control and survey work as it progresses.
- L. On completion of foundation walls and major site improvements, prepare a certified survey illustrating dimensions, locations, angles, and elevations of construction and site work.

3.04 GENERAL INSTALLATION REQUIREMENTS

- A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.05 ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
 - 1. Verify that construction and utility arrangements are as indicated.
 - 2. Report discrepancies to Architect before disturbing existing installation.
 - 3. Beginning of alterations work constitutes acceptance of existing conditions.
- B. Keep areas in which alterations are being conducted separated from other areas that are still occupied.
- C. Remove existing work as indicated and as required to accomplish new work.
 - 1. Remove items indicated on drawings.
 - 2. Relocate items indicated on drawings.

SECTION 01 7000 EXECUTION AND CLOSEOUT REQUIREMENTS

3. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.
 4. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.
- D. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove, relocate, and extend existing systems to accommodate new construction.
1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components; if necessary, modify installation to allow access or provide access panel.
 2. Where existing systems or equipment are not active and Contract Documents require reactivation, put back into operational condition; repair supply, distribution, and equipment as required.
 3. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 - a. Disable existing systems only to make switchovers and connections; minimize duration of outages.
 - b. See Section 01 1000 for other limitations on outages and required notifications.
 - c. Provide temporary connections as required to maintain existing systems in service.
 4. Verify that abandoned services serve only abandoned facilities.
 5. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification; patch holes left by removal using materials specified for new construction.
- E. Protect existing work to remain.
1. Prevent movement of structure; provide shoring and bracing if necessary.
 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
 3. Repair adjacent construction and finishes damaged during removal work.
- F. Adapt existing work to fit new work: Make as neat and smooth transition as possible.
1. When existing finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Architect.
 2. Where removal of partitions or walls results in adjacent spaces becoming one, rework floors, walls, and ceilings to a smooth plane without breaks, steps, or bulkheads.
- G. Patching: Where the existing surface is not indicated to be refinished, patch to match the surface finish that existed prior to cutting. Where the surface is indicated to be refinished, patch so that the substrate is ready for the new finish.
- H. Refinish existing surfaces as indicated:
1. Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.
 2. If mechanical or electrical work is exposed accidentally during the work, re-cover and refinish to match.
- I. Clean existing systems and equipment.
- J. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.
- K. Do not begin new construction in alterations areas before demolition is complete.
- L. Comply with all other applicable requirements of this section.

3.06 CUTTING AND PATCHING

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. See Alterations article above for additional requirements.
- C. Perform whatever cutting and patching is necessary to:

SECTION 01 7000 EXECUTION AND CLOSEOUT REQUIREMENTS

1. Complete the work.
 2. Fit products together to integrate with other work.
 3. Provide openings for penetration of mechanical, electrical, and other services.
 4. Match work that has been cut to adjacent work.
 5. Repair areas adjacent to cuts to required condition.
 6. Repair new work damaged by subsequent work.
 7. Remove samples of installed work for testing when requested.
 8. Remove and replace defective and non-complying work.
- D. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
- E. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- F. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- G. Restore work with new products in accordance with requirements of Contract Documents.
- H. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- I. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material , to full thickness of the penetrated element.
- J. Patching:
1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
 2. Match color, texture, and appearance.
 3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

3.07 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
- C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

3.08 PROTECTION OF INSTALLED WORK

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.
- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- F. Protect work from spilled liquids. If work is exposed to spilled liquids, immediately remove protective coverings, dry out work, and replace protective coverings.
- G. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- H. Prohibit traffic from landscaped areas.
- I. Remove protective coverings when no longer needed; reuse or recycle coverings if possible.

SECTION 01 7000 EXECUTION AND CLOSEOUT REQUIREMENTS

3.09 FINAL CLEANING

- A. Use cleaning materials that are nonhazardous.
- B. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- C. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.
- D. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- E. Clean debris from roofs, gutters, downspouts, scuppers, overflow drains, area drains, drainage systems, and _____.
- F. Clean site; sweep paved areas, rake clean landscaped surfaces.
- G. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

3.10 CLOSEOUT PROCEDURES

- A. Make submittals that are required by governing or other authorities.
 - 1. Provide copies to Architect.
- B. Accompany Project Coordinator on preliminary inspection to determine items to be listed for completion or correction in the Contractor's Correction Punch List for Contractor's Notice of Substantial Completion.
- C. Notify Architect when work is considered ready for Architect's Substantial Completion inspection.
- D. Submit written certification containing Contractor's Correction Punch List, that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's Substantial Completion inspection.
- E. Conduct Substantial Completion inspection and create Final Correction Punch List containing Architect's and Contractor's comprehensive list of items identified to be completed or corrected and submit to Architect.
- F. Correct items of work listed in Final Correction Punch List and comply with requirements for access to Owner-occupied areas.
- G. Notify Architect when work is considered finally complete and ready for Architect's Substantial Completion final inspection.
- H. Complete items of work determined by Architect listed in executed Certificate of Substantial Completion.

END OF SECTION

SECTION 02 4100 DEMOLITION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Selective demolition of built site elements.
- B. Selective demolition of building elements for alteration purposes.

1.02 RELATED REQUIREMENTS

- A. Section 01 1000 - Summary: Limitations on Contractor's use of site and premises.
- B. Section 01 1000 - Summary: Description of items to be salvaged or removed for re-use by Contractor.
- C. Section 01 5000 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
- D. Section 01 5713 - Temporary Erosion and Sediment Control.
- E. Section 01 6000 - Product Requirements: Handling and storage of items removed for salvage and relocation.
- F. Section 01 7000 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.
- G. Section 31 1000 - Site Clearing: Vegetation and existing debris removal; earth stripping and stockpiling.
- H. Section 31 2200 - Grading: Rough and fine grading.
- I. Section 31 2323 - Fill: Fill material for filling holes, pits, and excavations generated as a result of removal operations.

1.03 REFERENCE STANDARDS

- A. 29 CFR 1926 - Safety and Health Regulations for Construction; Current Edition.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

PART 2 PRODUCTS -- NOT USED

PART 3 EXECUTION

3.01 DEMOLITION

- A. Remove concrete paving and curbs to the nearest joint as required to accomplish new work.
- B. Remove bituminous pavement, drives, walks, and valley gutter to the full depth. Do not mix with other materials.
- C. Within area of new building and parking construction, remove foundation walls and footings in their entirety.
- D. Remove other items indicated, for salvage and recycling.
- E. Fill excavations, open pits, and holes in ground areas generated as result of removals, using specified fill; compact fill as specified in Section 31 2200.

3.02 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - 1. Obtain required permits.
 - 2. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
 - 3. Provide, erect, and maintain temporary barriers and security devices.
 - 4. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
 - 5. Do not close or obstruct roadways or sidewalks without permits from authority having jurisdiction.

SECTION 02 4100 DEMOLITION

6. Conduct operations to minimize obstruction of public and private entrances and exits. Do not obstruct required exits at any time. Protect persons using entrances and exits from removal operations.
 7. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon, or limit access to their property.
- B. Do not begin removal until receipt of notification to proceed from Owner.
- C. Protect existing structures and other elements to remain in place and not removed.
1. Provide bracing and shoring.
 2. Prevent movement or settlement of adjacent structures.
 3. Stop work immediately if adjacent structures appear to be in danger.
- D. Hazardous Materials:
1. If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner; hazardous materials include regulated asbestos containing materials, lead, PCBs, and mercury.
- E. Partial Removal of Paving and Curbs: Neatly saw cut at right angle to surface.
- F. All utilities to be abandoned in place and filled with flowable fill shall be cut at each end of the pipe and filled from one end until the fill material comes out the other end. All open ends of the pipe to be filled are to be plugged with a concrete cap.

3.03 EXISTING UTILITIES

- A. Notify the Owner of all underground utilities before starting any work. Contact Miss Dig (811 or 1-800-482-7171) at least 3 working days prior to the start of construction. Building sewer connections, water and gas services, and other utility lines may not be indicated on the drawings; Make every effort to locate all underground utilities using information obtained from the utility owner or by prospecting in advance of trench excavation.
- B. Coordinate work with utility companies. Notify utilities before starting work, comply with their requirements, and obtain required permits.
- C. Protect existing utilities to remain from damage.
- D. Any damage done to public or private utilities shall be immediately repaired or replaced at the Contractor's expense and reported to the Engineer.
- E. Do not disrupt public utilities without permit from authority having jurisdiction.
- F. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.
- G. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.
- H. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.
- I. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.
- J. Prepare building demolition areas by disconnecting and capping utilities outside the demolition zone. Identify and mark, in same manner as other utilities to remain, utilities to be reconnected.

3.04 SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Existing construction and utilities indicated on drawings are based on casual field observation and existing record documents only.
1. Verify construction and utility arrangements are as indicated.
 2. Report discrepancies to Architect before disturbing existing installation.
 3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- B. Remove existing work as indicated and required to accomplish new work.
1. Remove items indicated on drawings.
- C. Services including, but not limited to, HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications: Remove existing systems and equipment as indicated.

SECTION 02 4100 DEMOLITION

1. Maintain existing active systems to remain in operation, and maintain access to equipment and operational components.
 2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 3. Verify that abandoned services serve only abandoned facilities before removal.
 4. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings. Remove back to source of supply where possible, otherwise cap stub and tag with identification.
- D. Protect existing work to remain.
1. Prevent movement of structure. Provide shoring and bracing as required.
 2. Perform cutting to accomplish removal work neatly and as specified for cutting new work.
 3. Repair adjacent construction and finishes damaged during removal work.
 4. Patch to match new work.

3.05 DEBRIS AND WASTE REMOVAL

- A. Remove debris, junk, and trash from site.
- B. Leave site in clean condition, ready for subsequent work.
- C. Clean up spillage and wind-blown debris from public and private lands.

END OF SECTION

This page intentionally left blank

SECTION 03 1000 CONCRETE FORMING AND ACCESSORIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Formwork for cast-in-place concrete, with shoring, bracing and anchorage.
- B. Openings for other work.
- C. Form accessories.
- D. Form stripping.

1.02 RELATED REQUIREMENTS

- A. Section 03 2000 - Concrete Reinforcing.
- B. Section 03 3000 - Cast-in-Place Concrete.
- C. Section 05 1200 - Structural Steel Framing: Placement of embedded steel anchors and plates in cast-in-place concrete.

1.03 REFERENCE STANDARDS

- A. ACI 301 - Specifications for Concrete Construction; 2020.
- B. ACI 318 - Building Code Requirements for Structural Concrete; 2019 (Reapproved 2022).
- C. ACI 347R - Guide to Formwork for Concrete; 2014 (Reapproved 2021).
- A. ACI CODE-318 - Building Code for Structural Concrete—Code Requirements and Commentary; 2025.
- B. ACI PRC-347 - Guide to Formwork for Concrete; 2014 (Reapproved 2021).
- C. ACI SPEC-117 - Specification for Tolerances for Concrete Construction and Materials; 2010 (Reapproved 2015).
- D. ACI SPEC-301 - Specifications for Concrete Construction; 2020.
- E. ASME A17.1 - Safety Code for Elevators and Escalators Includes Requirements for Elevators, Escalators, Dumbwaiters, Moving Walks, Material Lifts, and Dumbwaiters with Automatic Transfer Devices; 2025.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Deliver prefabricated forms and installation instructions in manufacturer's packaging.
- B. Store prefabricated forms off ground in ventilated and protected manner to prevent deterioration from moisture.
- C. Protect plastic foam products from damage and exposure to sunlight.

PART 2 PRODUCTS

2.01 FORMWORK - GENERAL

- A. Provide concrete forms, accessories, shoring, and bracing as required to accomplish cast-in-place concrete work.
- B. Design and construct concrete that complies with design with respect to shape, lines, and dimensions.
- C. Chamfer outside corners of beams, joists, columns, and walls.
- D. Comply with applicable state and local codes with respect to design, fabrication, erection, and removal of formwork.
- E. Comply with relevant portions of ACI CODE-318, ACI PRC-347, and ACI SPEC-301.

2.02 WOOD FORM MATERIALS

- A. Form Materials: At the discretion of the Contractor.

2.03 FORMWORK ACCESSORIES

- A. Form Ties: Removable type, galvanized metal, fixed length, cone type, with waterproofing washer, free of defects that could leave holes larger than 1 inch in concrete surface.
- B. Form Release Agent: Capable of releasing forms from hardened concrete without staining or discoloring concrete or forming bugholes and other surface defects, compatible with concrete and form materials, and not requiring removal for satisfactory bonding of coatings to be applied.
 - 1. Do not use materials containing diesel oil or petroleum-based compounds.
 - 2. Composition: Colorless, reactive, solvent-based compound.

SECTION 03 1000 CONCRETE FORMING AND ACCESSORIES

- a. VOC Content: In compliance with applicable local, State, and federal regulations.
- C. Dowel Sleeves: Plastic sleeve and nailable plastic base for smooth, round, steel load-transfer dowels.
- D. Nails, Spikes, Lag Bolts, Through Bolts, Anchorages: Sized as required, of sufficient strength and character to maintain formwork in place while placing concrete.
- E. Embedded Anchor Shapes, Plates, Angles and Bars: As specified in Section 05 1200.
- F. Waterstops: Bentonite and butyl rubber.
 - 1. Configuration: As indicated on drawings.
 - 2. Size: As indicated on drawings.
 - 3. Manufacturers:
 - a. AVM Industries, Inc; Aussie Swell Red: www.avmindustries.com/#sle.
 - b. Cetco, a Mineral Technologies Company; Waterstop-RX: www.mineralstech.com
 - c. GCP Applied Technologies; Adcor ES: www.gcpat.com
 - d. WR Medows; Waterstop EC Plus; www.wrmedows.com.
 - e. Substitutions: See Section 01 6000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify lines, levels and centers before proceeding with formwork. Ensure that dimensions agree with drawings.

3.02 EARTH FORMS

- A. Earth forms are not permitted.

3.03 ERECTION - FORMWORK

- A. Erect formwork, shoring and bracing to achieve design requirements, in accordance with requirements of ACI SPEC-301.
- B. Provide bracing to ensure stability of formwork. Shore or strengthen formwork subject to overstressing by construction loads.
- C. Arrange and assemble formwork to permit dismantling and stripping. Do not damage concrete during stripping. Permit removal of remaining principal shores.
- D. Align joints and make watertight. Keep form joints to a minimum.

3.04 APPLICATION - FORM RELEASE AGENT

- A. Apply form release agent on formwork in accordance with manufacturer's recommendations.
- B. Do not apply form release agent where concrete surfaces will receive special finishes or applied coverings that are affected by agent. Soak inside surfaces of untreated forms with clean water. Keep surfaces coated prior to placement of concrete.

3.05 INSERTS, EMBEDDED PARTS, AND OPENINGS

- A. Provide formed openings where required for items to be embedded in passing through concrete work.
- B. Locate and set in place items that will be cast directly into concrete.
- C. Coordinate with work of other sections in forming and placing openings, slots, reglets, recesses, sleeves, bolts, anchors, other inserts, and components of other work.
- D. Install accessories in accordance with manufacturer's instructions, so they are straight, level, and plumb. Ensure items are not disturbed during concrete placement.
- E. Install waterstops in accordance with manufacturer's instructions, so they are continuous without displacing reinforcement.
- F. Provide temporary ports or openings in formwork where required to facilitate cleaning and inspection. Locate openings at bottom of forms to allow flushing water to drain.
- G. Close temporary openings with tight fitting panels, flush with inside face of forms, and neatly fitted so joints will not be apparent in exposed concrete surfaces.

3.06 FORM CLEANING

- A. Clean forms as erection proceeds, to remove foreign matter within forms.
- B. Clean formed cavities of debris prior to placing concrete.

SECTION 03 1000 CONCRETE FORMING AND ACCESSORIES

1. Flush with water or use compressed air to remove remaining foreign matter. Ensure that water and debris drain to exterior through clean-out ports.
2. During cold weather, remove ice and snow from within forms. Do not use de-icing salts. Do not use water to clean out forms, unless formwork and concrete construction proceed within heated enclosure. Use compressed air or other means to remove foreign matter.

3.07 FORMWORK TOLERANCES

- A. Construct formwork to maintain tolerances required by ACI SPEC-117, unless otherwise indicated.

3.08 FORM REMOVAL

- A. Do not remove forms or bracing until concrete has gained sufficient strength to carry its own weight and imposed loads.
- B. Store removed forms to prevent damage to form materials or to fresh concrete. Discard damaged forms.

END OF SECTION

This page intentionally left blank

SECTION 03 2000 CONCRETE REINFORCING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Reinforcing steel for cast-in-place concrete.
- B. Supports and accessories for steel reinforcement.

1.02 RELATED REQUIREMENTS

- A. Section 03 1000 - Concrete Forming and Accessories.
- B. Section 03 3000 - Cast-in-Place Concrete.

1.03 REFERENCE STANDARDS

- A. ACI CODE-318 - Building Code for Structural Concrete—Code Requirements and Commentary; 2025.
- B. ACI MNL-66 - ACI Detailing Manual; 2020.
- C. ACI SPEC-301 - Specifications for Concrete Construction; 2020.
- D. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement; 2016.
- E. ASTM A706/A706M - Standard Specification for Deformed and Plain Low-Alloy Steel Bars for Concrete Reinforcement; 2026.
- F. ASTM A1064/A1064M - Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete; 2018a.
- G. AWS D1.4/D1.4M - Structural Welding Code - Reinforcing Steel; 2011.
- H. CRSI (DA4) - Manual of Standard Practice; 2024.
- I. CRSI (P1) - Placing Reinforcing Bars, 10th Edition; 2019.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Comply with requirements of ACI SP-66. Include bar schedules, shapes of bent bars, spacing of bars, and location of splices.
- C. Manufacturer's Certificate: Certify that reinforcing steel and accessories supplied for this project meet or exceed specified requirements.

1.05 QUALITY ASSURANCE

- A. Perform work of this section in accordance with ACI SPEC-301.

PART 2 PRODUCTS

2.01 REINFORCEMENT

- A. Reinforcing Steel: ASTM A615/A615M, Grade 60 (60,000 psi).
 - 1. Deformed billet-steel bars.
 - 2. Unfinished.
- B. Steel Welded Wire Reinforcement (WWR): Plain type; ASTM A1064/A1064M.
 - 1. Form: Flat Sheets.
 - 2. WWR Style: As indicated on drawings.
- C. Reinforcement Accessories:
 - 1. Tie Wire: Annealed, minimum 16 gauge, 0.0508 inch.
 - 2. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for adequate support of reinforcement during concrete placement.
 - 3. Provide stainless steel, galvanized, or plastic components for placement within 1-1/2 inches of weathering surfaces.

2.02 FABRICATION

- A. Fabricate concrete reinforcing in accordance with CRSI (DA4) - Manual of Standard Practice.
- B. Welding of reinforcement is permitted only with the specific approval of Architect. Perform welding in accordance with AWS D1.4/D1.4M.
- C. Locate reinforcing splices not indicated on drawings at point of minimum stress.

SECTION 03 2000 CONCRETE REINFORCING

PART 3 EXECUTION

3.01 PLACEMENT

- A. Place, support and secure reinforcement against displacement. Do not deviate from required position.
- B. Accommodate placement of formed openings.
- C. Comply with applicable code for concrete cover over reinforcement.

3.02 FIELD QUALITY CONTROL

- A. An independent testing agency, as specified in Section 01 4000 - Quality Requirements, will inspect installed reinforcement for compliance with contract documents before concrete placement.

END OF SECTION

SECTION 03 3000 CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Concrete for composite floor construction.
- B. Floors and slabs on grade.
- C. Concrete foundation walls and footings.
- D. Joint devices associated with concrete work.
- E. Miscellaneous concrete elements, including equipment pads.
- F. Concrete curing.

1.02 RELATED REQUIREMENTS

1.03 REFERENCE STANDARDS

- A. ACI 211.1 - Selecting Proportions for Normal-Density and High Density-Concrete - Guide; 2022.
- B. ACI 301 - Specifications for Concrete Construction; 2020.
- C. ACI 302.1R - Guide to Concrete Floor and Slab Construction; 2015.
- D. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete; 2000 (Reapproved 2009).
- E. ACI 305R - Guide to Hot Weather Concreting; 2020.
- F. ACI 306R - Guide to Cold Weather Concreting; 2016.
- G. ACI 308R - Guide to External Curing of Concrete; 2016.
- H. ACI 318 - Building Code Requirements for Structural Concrete; 2019 (Reapproved 2022).
- I. ACI CODE-318 - Building Code for Structural Concrete—Code Requirements and Commentary; 2025.
- J. ACI PRC-211.1 - Selecting Proportions for Normal-Density and High Density-Concrete - Guide; 2022.
- K. ACI PRC-302.1 - Guide to Concrete Floor and Slab Construction; 2015.
- L. ACI PRC-304 - Guide for Measuring, Mixing, Transporting, and Placing Concrete; 2000 (Reapproved 2009).
- M. ACI PRC-305 - Guide to Hot Weather Concreting; 2020.
- N. ACI PRC-306 - Guide to Cold Weather Concreting; 2016.
- O. ACI PRC-308 - Guide to External Curing of Concrete; 2016.
- P. ACI SPEC-301 - Specifications for Concrete Construction; 2020.
- Q. ASTM C33/C33M - Standard Specification for Concrete Aggregates; 2018.
- R. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens; 2018.
- S. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete; 2026.
- T. ASTM C143/C143M - Standard Test Method for Slump of Concrete; 2026a.
- U. ASTM C150/C150M - Standard Specification for Portland Cement; 2018.
- V. ASTM C171 - Standard Specification for Sheet Materials for Curing Concrete; 2020.
- W. ASTM C260/C260M - Standard Specification for Air-Entraining Admixtures for Concrete; 2024.
- X. ASTM C309 - Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete; 2025.
- Y. ASTM C494/C494M - Standard Specification for Chemical Admixtures for Concrete; 2024.
- Z. ASTM C618 - Standard Specification for Coal Ash and Raw or Calcined Natural Pozzolan for Use in Concrete; 2025a.
- AA. ASTM C685/C685M - Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing; 2025a.

SECTION 03 3000 CAST-IN-PLACE CONCRETE

- BB. ASTM C881/C881M - Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete; 2015.
- CC. ASTM C1059/C1059M - Standard Specification for Latex Agents for Bonding Fresh to Hardened Concrete; 2013.
- DD. ASTM C1116/C1116M - Standard Specification for Fiber-Reinforced Concrete; 2023.
- EE. ASTM C1240 - Standard Specification for Silica Fume Used in Cementitious Mixtures; 2020.
- FF. ASTM C1315 - Standard Specification for Liquid Membrane-Forming Compounds Having Special Properties for Curing and Sealing Concrete; 2025.
- GG. ASTM C1602/C1602M - Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete; 2022.
- HH. ASTM D1751 - Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Asphalt Types); 2023.
- II. ASTM E1155/E1155M - Standard Test Method for Determining FF Floor Flatness and FL Floor Levelness Numbers; 2023.
- JJ. ASTM E1643 - Standard Practice for Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs; 2024.
- KK. ASTM E1745 - Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs; 2017 (Reapproved 2023).
- LL. COE CRD-C 48 - Handbook for Concrete and Cement Standard Test Method for Water Permeability of Concrete; 1992.
- MM. COE CRD-C 572 - Handbook for Concrete and Cement Corps of Engineers Specifications for Polyvinylchloride Waterstop; 1974.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Submit manufacturers' data on manufactured products showing compliance with specified requirements and installation instructions.
 - 1. For curing compounds, provide data on method of removal in the event of incompatibility with floor covering adhesives.
- C. Mix Design: Submit proposed concrete mix design.
 - 1. Indicate proposed mix design complies with requirements of ACI CODE-318, Chapter 5 - Concrete Quality, Mixing and Placing.
- D. Test Reports: Submit report for each test or series of tests specified.

1.05 QUALITY ASSURANCE

- A. Perform work of this section in accordance with ACI SPEC-301 and ACI CODE-318.
- B. Follow recommendations of ACI PRC-305 when concreting during hot weather.
- C. Follow recommendations of ACI PRC-306 when concreting during cold weather.

PART 2 PRODUCTS

2.01 FORMWORK

- A. Comply with requirements of Section 03 1000.

2.02 REINFORCEMENT MATERIALS

- A. Comply with requirements of Section 03 2000.

2.03 CONCRETE MATERIALS

- A. Cement: ASTM C150/C150M, Type I - Normal Portland type or ASTM C595/C595M, Type IL - Portland Limestone cement
 - 1. Acquire cement for entire project from same source.
- B. Fine and Coarse Aggregates: ASTM C33/C33M.
- C. Fly Ash: ASTM C618, Class C or F.
- D. Calcined Pozzolan: ASTM C618, Class N.
- E. Silica Fume: ASTM C1240, proportioned in accordance with ACI PRC-211.1.

SECTION 03 3000 CAST-IN-PLACE CONCRETE

- F. Water: ASTM C1602/C1602M; clean, potable, and not detrimental to concrete.
- G. Structural Fiber Reinforcement: ASTM C1116/C1116M.
 - 1. Fiber Type: Alkali-resistant synthetic.
 - 2. Products:
 - a. Fibermesh; Fibermesh 300 @ 1.5 pounds per cubic yard: www.fibermesh.com/#sle.
 - b. Substitutions: See Section 01 6000 - Product Requirements.

2.04 ADMIXTURES

- A. Do not use chemicals that will result in soluble chloride ions in excess of 0.1 percent by weight of cement.
- B. Air Entrainment Admixture: ASTM C260/C260M.
- C. High Range Water Reducing and Retarding Admixture: ASTM C494/C494M Type G.
- D. High Range Water Reducing Admixture: ASTM C494/C494M Type F.
- E. Water Reducing and Accelerating Admixture: ASTM C494/C494M Type E.
- F. Water Reducing and Retarding Admixture: ASTM C494/C494M Type D.
- G. Water Reducing Admixture: ASTM C494/C494M Type A.
- H. Waterproofing Admixture: Admixture formulated to reduce permeability to liquid water, with no adverse effect on concrete properties.
 - 1. Admixture Composition: Crystalline, functioning by growth of crystals in capillary pores.
 - 2. Permeability of Cured Concrete: No measurable leakage when tested in accordance with COE CRD-C 48 at 200 psi; provide test reports.
 - 3. Products:
 - a. Kryton International, Inc; Krystol Internal Membrane (KIM): www.kryton.com/#sle.
 - b. Penetron; PENETRON ADMIX SB: www.penetron.com/#sle.
 - c. Xypex Chemical Corporation; Bio-San C500: www.xypex.com/#sle.
 - d. Substitutions: See Section 01 6000 - Product Requirements.

2.05 ACCESSORY MATERIALS

- A. Underslab Vapor Retarder:
 - 1. Sheet Material: ASTM E1745, Class A; stated by manufacturer as suitable for installation in contact with soil or granular fill under concrete slabs. Single-ply polyethylene is prohibited.
 - 2. Accessory Products: Vapor retarder manufacturer's recommended tape, adhesive, mastic, prefabricated boots, etc., for sealing seams and penetrations.
 - 3. Products:
 - a. Fortifiber Building Systems Group ; Moistop Ultra 10: www.fortifiber.com.
 - b. Henry Company; Moistop Ultra 10: www.henry.com/#sle.
 - c. ISI Building Products; Viper VaporCheck II 10-mil (Class A): www.isibp.com/#sle.
 - d. Poly-America; Husky Yellow Guard Class A 10-mil Vapor Barrier: www.yellowguard.com/#sle.
 - e. Reef Industries: Vaporguard: www.reefindustries.com
 - f. Stego Industries, LLC; Stego Wrap Class A - 10 mils (0.25 mm): www.stegoindustries.com/#sle.
 - g. W. R. Meadows, Inc; PERMINATOR Class A - 10 mils (0.25 mm): www.wrmeadows.com/#sle.
 - h. Substitutions: See Section 01 6000 - Product Requirements.

2.06 BONDING AND JOINTING PRODUCTS

- A. Latex Bonding Agent: Non-redispersable acrylic latex, complying with ASTM C1059/C1059M, Type II.
- B. Epoxy Bonding System:
 - 1. Complying with ASTM C881/C881M and of Type required for specific application.
- C. Waterstops: PVC, complying with COE CRD-C 572.
 - 1. Configuration: As indicated on drawings.
 - 2. Size: As indicated on drawings.
 - 3. Products:

SECTION 03 3000 CAST-IN-PLACE CONCRETE

- a. BoMetals, Inc: www.bometals.com/#sle.
 - b. Substitutions: See Section 01 6000 - Product Requirements.
- D. Slab Isolation Joint Filler: 1/2-inch thick, height equal to slab thickness, with removable top section forming 1/2-inch deep sealant pocket after removal.
1. Material: ASTM D1751, cellulose fiber.

2.07 CURING MATERIALS

- A. Evaporation Reducer: Liquid thin-film-forming compound that reduces rapid moisture loss caused by high temperature, low humidity, and high winds; intended for application immediately after concrete placement.
- B. Curing Compound, Naturally Dissipating: Clear, water-based, liquid membrane-forming compound; complying with ASTM C309.
- C. Curing and Sealing Compound, Moisture Emission-Reducing, Membrane-Forming: Clear, liquid sealer for application to newly-placed concrete; capable of providing adequate bond for flooring adhesives, initially and over the long term; with sufficient moisture vapor impermeability to prevent deterioration of flooring adhesives due to moisture emission.
1. Use this product to cure and seal all slabs to receive adhesively applied flooring or roofing.
 2. Comply with ASTM C309 and ASTM C1315 Type I Class A.
 3. VOC Content: Less than 100 g/L.
 4. Solids Content: 25 percent, minimum.
- D. Moisture-Retaining Sheet: ASTM C171.
1. Polyethylene film, white opaque, minimum nominal thickness of 4 mil, 0.004 inch.
 2. White-burlap-polyethylene sheet, weighing not less than 3.8 ounces per square yard.
- E. Water: Potable, not detrimental to concrete.

2.08 CONCRETE MIX DESIGN

- A. Proportioning Normal Weight Concrete: Comply with ACI PRC-211.1 recommendations.
- B. Concrete Strength: Establish required average strength for each type of concrete on the basis of field experience or trial mixtures, as specified in ACI SPEC-301.
1. For trial mixtures method, employ independent testing agency acceptable to Architect for preparing and reporting proposed mix designs.
- C. Normal Weight Concrete:
1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days: As indicated on drawings.
 2. Fly Ash Content: Maximum 25 percent of cementitious materials by weight.
 3. Calcined Pozzolan Content: Maximum 10 percent of cementitious materials by weight.
 4. Silica Fume Content: Maximum 5 percent of cementitious materials by weight.
 5. Maximum Aggregate Size: 5/8 inch.

2.09 MIXING

- A. On Project Site: Mix in drum type batch mixer, complying with ASTM C685/C685M. Mix each batch not less than 1-1/2 minutes and not more than 5 minutes.
- B. Transit Mixers: Comply with ASTM C94/C94M.
- C. Adding Water: If concrete arrives on-site with slump less than suitable for placement, do not add water that exceeds the maximum water-cement ratio or exceeds the maximum permissible slump.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify lines, levels, and dimensions before proceeding with work of this section.

3.02 PREPARATION

- A. Where new concrete is to be bonded to previously placed concrete, prepare existing surface by cleaning and applying bonding agent in according to bonding agent manufacturer's instructions.
1. Use epoxy bonding system for bonding to damp surfaces, for structural load-bearing applications, and where curing under humid conditions is required.
 2. Use latex bonding agent only for non-load-bearing applications.

SECTION 03 3000 CAST-IN-PLACE CONCRETE

- B. Interior Slabs on Grade: Install vapor retarder under interior slabs on grade. Comply with ASTM E1643. Lap joints minimum 6 inches. Seal joints, seams and penetrations watertight with manufacturer's recommended products and follow manufacturer's written instructions. Repair damaged vapor retarder before covering.
 - 1. Vapor Retarder Over Granular Fill: Install compactible granular fill before placing vapor retarder as indicated on drawings. Do not use sand.

3.03 PLACING CONCRETE

- A. Place concrete in accordance with ACI PRC-304.
- B. Place concrete for floor slabs in accordance with ACI PRC-302.1.
- C. Ensure reinforcement, inserts, waterstops, embedded parts, and formed construction joint devices will not be disturbed during concrete placement.
- D. Place concrete continuously without construction (cold) joints wherever possible; where construction joints are necessary, before next placement prepare joint surface by removing laitance and exposing the sand and sound surface mortar, by sandblasting or high-pressure water jetting.
- E. Finish floors level and flat, unless otherwise indicated, within the tolerances specified below.

3.04 SLAB JOINTING

- A. Locate joints as indicated on drawings.
- B. Anchor joint fillers and devices to prevent movement during concrete placement.
- C. Isolation Joints: Use preformed joint filler with removable top section for joint sealant, total height equal to thickness of slab, set flush with top of slab.
- D. Saw Cut Contraction Joints: Saw cut joints before concrete begins to cool, within 4 to 12 hours after placing; use 3/16 inch thick blade and cut at least 1 inch deep but not less than one quarter (1/4) the depth of the slab.

3.05 FLOOR FLATNESS AND LEVELNESS TOLERANCES

- A. An independent testing agency, as specified in Section 01 4000, will inspect finished slabs for compliance with specified tolerances.
- B. Measure F(F) Floor Flatness and F(L) Floor Levelness in accordance with ASTM E1155/E1155M, within 48 hours after slab installation; report both composite overall values and local values for each measured section.
- C. Correct the slab surface if composite overall value is less than specified and if local value is less than two-thirds of specified value or less than F(F) 13/F(L) 10.
- D. Correct defects by grinding or by removal and replacement of the defective work. Areas requiring corrective work will be identified. Re-measure corrected areas by the same process.

3.06 CONCRETE FINISHING

- A. Repair surface defects, including tie holes, immediately after removing formwork.
- B. Unexposed Form Finish: Rub down or chip off fins or other raised areas 1/4 inch or more in height.
- C. Exposed Form Finish: Rub down or chip off and smooth fins or other raised areas 1/4 inch or more in height. Provide finish as follows:
 - 1. Smooth Rubbed Finish: Wet concrete and rub with carborundum brick or other abrasive, not more than 24 hours after form removal. Smooth rubbed finish to be used when finish is not indicated in drawings.
- D. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.
- E. Concrete Slabs: Finish to requirements of ACI PRC-302.1 and as follows:
 - 1. Surfaces to Receive Thick Floor Coverings: "Wood float" as described in ACI PRC-302.1; thick floor coverings include quarry tile, ceramic tile, and Portland cement terrazzo with full bed setting system.

SECTION 03 3000 CAST-IN-PLACE CONCRETE

2. Surfaces to Receive Thin Floor Coverings: "Steel trowel" as described in ACI PRC-302.1; thin floor coverings include carpeting, resilient flooring, seamless flooring, resinous matrix terrazzo, thin set quarry tile, and thin set ceramic tile.
3. Decorative Exposed Surfaces: Trowel as described in ACI PRC-302.1; take measures necessary to avoid black-burnish marks; decorative exposed surfaces include surfaces to be stained or dyed, pigmented concrete, surfaces to receive liquid hardeners, surfaces to receive dry-shake hardeners, surfaces to be polished, and all other exposed slab surfaces.

F. In areas with floor drains, maintain floor elevation at walls; pitch surfaces uniformly to drains at 1:100 nominal.

3.07 CURING AND PROTECTION

- A. Comply with requirements of ACI PRC-308. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
- B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.
 1. Normal concrete: Not less than seven days.
- C. Surfaces Not in Contact with Forms:
 1. Initial Curing: Start as soon as free water has disappeared and before surface is dry. Keep continuously moist for not less than three days by water ponding, water-saturated sand, water-fog spray, or saturated burlap.
 2. Final Curing: Begin after initial curing but before surface is dry.
 - a. Curing Compound: Apply in two coats at right angles, using application rate recommended by manufacturer.

3.08 FIELD QUALITY CONTROL

- A. An independent testing agency will perform field quality control tests, as specified in Section 01 4000 - Quality Requirements.
- B. Provide free access to concrete operations at project site and cooperate with appointed firm.
- C. Tests of concrete and concrete materials may be performed at any time to ensure compliance with specified requirements.
- D. Compressive Strength Tests: ASTM C39/C39M, for each test, mold and cure three concrete test cylinders. Obtain test samples for every 100 cubic yards or less of each class of concrete placed.
- E. Take one additional test cylinder during cold weather concreting, cured on job site under same conditions as concrete it represents.
- F. Perform one slump test for each set of test cylinders taken, following procedures of ASTM C143/C143M.

3.09 DEFECTIVE CONCRETE

- A. Test Results: The testing agency shall report test results in writing to Architect and Contractor within 24 hours of test.
- B. Defective Concrete: Concrete not complying with required lines, details, dimensions, tolerances or specified requirements.
- C. Repair or replacement of defective concrete will be determined by the Architect. The cost of additional testing shall be borne by Contractor when defective concrete is identified.
- D. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of Architect for each individual area.

3.10 PROTECTION

- A. Do not permit traffic over unprotected concrete floor surface until fully cured.

END OF SECTION

SECTION 31 2200 GRADING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Removal of topsoil.
- B. Rough grading the site for site structures, building pads, and pavement.
- C. Fine grading.

1.02 RELATED REQUIREMENTS

- A. Section 31 2316 - Excavation.
- B. Section 31 2323 - Fill.
- C. Section 32 9219 - Seeding: Finish ground cover.
- D. Section 32 9300 - Plants: Topsoil in beds and pits.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Topsoil: See Section 31 2323.
- B. Other Fill Materials: See Section 31 2323.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify survey bench mark and intended elevations for grading areas are as indicated.
- B. Verify the absence of standing or ponding water.

3.02 PREPARATION

- A. Identify required lines, levels, contours, and datum.
- B. Stake and flag locations of known utilities.
- C. At least three working days prior to the start of construction contact www.call811.com.
- D. Locate, identify, and protect above- and below-grade utilities to remain.
- E. Notify utility company to remove and relocate utilities.
- F. Provide temporary means and methods to remove standing or ponding water from areas prior to grading.
- G. Protect site features to remain, including but not limited to bench marks, survey control points, and fences.

3.03 ROUGH GRADING

- A. Excavate and fill subgrade material to elevations indicated on plans.
- B. Remove topsoil from areas to be further excavated, re-landscaped, or re-graded, without mixing with foreign materials.
- C. Do not remove topsoil when wet.
- D. Remove subsoil from areas to be further excavated, re-landscaped, or re-graded.
- E. Do not remove wet subsoil, unless it is subsequently processed to obtain optimum moisture content.
- F. When excavating through roots, perform work by hand and cut roots with sharp axe.
- G. Replace displaced subgrade in accordance with Section 31 2323.
- H. Remove and replace unsuitable materials as specified fill.

3.04 FINE GRADING

- A. Scrape and spread subgrade material uniformly smooth and without disruptions as indicated on drawings.

3.05 SOIL REMOVAL AND STOCKPILING

- A. Stockpile topsoil to be re-used on site; remove remainder from site.
- B. Stockpile subsoil to be re-used on site; remove remainder from site.
- C. Separate differing materials with dividers or stockpile apart to prevent mixing.
- D. Stockpiles: Use areas designated on site; pile depth not to exceed 8 feet; protect from erosion.

SECTION 31 2200 GRADING

- E. Before Finish Grading:
 - 1. Verify building and trench backfilling have been inspected.
 - 2. Verify subgrade has been contoured and compacted.
- F. Remove debris, roots, branches, stones, in excess of 1/2 inch in size. Remove soil contaminated with petroleum products.
- G. In areas where vehicles or equipment have compacted soil, scarify surface to depth of 3 inches.
- H. Place topsoil in areas where seeding are indicated.
- I. Place topsoil where required to level finish grade.
- J. Place topsoil to thickness as indicated in Section 32 9300.
- K. Place topsoil during dry weather.
- L. Remove roots, weeds, rocks, and foreign material while spreading.
- M. Near plants spread topsoil manually to prevent damage.
- N. Fine grade topsoil to eliminate uneven areas and low spots. Maintain profiles and contour of subgrade.
- O. Lightly compact placed topsoil.
- P. Maintain stability of topsoil during inclement weather. Replace topsoil in areas where surface water has eroded thickness below specifications.

3.06 TOLERANCES

- A. Top Surface of Subgrade: Plus or minus 0.10 foot (1-3/16 inches) from required elevation.
- B. Top Surface: Plus or minus 1/2 inch.

3.07 REPAIR AND RESTORATION

- A. Existing Facilities, Utilities, and Site Features to Remain: If damaged due to this work, repair or replace to original condition.
- B. Trees to Remain: If damaged due to this work, trim broken branches and repair bark wounds; if root damage has occurred, obtain instructions from Architect as to remedy.
- C. Other Existing Vegetation to Remain: If damaged due to this work, replace with vegetation of equivalent species and size.

3.08 FIELD QUALITY CONTROL

- A. See Section 31 2323 for compaction density testing.
- B. All excavated or cut areas shall be proof rolled and the top 12 inches of finished subgrade shall be compacted to 95 percent of maximum density in accordance with ASTM D1557

3.09 CLEANING

- A. See Section 01 7000 - Execution and Closeout Requirements for additional requirements.
- B. Remove unused stockpiled subsoil. Grade stockpile area to prevent standing water.
- C. Leave site clean and raked, ready to receive work.

END OF SECTION

SECTION 31 2316 EXCAVATION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Excavating for building volume below grade, footings, slabs-on-grade, paving, site structures, and utilities within the building.
- B. Trenching for utilities outside the building to utility main connections.
- C. Temporary excavation support and protection systems.

1.02 RELATED REQUIREMENTS

- A. Document _____: Geotechnical report; bore hole locations and findings of subsurface materials.
- B. Section 01 5713 - Temporary Erosion and Sediment Control: Slope protection and erosion control.
- C. Section 01 7000 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring. General requirements for dewatering of excavations and water control.
- D. Section 31 1000 - Site Clearing: Vegetation and existing debris removal.
- E. Section 31 2200 - Grading: Soil removal from surface of site.
- F. Section 31 2200 - Grading: Grading.
- G. Section 31 2323 - Fill: Fill materials, backfilling, and compacting.

1.03 REFERENCE STANDARDS

- A. 29 CFR 1926 - Safety and Health Regulations for Construction; Current Edition.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Project Record Documents: Record drawings at project closeout according to 01 7000 - Execution and Closeout Requirements. Show locations of installed support materials left in place, including referenced locations and depths, on drawings.
- C. Field Quality Control Submittals: Document visual inspection of load-bearing excavated surfaces.

1.05 QUALITY ASSURANCE

- A. Temporary Support and Excavation Protection Plan:
 - 1. Indicate sheeting, shoring, and bracing materials and installation required to protect excavations and adjacent structures and property.
 - 2. Bracing and shoring design to meet requirements of OSHA's Excavation Standard, 29 CFR 1926, Subpart P.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Bedding and Fill to Correct Over-Excavation:
 - 1. See Section 31 2323 for bedding and corrective fill materials at general excavations.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that survey bench mark and intended elevations for the work are as indicated.
- B. Determine the prevailing groundwater level prior to excavation. If dewatering is necessary, submit dewatering plan to control groundwater intrusion with comprehensive dewatering procedures for review by Architect.

3.02 PREPARATION

- A. Identify required lines, levels, contours, and datum locations.
- B. See Section 31 1000 for clearing, grubbing, and removal of existing debris.
- C. See Section 31 2200 for topsoil removal.
- D. Locate, identify, and protect utilities that remain and protect from damage.
- E. Notify utility company to remove and relocate utilities.

SECTION 31 2316 EXCAVATION

- F. Protect bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
- G. Protect plants, lawns, and other features to remain.
- H. Grade top perimeter of excavation to prevent surface water from draining into excavation. Provide temporary means and methods, as required, to maintain surface water diversion until no longer needed, or as directed by Architect.

3.03 TEMPORARY EXCAVATION SUPPORT AND PROTECTION

- A. Excavation Safety: Comply with OSHA's Excavation Standard, 29 CFR 1926, Subpart P.
 - 1. Excavations in stable rock or in less than 5 feet in depth in ground judged as having no cave-in potential do not require excavation support and protection systems.
 - 2. Depending upon excavation depth, time that excavation is open, soil classification, configuration and slope of excavation sidewalls, design and provide an excavation support and protection system that meets the requirements of 29 CFR 1926, Subpart P:
 - a. Sloping and benching systems.
 - b. Support systems, shield systems, and other protective systems.
- B. Excavation support and protection systems not required to remain in place may be removed subject to approval of Owner or Owner's Representative.
 - 1. Remove temporary shoring and bracing in a manner to avoid harmful disturbance to underlying soils and damage to buildings, structures, pavements, facilities and utilities.

3.04 EXCAVATING

- A. Excavate to accommodate new structures, construction operations, and utilities.
 - 1. Excavate to the specified elevations.
 - 2. Excavate to the length and width required to safely install, adjust, and remove any forms, bracing, or supports necessary for the installation of the work.
 - 3. Cut utility trenches wide enough to allow inspection of installed utilities.
- B. Notify Architect of unexpected subsurface conditions and discontinue affected Work in area until notified to resume work.
- C. Do not interfere with 45 degree bearing splay of foundations.
- D. Provide temporary means and methods, as required, to remove all water from excavations until directed by Architect. Remove and replace soils deemed suitable by classification and which are excessively moist due to lack of dewatering or surface water control.

3.05 TRENCHING

- A. Trenching operations to be conducted in a safe, orderly manner. Comply with regulations or law governing the protection and/or safety of persons or property.
- B. Use of mechanical equipment will be permitted except in locations where its operation would cause damage to trees, buildings, culverts, or other existing property utilities, or structures above or below ground; in all such locations, hand excavating tools and methods to be used.
- C. Mechanical equipment used for trench excavation shall be of a type, design, and construction, and be operated so that:
 - 1. Uniform trench widths and vertical side walls are obtained within the pipe embedment zone.
 - 2. Sufficient trench width is provided to allow free working space and to permit compacting the backfill around the pipe.
 - 3. Width of trench within the pipe embedment zone (twelve inches above top of pipe to four inches below the bottom of pipe) is a minimum width of 18 inches or equal to the width of the outside pipe diameter plus 6 inches on either side of the pipe.
 - 4. Trench alignment is such that the pipe when accurately laid to specific alignment will be centered in the trench with adequate clearance between the pipe and the side walls of the trench.
- D. Undercutting of the trench side wall to obtain trench sidewall clearance will not be permitted.
- E. Where necessary to reduce the earth load on trench banks to prevent sliding and caving, the banks may be cut back on slopes which shall not extend lower than 1 foot above the top of the pipe (top of pipe embedment zone).

SECTION 31 2316 EXCAVATION

3.06 SUBGRADE PREPARATION

- A. See Section 31 2323 for subgrade preparation at general excavations.

3.07 FILLING AND BACKFILLING

- A. Do not fill or backfill until all debris, water, unsatisfactory soil materials, obstructions, and deleterious materials have been removed from excavation.
- B. See Section 31 2323 for fill, backfill, and compaction requirements at general excavations.
- C. See Section 31 2200 for rough and final grading and topsoil replacement requirements.

3.08 REPAIR

- A. Correct areas that are over-excavated and load-bearing surfaces that are disturbed; see Section 31 2323.

3.09 FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements, for general requirements for field inspection and testing.
- B. Provide for visual inspection of load-bearing excavated surfaces by Architect before placement of foundations.

3.10 CLEANING

- A. Stockpile excavated material to be re-used in area designated on site in accordance with Section 31 2200.
- B. Remove excavated material that is unsuitable for re-use from site.
- C. Remove excess excavated material from site.

3.11 PROTECTION

- A. Divert surface flow from rains or water discharges from the excavation.
- B. Prevent displacement of banks and keep loose soil from falling into excavation; maintain soil stability.
- C. Protect open excavations from rainfall, runoff, freezing groundwater, or excessive drying so as to maintain foundation subgrade in satisfactory, undisturbed condition.
- D. Protect bottom of excavations and soil adjacent to and beneath foundation from freezing.
- E. Keep excavations free of standing water and completely free of water during concrete placement.

END OF SECTION

This page intentionally left blank

SECTION 31 2323 FILL

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Filling, backfilling, and compacting for building volume below grade, slabs-on-grade, paving, site structures, and utilities within the building.
- B. Backfilling and compacting for utilities outside the building to utility main connections.
- C. Filling holes, pits, and excavations generated as a result of removal (demolition) operations.
- D. Topsoil

1.02 RELATED REQUIREMENTS

- A. Document _____: Geotechnical report; bore hole locations and findings of subsurface materials.
- B. Section 01 5713 - Temporary Erosion and Sediment Control: Slope protection and erosion control.
- C. Section 31 2200 - Grading: Removal and handling of soil to be re-used.
- D. Section 31 2200 - Grading: Site grading.
- E. Section 31 2316 - Excavation: Removal and handling of soil to be re-used.

1.03 DEFINITIONS

- A. Finish Grade Elevations: Indicated on drawings.
- B. Subgrade Elevations: Indicated on drawings.

1.04 REFERENCE STANDARDS

- A. AASHTO T 180 - Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18 in.) Drop; 2021, with Errata (2022).
- B. ASTM D698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)); 2012 (Reapproved 2021).
- C. ASTM D1556/D1556M - Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method; 2015, with Editorial Revision (2016).
- D. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³)); 2012 (Reapproved 2021).
- E. ASTM D2167 - Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method; 2015.
- F. ASTM D2487 - Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System); 2017 (Reapproved 2025).
- G. ASTM D6938 - Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth); 2023.

1.05 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Fill Composition Test Reports: Results of laboratory tests on proposed and actual materials used, including manufactured fill.
- C. Compaction Density Test Reports.

1.06 QUALITY ASSURANCE

- A. Testing Agency Qualifications: Independent firm specializing in performing testing and inspections of the type specified in this section.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. When necessary, store materials on site in advance of need.
- B. When fill materials need to be stored on site, locate stockpiles where designated.
 - 1. Separate differing materials with dividers or stockpile separately to prevent intermixing.
 - 2. Prevent contamination.
 - 3. Protect stockpiles from erosion and deterioration of materials.

SECTION 31 2323 FILL

PART 2 PRODUCTS

2.01 FILL MATERIALS

- A. General Fill: Subsoil excavated on-site and approved by the Geotechnical Engineer for use as fill.
 - 1. Graded.
 - 2. Free of lumps larger than 3 inches, rocks larger than 2 inches, and debris.
 - 3. Conforming to ASTM D2487 Group Symbol SP or SP-SM.
- B. Sand- Fill Type Class II: Conforming to State of Michigan Highway Department standard.
- C. Topsoil: Topsoil excavated on-site.
 - 1. Graded.
 - 2. Free of roots, rocks larger than 1/2 inch, subsoil, debris, large weeds and foreign matter.
 - 3. Acidity range (pH) of 5.5 to 7.0.
 - 4. Containing a minimum of 4 percent and a maximum of 25 percent inorganic matter.

2.02 SOURCE QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements, for general requirements for testing and analysis of soil material.
- B. Where fill materials are specified by reference to a specific standard, test and analyze samples for compliance before delivery to site.
- C. If tests indicate materials do not meet specified requirements, change material and retest.
- D. Provide materials of each type from same source throughout the Work.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that survey bench marks and intended elevations for the Work are as indicated.
- B. Identify required lines, levels, contours, and datum locations.
- C. See Section 31 2200 for additional requirements.
- D. Verify areas to be filled are not compromised with surface or ground water.

3.02 PREPARATION

- A. Scarify and proof roll subgrade surface to a depth of 6 inches to identify soft spots. Proof rolling to be observed by Geotechnical Engineer, and approved prior to final compaction.
- B. Cut out soft areas of subgrade not capable of compaction in place. Backfill with material recommended and approved by the Geotechnical Engineer..
- C. Compact subgrade to density equal to or greater than requirements for subsequent fill material.
- D. Until ready to fill, maintain excavations and prevent loose soil from falling into excavation.

3.03 FILLING

- A. Fill to contours and elevations indicated using unfrozen materials.
- B. Employ a placement method that does not disturb or damage other work.
- C. Systematically fill to allow maximum time for natural settlement. Do not fill over porous, wet, frozen or spongy subgrade surfaces.
- D. Maintain optimum moisture content of fill materials to attain required compaction density.
- E. Granular Fill: Place and compact materials in equal continuous layers not exceeding 8 inches compacted depth.
- F. Soil Fill: Place and compact material in equal continuous layers not exceeding 8 inches compacted depth.
- G. Slope grade away from building minimum 2 inches in 10 feet, unless noted otherwise. Make gradual grade changes. Blend slope into level areas.
- H. Correct areas that are over-excavated.
 - 1. Load-bearing foundation surfaces: Use material recommended and approved by the Geotechnical Engineer, flush to required elevation, compacted to 98 percent of maximum dry density.

SECTION 31 2323 FILL

2. Other areas: For non load bearing areas, use general fill, flush to required elevation, compacted to minimum 95 percent of maximum dry density.
- I. Compaction Density Unless Otherwise Specified or Indicated:
 1. Under paving, slabs-on-grade, and similar construction: 98 percent of maximum dry density.
 2. At non load bearing locations: 95 percent of maximum modified proctor, dry density.
- J. Reshape and re-compact fills subjected to vehicular traffic.
- K. Maintain temporary means and methods, as required, to remove all water while fill is being placed as required, or until directed by the Architect. Remove and replace soils deemed unsuitable by classification and which are excessively moist due to lack of dewatering or surface water control.

3.04 FILL AT SPECIFIC LOCATIONS

- A. Use general fill unless otherwise specified or indicated.

3.05 TOLERANCES

- A. Top Surface of General Filling: Plus or minus 1/2 inch from required elevations.

3.06 FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements, for general requirements for field inspection and testing.
- B. Perform compaction density testing on compacted fill in accordance with ASTM D1556, ASTM D2167, or ASTM D6938.
- C. Evaluate results in relation to compaction curve determined by testing uncompacted material in accordance with ASTM D698 ("standard Proctor"), ASTM D1557 ("modified Proctor"), or AASHTO T 180.
- D. If tests indicate work does not meet specified requirements, remove work, replace and retest.
- E. Frequency of Tests: _____.
- F. Proof roll compacted fill at surfaces that will be under slabs-on-grade and paving.

3.07 CLEANING

- A. Remove unused stockpiled materials, leave area in a clean and neat condition. Grade stockpile area to prevent standing surface water.

END OF SECTION

This page intentionally left blank

SECTION 32 1120 SUBBASE AND AGGREGATE BASE COURSES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Subbase course.
- B. Aggregate base course.

1.02 RELATED REQUIREMENTS

- A. Section 31 2200 - Grading.
- B. Section 31 2323 - Fill.
- C. Section 32 1313 - Concrete Paving.
- D. Section 32 1423 - Asphalt Unit Paving.

1.03 REFERENCE STANDARDS

- A. AASHTO M 147 - Standard Specification for Materials for Aggregate and Soil-Aggregate Subbase, Base, and Surface Courses; 2017 (Reapproved 2021).
- B. AASHTO T 180 - Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18 in.) Drop; 2021, with Errata (2022).
- C. ASTM C136/C136M - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates; 2025.
- D. ASTM D698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)); 2012 (Reapproved 2021).
- E. ASTM D1241 - Standard Specification for Materials for Soil-Aggregate Subbase, Base, and Surface Courses; 2015.
- F. ASTM D1556/D1556M - Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method; 2015, with Editorial Revision (2016).
- G. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³)); 2012 (Reapproved 2021).
- H. ASTM D2167 - Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method; 2015.
- I. ASTM D2487 - Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System); 2017 (Reapproved 2025).
- J. ASTM D3665 - Standard Practice for Random Sampling of Construction Materials; 2024.
- K. ASTM D4318 - Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils; 2017, with Editorial Revision (2018).
- L. ASTM D6938 - Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth); 2023.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Test Reports:
 - 1. Aggregate Composition: Results of laboratory tests on proposed and actual materials used.
 - a. Test reports provided are to be done within 12 months prior to the project bid date.
- C. Source Quality Control Submittals: Submit name of imported materials source.
- D. Field Quality Control Submittals: Submit compaction density testing results.

1.05 QUALITY ASSURANCE

- A. Testing Agency Qualifications: Independent firm specializing in performing testing and inspections of type specified in this section.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Aggregate Storage:
 - 1. Prevent material intermixing, contamination, and deterioration.
 - 2. Protect stockpiles from erosion and deterioration of materials.

SECTION 32 1120 SUBBASE AND AGGREGATE BASE COURSES

PART 2 PRODUCTS

2.01 MATERIALS

- A. Subbase Course:
 - 1. Granular Materials, Class II sand complying with State of Michigan Department of Transportation standard specifications for construction, latest edition.
 - 2. Graded in accordance with ASTM C136/C136M, within the following limits:
 - a. 3 inch sieve: 100 percent passing.
 - b. 1 inch sieve: 60 to 100 percent passing.
 - c. No.4 sieve: 50 to 100 percent passing.
 - d. No. 100 sieve: 0 to 30 percent passing.
 - e. No.200: 0 to 7 percent passing.
- B. Aggregate Base Course:
 - 1. Dense Aggregate, Type 21AA, Modified : Comply with State of Michigan Department of Transportation standard specification for construction, latest edition.
 - 2. Graded in accordance with ASTM C136/C136M, within the following limits:
 - a. 1 1/2 inch sieve: 100 percent passing.
 - b. 1 inch sieve: 85 to 100 percent passing.
 - c. 1/2 inch sieve: 50 to 70 percent passing.
 - d. No. 8 sieve: 20 to 35 percent passing.
 - e. No. 30 sieve: 8 to 22 percent passing.
 - f. Loss by Wash: 0 to 7 percent passing.
 - 3. Crushed material: 95% minimum.
 - 4. Loss, Los Angeles Abrasion (MTM 102): 50% maximum.

2.02 SOURCE QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements for additional requirements.
- B. If tests indicate materials do not meet specified requirements, change material and retest.
- C. Provide materials of each type from same source throughout the Work.
- D. For aggregate materials using classification complying with ASTM D2487, provide testing before delivery to site.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that survey bench marks and intended elevations for the work are as indicated.
- B. Verify substrate has been inspected, and gradients and elevations are correct and dry.

3.02 PREPARATION

- A. Correct irregularities in substrate gradient and elevation by scarifying, reshaping, and recompacting.
- B. Do not place aggregate on soft, muddy, or frozen surfaces.
- C. Grade excavated and filled substrate; see Section 31 2200.
- D. Backfill and compact subgrade fill; see Section 31 2323.

3.03 PLACEMENT

- A. Under Bituminous Concrete Paving:
 - 1. Subbase Compacted Thickness: According to design drawings.
 - 2. Aggregate Base Compacted Thickness: According to design drawings.
 - 3. Compact to 95 percent of maximum dry density.
- B. Under Portland Cement Concrete Paving:
 - 1. Subbase Compacted Thickness: According to design drawings.
 - 2. Aggregate Base Compacted Thickness: According to design drawings.
 - 3. Compact to 95 percent of maximum dry density.
- C. Place course in maximum ____ layers and roller compact to specified density.
- D. Level and contour surfaces to elevations and gradients indicated.
- E. Use mechanical tamping equipment in areas inaccessible to compaction equipment.

SECTION 32 1120 SUBBASE AND AGGREGATE BASE COURSES

3.04 TOLERANCES

- A. Variation From Design Elevation: Within 1/2 inch.
- B. Flatness: Maximum variation of 1/4 inch measured with 10 foot straight edge.
- C. Scheduled Compacted Thickness: Within 1/4 inch.

3.05 FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements for additional requirements.
- B. Subbase Compaction Density Testing: In accordance with ASTM D1556/D1556M, ASTM D2167, or ASTM D6938.
- C. Aggregate Base Compaction Density Testing: In accordance with ASTM D1556/D1556M, ASTM D2167, or ASTM D6938.
- D. Evaluate results in relation to compaction curve determined by testing uncompacted material in accordance with AASHTO T 180, ASTM D698 ("standard Proctor"), or ASTM D1557 ("modified Proctor").
- E. Frequency of Tests: In accordance with ASTM D3665.
- F. Remove, replace, and retest work that does not meet specified requirements.
- G. Proof roll compacted aggregate at surfaces going underneath flexible paving.

3.06 CLEANING

- A. See Section 01 7000 - Execution and Closeout Requirements for additional requirements.
- B. Remove unused materials and grade areas to prevent standing surface water.

END OF SECTION

This page intentionally left blank

SECTION 32 1216 ASPHALT PAVING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Double course bituminous concrete paving.

1.02 RELATED REQUIREMENTS

- A. Section 31 2200 - Grading: Preparation of site for paving and base.
- B. Section 31 2323 - Fill: Compacted subgrade for paving.
- C. Section 32 1123 - Aggregate Base Courses: Aggregate base course.
- D. Section 33 0561 - Concrete Manholes: Manholes, including frames; gutter drainage grilles, covers, and frames for placement by this section.

1.03 REFERENCE STANDARDS

- A. AI MS-2 - Asphalt Mix Design Methods; 2015.
- B. MDOT Standard Specifications for Construction; 2012.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Design Mix: Submit actual design mix to the Engineer for review and/or approval. Do not place any asphaltic concrete paving until receipt of Engineer's approval.
 - 1. Design mix submittal shall follow the format as indicated in the Asphalt Institute Manual MS-2, Marshall Stability Method.
 - 2. Include the type/name of the mix, gradation analysis, asphalt cement grade used, Marshall Stability (lbs.), flow, effective asphalt content (percent), and direct references to the applicable highway department specification sections for each material.
 - 3. Design shall be for a mixture listed in the most recent edition of roadway specifications of the state in which the project is to be constructed.
- C. Written Warranty.

1.05 QUALITY ASSURANCE

- A. Perform Work in accordance with Michigan Department of Transportation standards.
- B. Mixing Plant: Complying with Michigan Department of Transportation standards.
- C. Obtain materials from same source throughout.

1.06 FIELD CONDITIONS

- A. Do not place asphalt when ambient air or base surface temperature is less than 40 degrees F, or surface is wet or frozen.
- B. Applicable weather and seasonal limitation of MDOT standards apply.

1.07 WARRANTY

- A. Furnish written warranty, executed by Contractor, for quality of paving. Contractor shall make necessary repairs to asphalt due to defects or faulty materials or workmanship, which may appear within the warranty period. This shall include but is not limited to asphalt cracking, water ponding, subgrade failures, and separation of longitudinal construction joints.
- B. Warranty Period: 2 years from date of Substantial Completion. The Owner, Engineer and Paving Contractor, prior to the expiration of the warranty, shall make a review of the asphalt areas.

PART 2 PRODUCTS

2.01 REGULATORY REQUIREMENTS

- A. Comply with applicable code for paving work on public property.

2.02 MATERIALS

- A. Sand Subbase: Class II sand conforming to MDOT standard.
- B. Aggregate Base: Per Section 32 1123.
- C. Aggregate for Binder Course: State of Michigan Department of Transportation standards.
- D. Aggregate for Wearing Course: State of Michigan Department of Transportation standards.
- E. Tack Coat: In accordance with State of Michigan Highways standards.
- F. Hot Poured Rubber Joint Sealer: Provide one of the following or approved equal.

SECTION 32 1216 ASPHALT PAVING

1. Road saver 221: CrafcO Inc.
2. Product #9005 or #9030: Koch Material Company
3. Sealtight Hi-SpecL W.R. Meadows, Inc.

2.03 ASPHALT PAVING MIXES AND MIX DESIGN

Criteria	minimu m	maximu m	minimu m	maximu m					
Asphalt Content (%)	4.5	8.0	5.0	8.0					
Air Void Content Target (%)	3.0	3.5	3.0	3.0					
VMA (%)	15.0	15.5	15.5	16.5					
RAP (%)	0	17	0	17					
Crushed Aggregate (%)	60	90	60	---	MDO T Mixtur e Type	Levelin g Course	Levelin g Course	Wearin g Course	Wearin g Course

- A. Parking Lot:
 1. Asphalt Binder Course: State of Michigan Highways standards.
 2. Leveling Course Gradation: Michigan DOT EL
 3. Wearing Course Gradation: Michigan DOT EL
- B. Asphalt Wearing Course: 5 to 7 percent of asphalt cement by weight in mixture in accordance with AI MS-2.
- C. Performance Grade Binder: PG 58-28
- D. Submit proposed mix design for review prior to beginning of work.

2.04 SOURCE QUALITY CONTROL

- A. Test mix design and samples in accordance with current Michigan Department of Transportation Standards.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that compacted subgrade is dry and ready to support paving and imposed loads.
- B. Verify gradients and elevations of base are correct.

3.02 AGGREGATE BASE COURSE

- A. See Section 32 1123.
- B. Proof-Rolling and Inspection.
 1. Examine subgrade, surface, and elevations to which base materials and hot mix asphalt pavement will be installed. Proof-rolling will be required for acceptance of final structural sub-grade, prior to start of pavement operations.
 2. Notify the Engineer in writing of the conditions detrimental to the completion of the work.
 3. Do not proceed with the work until unsatisfactory conditions have been corrected, and acceptable to the Engineer.
- C. Surface Preparation.
 1. Schedule paving operations so that aggregate base is not exposed longer than a maximum of 7 days. Contractor responsible for any rework required due to exposure to weather.
 - a. Application of bituminous materials shall avoid smearing of adjoining concrete surfaces. Remove and clean damaged surfaces.

SECTION 32 1216 ASPHALT PAVING

3.03 PREPARATION - TACK COAT

- A. Apply tack coat in accordance with manufacturer's instructions.
- B. Apply tack coat on asphalt or concrete surfaces over subgrade surface at uniform rate of 1/10 gal/sq yd.
- C. Apply tack coat to contact surfaces of curbs and gutters.
- D. Coat surfaces of manhole frames with oil to prevent bond with asphalt pavement. Do not tack coat these surfaces.

3.04 PLACING ASPHALT PAVEMENT - DOUBLE COURSE

- A. General: Place hot mix asphalt mixture on prepared surface, spread and strike off. Spread mixture at a minimum temperature of 275 degrees F. Maximum temperature shall not exceed 325 degrees F.
 - 1. Loads will be rejected that have a temperature either below 250 degrees F or greater than 20 degrees F above the recommended maximum mixing temperature specified by the binder producer at time of discharge.
 - 2. Place each course to required grade, cross section, and compacted thickness.
- B. Pavement Placement: Place in strips not less than 10 feet wide, unless otherwise acceptable to the Engineer. After first strip has been placed and rolled, place succeeding strips and extend rolling to overlap previous strips.
- C. Joints: Make joints between old and new pavements, or between successive days' work, to insure continuous bond between adjoining work. Construct joints to have same texture, density and smoothness as other sections of hot mix asphalt course. Clean contact surfaces and apply tack coat.
 - 1. Ensure a smooth transition where asphalt pavement abuts building concrete, with special attention at front building sidewalks. Asphalt pavement must be flush with concrete.
- D. Place asphalt binder course within 24 hours of applying primer or tack coat.
- E. Place asphalt wearing course within two hours of placing and compacting binder course.
- F. Compact pavement by rolling to specified density. Do not displace or extrude pavement from position. Hand compact in areas inaccessible to rolling equipment.
- G. Perform rolling with consecutive passes to achieve even and smooth finish, without roller marks.

3.05 TOLERANCES

- A. Flatness: Maximum variation of 1/4 inch measured with 10 foot straight edge.
- B. Variation from True Elevation: Within 1/2 inch.
- C. Check surface areas at intervals as directed by Engineer. Areas of ponding or standing water in excess of 1/8 inch will not be acceptable. Defective portions of the pavement will be removed and replaced as directed by the Engineer.

3.06 FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements, for general requirements for quality control.
- B. Provide field inspection and testing. Take samples and perform tests in accordance with AI MS-2.
- C. All bituminous material shall be compacted to a density of 94 to 97 percent of the theoretical maximum density as determined by the Rice Method.

3.07 PROTECTION

- A. Immediately after placement, protect pavement from mechanical injury for 2 days or until surface temperature is less than 140 degrees F.

3.08 REPAIR AND REPLACEMENT

- A. Sawcutting and Patching:
 - 1. Remove and replace leveling and/or wearing course areas mixed with foreign materials and defective areas.
 - 2. Sawcut full depth of existing pavement in perpendicular and parallel directions to adjoining surfaces to ensure a quality and aesthetically pleasing repair. Replacement may need to extend beyond the area of repair.

SECTION 32 1216 ASPHALT PAVING

3. Cut out areas and fill with fresh, hot mix asphalt.
4. Compact by rolling to specified density and smoothness.
5. Sawcut or route new joint and fill with hot poured rubber joint sealer.

3.09 CLEAN-UP

- A. For duration of work, maintain work area free from waste material, debris, and the similar items.
- B. Remove all excess material, debris and equipment.

END OF SECTION

SECTION 32 1313 CONCRETE PAVING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Concrete sidewalks, stair steps, integral curbs, gutters, parking areas, and roads.

1.02 RELATED REQUIREMENTS

- A. Section 03 1000 - Concrete Forming and Accessories.
- B. Section 03 2000 - Concrete Reinforcing.
- C. Section 31 2200 - Grading: Preparation of site for paving and base and preparation of subsoil at pavement perimeter for planting.
- D. Section 31 2323 - Fill: Compacted subbase for paving.
- E. Section 33 0561 - Concrete Manholes: Manholes, including frames; gutter drainage grilles, covers, and frames for placement by this section.

1.03 REFERENCE STANDARDS

- A. ACI 211.1 - Selecting Proportions for Normal-Density and High Density-Concrete - Guide; 2022.
- B. ACI 301 - Specifications for Concrete Construction; 2020.
- C. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete; 2000 (Reapproved 2009).
- D. ACI 305R - Guide to Hot Weather Concreting; 2020.
- E. ACI 306R - Guide to Cold Weather Concreting; 2016.
- A. ACI PRC-211.1 - Selecting Proportions for Normal-Density and High Density-Concrete - Guide; 2022.
- B. ACI PRC-304 - Guide for Measuring, Mixing, Transporting, and Placing Concrete; 2000 (Reapproved 2009).
- C. ACI PRC-305 - Guide to Hot Weather Concreting; 2020.
- D. ACI PRC-306 - Guide to Cold Weather Concreting; 2016.
- E. ACI SPEC-301 - Specifications for Concrete Construction; 2020.
- F. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement; 2016.
- G. ASTM C1260 - Aggregate Test for Alkali Silica Reactivity (ASR)
- H. ASTM C1567- Blended Material Test for Alkali Silica Reactivity (ASR)
- I. ASTM C33/C33M - Standard Specification for Concrete Aggregates; 2018.
- J. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens; 2018.
- K. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete; 2026.
- L. ASTM C150/C150M - Standard Specification for Portland Cement; 2018.
- M. ASTM C595/C595M - Standard Specification for Blended Hydraulic Cements.
- N. ASTM C173/C173M - Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method; 2026.
- O. ASTM C309 - Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete; 2025.
- P. ASTM C685/C685M - Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing; 2025a.
- Q. ___DOT Standard Specifications for Construction.
- R. ASTM D1751 - Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Asphalt Types); 2023.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on joint filler, admixtures, and curing compound.

SECTION 32 1313 CONCRETE PAVING

- C. Design Data: Indicate pavement thickness, mix design including alkali silica reactivity test results, designed concrete strength, reinforcement, and typical details.

PART 2 PRODUCTS

2.01 PAVING ASSEMBLIES

- A. Comply with applicable requirements of ACI SPEC-301.
- B. Design paving for parking and light duty commercial vehicles.

2.02 FORM MATERIALS

- A. Form Materials: As specified in Section 03 1000, comply with ACI SPEC-301.
- B. Joint Filler: Preformed; non-extruding bituminous type (ASTM D1751).
 - 1. Thickness: 3/8 inch.

2.03 REINFORCEMENT

- A. Reinforcing Steel and Welded Wire Reinforcement: Types specified in Section 03 2000.
- B. Dowels: ASTM A615/A615M, Grade 40 - 40,000 psi yield strength; deformed billet steel bars; epoxy coated finish.

2.04 CONCRETE MATERIALS

- A. Obtain cementitious materials from same source throughout.
- B. Concrete Materials: Provide in accordance with State of _____ Highways standards.
- C. Cement: ASTM C595/C595M, Type IL(10) - Portland limestone cement

2.05 ACCESSORIES

- A. Curing Compound: ASTM C309, Type 1, Class A.
- B. Curing Compound at salt guard: Compatible with requirements of salt guard manufacturer.
- C. Salt Guard: Water based emulsion of saline/siloxane to penetrate concrete surface at all horizontal concrete surfaces.
 - 1. Manufacturers:
 - a. Dayton Superior; Product: Weather Worker 10% J26WB; www.daytonsuperior.com
 - b. Euclid Chemical; Product Weather-Guard: www.euclidchemical.com
 - c. Kryton International Inc.; Product: Hydropel Sealer: www.kryton.com
 - d. Prosoco Inc.; Saltguard WB: www.prosoco.com
 - e. SpecChem, LLC; Product: SpecShield WB; www.specchemllc.com
 - f. Substitutions: See Section 01 6000 - Product Requirements.

2.06 CONCRETE MIX DESIGN

- A. Proportioning Normal Weight Concrete: Comply with ACI PRC-211.1 recommendations.
- B. Concrete Strength: Establish required average strength for each type of concrete on the basis of field experience or trial mixtures, as specified in ACI SPEC-301.
 - 1. For trial mixtures method, employ independent testing agency acceptable to Architect for preparing and reporting proposed mix designs.
- C. Admixtures: Add acceptable admixtures as recommended in ACI PRC-211.1 and at rates recommended by manufacturer.
- D. Concrete Mix: MDOT P1, Modified - Plain concrete with MDOT 6AA coarse aggregate with modified compressive strength per the following Concrete Properties specifications
- E. Concrete Properties:
 - 1. Compressive strength, when tested in accordance with ASTM C39/C39M at 28 days; 4,000 psi.
 - 2. Fly Ash Content: Maximum 25 percent of cementitious materials by weight.
 - 3. Calcined Pozzolan Content: Maximum 10 percent of cementitious materials by weight.
 - 4. Total Air Content: 6 percent, determined in accordance with ASTM C173/C173M.

2.07 CONCRETE MATERIALS FOR DRIVEWAY PAVING (HEAVY DUTY)

- A. Reinforcing steel shall be as shown on the drawings.
- B. Concrete Mix: MDOT P1, Modified - Plain concrete with MDOT 6AA coarse aggregate with modified compressive strength per the following Concrete Properties specifications
- C. Concrete Properties:

SECTION 32 1313 CONCRETE PAVING

1. Compressive strength, when tested in accordance with ASTM C39/C39M at 28 days; 4,500 psi.

2.08 MIXING

- A. On Project Site: Mix in drum type batch mixer, complying with ASTM C685/C685M. Mix each batch not less than 1-1/2 minutes and not more than 5 minutes.
- B. Transit Mixers: Comply with ASTM C94/C94M.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify compacted subgrade is acceptable and ready to support paving and imposed loads.
- B. Verify gradients and elevations of base are correct.

3.02 SUBBASE

- A. See Section 32 1123 for construction of base course for work of this Section.

3.03 PREPARATION

- A. Moisten base to minimize absorption of water from fresh concrete.
- B. Coat surfaces of manhole frames with oil to prevent bond with concrete pavement.

3.04 FORMING

- A. Place and secure forms to correct location, dimension, profile, and gradient.
- B. Assemble formwork to permit easy stripping and dismantling without damaging concrete.
- C. Place joint filler vertical in position, in straight lines. Secure to formwork during concrete placement.

3.05 REINFORCEMENT

- A. Place reinforcement as indicated on drawings.
- B. Interrupt reinforcement at contraction joints.
- C. Place dowels to achieve pavement and curb alignment as detailed.

3.06 COLD AND HOT WEATHER CONCRETING

- A. Follow recommendations of ACI PRC-305 when concreting during hot weather.
- B. Follow recommendations of ACI PRC-306 when concreting during cold weather.
- C. Do not place concrete when base surface temperature is less than 40 degrees F, or surface is wet or frozen.

3.07 PLACING CONCRETE

- A. Place concrete in accordance with ACI PRC-304.
- B. Do not place concrete when base surface is wet.
- C. Ensure reinforcement, inserts, embedded parts, formed joints are not disturbed during concrete placement.
- D. Apply surface retarder to all exposed surfaces in accordance with manufacturer's instructions.

3.08 JOINTS

- A. Align curb, gutter, and sidewalk joints.
- B. Place 3/8 inch wide expansion joints at 20 foot intervals or as indicated on drawings and to separate paving from vertical surfaces and other components.
 1. Form joints with joint filler extending from bottom of pavement to within 1/2 inch of finished surface.
 2. Secure to resist movement by wet concrete.
- C. Provide sawn joints.
 1. At 5 feet intervals or as indicated on drawings.
- D. Saw cut contraction joints 3/16 inch wide at an optimum time after finishing. Cut 1/3 into depth of slab.

3.09 FINISHING

- A. Area Paving: Light broom, texture perpendicular to pavement direction.

SECTION 32 1313 CONCRETE PAVING

- B. Sidewalk Paving: Light broom, texture perpendicular to direction of travel with troweled and radiused edge 1/4 inch radius.
- C. Curbs and Gutters: Light broom, texture parallel to pavement direction.
- D. Place curing compound on exposed concrete surfaces immediately after finishing. Apply in accordance with manufacturer's instructions.
 - 1. At locations of salt guard applications, provide curing compatible with salt guard manufacturer requirements.

3.10 TOLERANCES

- A. Maximum Variation of Surface Flatness: 1/4 inch in 10 ft.
- B. Maximum Variation From True Position: 1/4 inch.

3.11 FIELD QUALITY CONTROL

- A. An independent testing agency will perform field quality control tests, as specified in Section 01 4000 - Quality Requirements.
- B. Compressive Strength Tests: ASTM C39/C39M; for each test, mold and cure three concrete test cylinders. Obtain test samples for every 100 cu yd or less of each class of concrete placed.
 - 1. Take one additional test cylinder during cold weather concreting, cured on job site under same conditions as concrete it represents.
- C. Maintain records of placed concrete items. Record date, location of pour, quantity, air temperature, and test samples taken.

3.12 PROTECTION

- A. Immediately after placement, protect pavement from premature drying, excessive hot or cold temperatures, and mechanical injury.

END OF SECTION

SECTION 32 1723 PAVEMENT MARKINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Painted pavement markings.
- B. Raised pavement markings.
- C. Plastic pavement markings.

1.02 RELATED REQUIREMENTS

- A. Section 32 1216 - Asphalt Paving.
- B. Section 32 1313 - Concrete Paving.

1.03 REFERENCE STANDARDS

- A. AASHTO M 237 - Standard Specification for Epoxy Resin Adhesives for Bonding Traffic Markers to Hardened Portland Cement and Asphalt Concrete; 2024.
- B. AASHTO M 247 - Standard Specification for Glass Beads Used in Pavement Markings; 2013 (Reapproved 2018).
- C. AASHTO M 249 - Standard Specification for White and Yellow Reflective Thermoplastic Striping Material (Solid Form); 2012 (Reapproved 2020).
- D. AASHTO MP 24 - Standard Specification for Waterborne White and Yellow Traffic Paints; 2015 (Reapproved 2020).
- E. ASTM D4505 - Standard Specification for Preformed Retroreflective Pavement Marking Tape for Extended Service Life; 2012 (Reapproved 2022).
- F. FHWA MUTCD - Manual on Uniform Traffic Control Devices; 2023, with Editorial Revision (2025).

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Manufacturer's data sheets on each product to be used.
- C. Manufacturer's Instructions:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- D. Manufacturer's qualification statement.
- E. Installer's qualification statement.
- F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 6000 - Product Requirements for additional provisions.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience.
- B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience and approved by manufacturer.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver paint in containers of at least 5 gallons accompanied by batch certificate.
- B. Store products in manufacturer's unopened packaging until ready for installation.
- C. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.07 FIELD CONDITIONS

- A. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.08 SEQUENCING

- A. Allow new pavement surfaces to cure for a period of not less than 14 days before application of markings.

PART 2 PRODUCTS

2.01 PAINTED PAVEMENT MARKINGS

- A. Comply with State of _____ Highway Department standards.

SECTION 32 1723 PAVEMENT MARKINGS

- B. Comply with FHWA MUTCD.
- C. Painted Pavement Markings: As indicated on drawings.
 - 1. Marking Paint: In accordance with AASHTO MP 24.
 - a. Parking Lots: Yellow.
 - b. Symbols and Text: White.
 - c. Wheelchair Symbols: Provide blue and white.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verification of Conditions: Verify that pavement is dry and ready for installation.
- B. Notify Architect of unsatisfactory conditions before proceeding.

3.02 PREPARATION

- A. Clean surfaces prior to installation.
 - 1. Remove dust, dirt, and other debris.
- B. Apply paint stencils by type and color at necessary intervals.

3.03 INSTALLATION

- A. General:
 - 1. Position pavement markings as indicated on drawings.
 - 2. Field location adjustments require approval of Architect.
- B. Painted Pavement Markings:
 - 1. Apply in accordance with manufacturer's instructions.
 - 2. Apply in accordance with State of _____ Highway Department standards.
 - 3. Apply in accordance with FHWA MUTCD standards.
 - 4. Marking Paint: Apply uniformly, with sharp edges.
 - a. Applications: One coat at manufacturer's recommended rates.
 - b. Wet Film Thickness: 0.015 inch, minimum.
 - c. Stencils: Lay flat against pavement, align with striping, remove after application.
 - d. Length Tolerance: Plus or minus 2 inches.
 - e. Width Tolerance: Plus or minus 1/4 inch.
- C. Plastic Pavement Markings:
 - 1. Install in accordance with manufacturer's instructions in manner necessary to maintain manufacturer's warranty.
 - 2. Install in accordance with State of _____ Highway Department standards.
 - 3. Install in accordance with FHWA MUTCD standards.
 - 4. Thermoplastic Markings: Preheat pavement surface to 275 degrees F (135 degrees C). Place markings on pavement smooth and without wrinkles. 1/4 inch (6 mm) maximum gap between adjacent markings. Uniformly heat markings between 400 degrees F (204 degrees C) to 440 degrees F (227 degrees C). Do not overheat, scorch, or disperse embedded glass beads.

3.04 FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements for additional requirements.
- B. Protect newly painted markings so that paint is not picked up by tires, smeared, or tracked.
- C. Provide barricades, warning signs, and flags as necessary to prevent traffic crossing newly painted markings.
- D. If inspections indicate work does not meet specified requirements, rework and reinspect at no cost to Owner.
- E. Allow the pavement marking to set at least the minimum time recommended by manufacturer.

3.05 PROTECTION

- A. Replace damaged or removed markings at no additional cost to Owner.

END OF SECTION

SECTION 33 4230 STORMWATER DRAINS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Precast concrete catch basins.
- B. Prefabricated trench drains.
- C. Frames and grates.
- D. Stormwater Quality Units

1.02 RELATED REQUIREMENTS

- A. Section 31 2316 - Excavation.
- B. Section 31 2323 - Fill.
- C. Section 33 0561 - Concrete Manholes.
- D. Section 33 4211 - Stormwater Gravity Piping.

1.03 REFERENCE STANDARDS

- A. AASHTO HB - Standard Specifications for Highway Bridges; 2005, with Errata.
- B. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete; 2026.
- C. ASTM C139 - Standard Specification for Dry-Cast Concrete Masonry Units for Construction of Catch Basins and Manholes; 2025.
- D. ASTM C478/C478M - Standard Specification for Circular Precast Reinforced Concrete Manhole Sections; 2022.
- E. ASTM C923/C923M - Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals; 2020 (Reapproved 2025).
- F. ASTM C990 - Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants; 2009 (Reapproved 2019).

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination: Installation of stormwater drains with piping and other structures.
 - 1. See Section 33 4211 for stormwater gravity piping.
 - 2. See Section 33 0561 for concrete manholes.

1.05 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Weight rating for catch basins, drop inlets, trench drains, and frame and grates.
- C. Shop Drawings: Indicate stack assembly, invert elevations, opening sizes, and pipe angles.
- D. Manufacturer's Installation Instructions: Indicate special procedures for assembly.
- E. Manufacturer's qualification statement.
- F. Installer's qualification statement.
- G. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- H. Project Record Documents:
 - 1. Record invert elevations of catch basins, drop inlets, and trench drains.
 - 2. Identify and describe unexpected variations to subsoil conditions or discovery of uncharted utilities.

1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with at least three years of documented experience.
- B. Installer Qualifications: Company specializing in installing work of the type specified in this section, and with at least three years of documented experience and approved by manufacturer.

PART 2 PRODUCTS

2.01 CATCH BASINS

- A. Weight Rating: H 20 according to AASHTO HB.
- B. Precast Concrete Catch Basins: Comply with ASTM C478/C478M, reinforced.
 - 1. Wall Thickness: 5 inches (127 mm).

SECTION 33 4230 STORMWATER DRAINS

2. Base Thickness: 8 inches (203 mm).
 3. Joint Sealant: Comply with ASTM C990.
 4. Resilient Connectors: Comply with ASTM C923/C923M.
- C. Grade Adjustments:
1. Adjustment Ring: Concrete, 6 inches (152 mm) wide, diameter matching frame dimensions, in accordance with ASTM C478/C478M.
- D. Frames and Grates: As indicated on drawings.
- E. Frames and Grates: Steel, checkerboard pattern, ___ by ___ inch.

2.02 PREFABRICATED TRENCH DRAINS

- A. Prefabricated Trench Drain: Polymer concrete, glass fiber reinforced, metal installation brackets.
1. Weight Rating: Pedestrian according to AASHTO HB.
 2. Frames and Grates: Galvanized steel support, steel grate, linear pattern, match drain opening size.

2.03 ACCESSORIES

- A. Steps: Formed galvanized steel rungs; 3/4 inch diameter. Formed integral with manhole sections.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify items provided by other sections of work are properly sized and located.
- B. Verify built-in items are in proper location and ready for roughing into work.
- C. Verify excavation location and depth are correct.

3.02 EXCAVATION AND FILL

- A. Hand trim excavation for accurate placement to indicated elevations.
- B. Backfill with cover fill, tamp in place and compact, then complete backfilling.

3.03 INSTALLATION

- A. Establish elevations and pipe inverts for inlets and outlets as indicated in drawings.
- B. Precast Concrete Catch Basins:
 1. Place base section plumb and level.
 2. Install joint sealant uniformly around section lip.
- C. Prefabricated Drop Inlets or Trench Drains:
 1. Place base section plumb and level.
 2. Install according to manufacturer's instructions.
 3. Secure installation brackets.
- D. Grade Adjustments:
 1. Lay concrete ring on mortar bed plumb and level. Top with mortar, plumb and level.
 2. Place adjacent materials tight and smooth following design grades.
- E. Frames and Grates:
 1. Place frame plumb and level.
 2. Mount frame on mortar bed at indicated elevation.
 3. Mount frame on prefabricated drop inlets or trench drains according to manufacturer's instructions.
 4. Place grate in frame securely.

3.04 FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements for additional requirements.
- B. Perform field inspection for pipe invert elevations.
- C. If inspections indicate work does not meet specified requirements, adjust work and reinspect at no cost to Owner.

END OF SECTION



CALL 811 NOTE:
 CONTRACTOR TO CONTACT 811 SERVICE AT LEAST 3 WORKING DAYS PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL PROTECT AND MAINTAIN EXISTING UTILITY SERVICES AT ALL TIMES.

SURVEY NOTES

- EXISTING UTILITIES ARE LOCATED TO THE BEST OF OUR KNOWLEDGE. THE CONTRACTOR WILL BE RESPONSIBLE FOR VERIFYING EXISTING UTILITY LOCATIONS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL PROTECT AND MAINTAIN EXISTING UTILITY SERVICES AT ALL TIMES.
- SURVEY PROVIDED IS A TOPOGRAPHIC SURVEY. NOT A BOUNDARY SURVEY. PROPERTY LINES ARE SHOWN IN APPROXIMATE LOCATION.

SURVEY LEGEND

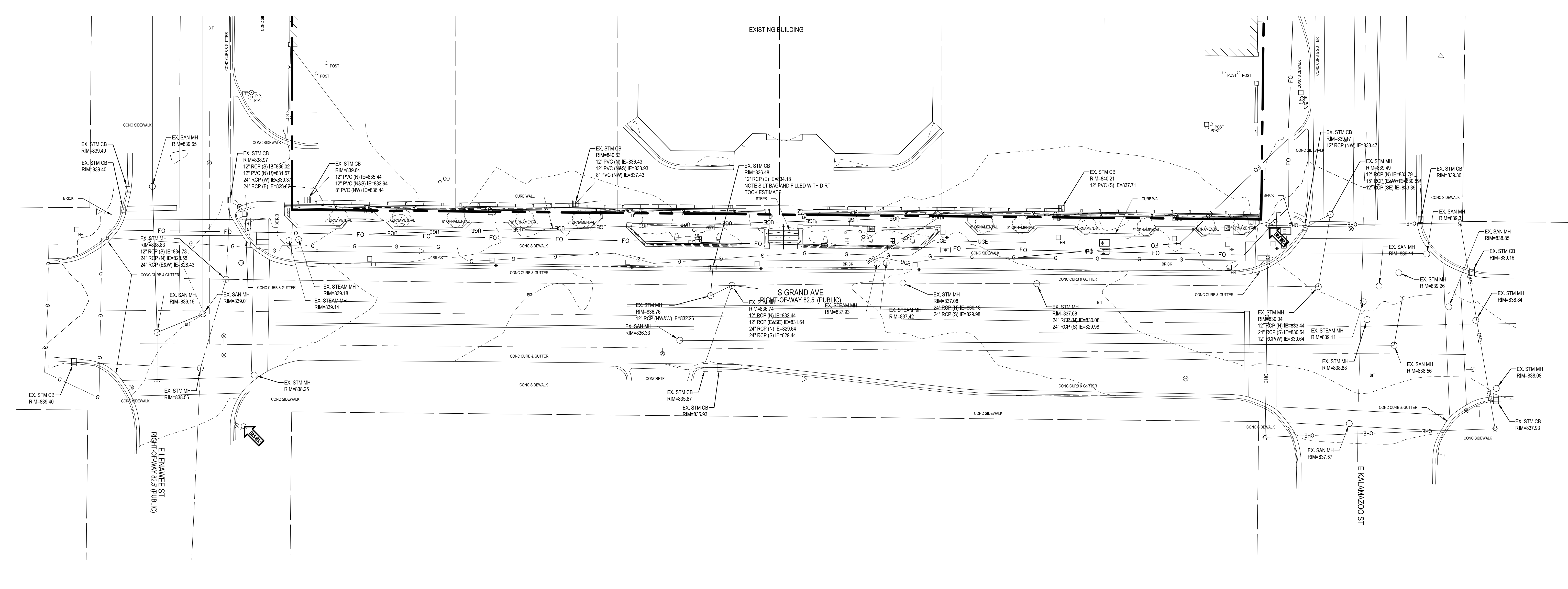
	MONUMENT
	PROPERTY IRON SET
	PROPERTY IRON FOUND
	TRAFFIC SIGNAL POLE
	BOLLARD LIGHT
	LIGHT POLE
	FLOOD LIGHT
	SIGN
	FLAG POLE
	CLEANOUT
	POWER POLE
	TELEPHONE POLE
	ELECTRICAL HAND HOLE
	TEL. ELEC. CATV. GAS WATER RISERS
	TEL. ELEC. GAS WATER MANHOLE
	TEL. ELEC. CATV. GAS MARKER
	CATCH BASIN
	MANHOLE
	SPRINKLER
	VALVE & BOX
	HYDRANT
	SPOT ELEVATION
	MAJOR CONTOUR - 5 FT. INTERVAL
	MINOR CONTOUR - 1 FT. INTERVAL
	GUARD RAIL
	FENCE LINE
	STORM SEWER
	SANITARY SEWER
	WATERMAIN
	GAS MAIN
	UNDERGROUND TELEPHONE LINE
	UNDERGROUND FIBER OPTIC LINE
	UNDERGROUND ELECTRIC LINE
	DITCH CENTERLINE, TOE OF SLOPE
	DECIDUOUS TREE
	CONIFEROUS TREE
	TREE & BRUSH LINE
	BUILDING

BENCHMARKS:

BM #1 TOP OF NE FLANGE BOLT TO HYDRANT, ABOVE 'W' OF WATER NE QUADRANT OF LENAWEE ST & GRAND AVE.	ELEVATION = 839.61
BM #2 TOP OF NE BOLT TO TRAFFIC ARM POST, SW QUADRANT OF KALAMAZOO ST & GRAND AVE.	ELEVATION = 842.18

SURVEY

DATE:	08/25/2025
PAE(P) LOG BOOK NO.:	25-00
PAGES:	38



SITE EXISTING CONDITIONS PLAN
 1"=20'
 NORTH

NOT FOR CONSTRUCTION

If this document is issued and agreed to in a digital or electronic format and is received from someone other than the issuing professional identified in the document, you must contact the issuing professional in writing to verify the authenticity of the document. The issuing professional disclaims the need and signature and seal will be held for any liability associated with it where the authenticity of any digital or electronic seal or signature has not been validated in this manner.

ISSUANCE
 02/11/2025 SITE PLAN SUBMITTAL
 05/12/2025 ISSUED FOR BID

PROJECT NUMBER
 75000025
PROJECT MANAGER
 G. RUNIONS
PROFESSIONAL
 B. SIMON
DRAWN BY
 B. SIMON
CHECKED BY

5/11/2025 4:43:20 PM B. Simon
 P:\25000025\WP2\C101\101_C101_SITING_CONDITIONS_PLAN.dwg
 B. Simon
 10/11/2025 4:43:20 PM B. Simon
 P:\25000025\WP2\C101\101_C101_SITING_CONDITIONS_PLAN.dwg
 B. Simon
 10/11/2025 4:43:20 PM B. Simon
 P:\25000025\WP2\C101\101_C101_SITING_CONDITIONS_PLAN.dwg
 B. Simon



www.CALL811.com

CALL 811 NOTE: CONTRACTOR TO CONTACT 811 SERVICE AT LEAST 3 WORKING DAYS PRIOR TO CONSTRUCTION, TO CONFIRM LOCATION OF EXISTING UTILITIES. DIAL 811.

DEMOLITION LEGEND

- BITUMINOUS PAVEMENT REMOVAL
CONCRETE REMOVAL
TREE REMOVAL
ABANDON UTILITY LINE
REMOVE UTILITY LINE
ALL ITEMS IN BOLD TO BE REMOVED UNLESS OTHERWISE NOTED.

SITE CLEARING AND DEMOLITION NOTES

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE AND BECOMING FAMILIAR WITH THE DEMOLITION AND CLEARING REQUIREMENTS.
2. NO REMOVAL, DEMOLITION, CLEARING OR TOPSOIL REMOVAL SHALL OCCUR ON SITE UNTIL THE SESC AND STORMWATER PERMITS HAVE BEEN ISSUED AND THE CONTRACTOR HAS VERIFIED AND STAKED THE LIMITS OF REMOVAL IN THE FIELD.
3. ALL MATERIALS NOTED TO BE SALVAGED SHALL BE TURNED OVER TO THE OWNER OR REINSTALLED ON SITE AS NOTED.
4. NO BURNING OR BURYING OF CLEARED OR DEMOLITION MATERIAL SHALL BE ALLOWED ON SITE.
5. REMOVE ALL STRUCTURES, FOUNDATIONS, BITUMINOUS PAVEMENT, CONCRETE SIDEWALKS AND OTHER EXISTING SITE FEATURES AS INDICATED ON THE DRAWINGS. ALSO, REMOVE ALL DEBRIS FROM WITHIN CONSTRUCTION LIMITS ON SITE. ALL DEMOLITION MATERIALS SHALL BE REMOVED FROM THE SITE AND, UNLESS OTHERWISE NOTED, DISPOSED OF IN A MANNER ACCEPTABLE TO LOCAL JURISDICTION HAVING AUTHORITY.
6. THE CONTRACTOR SHALL BE LICENSED BY THE STATE OF MICHIGAN FOR DEMOLITION REMOVAL AND HAULING OF MATERIALS.
7. THE CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL PERMITS AND FEES FOR THIS WORK.
8. EXISTING UTILITIES ARE LOCATED TO THE BEST OF OUR KNOWLEDGE. THE CONTRACTOR WILL BE RESPONSIBLE FOR VERIFYING EXISTING UTILITY LOCATIONS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL PROTECT AND MAINTAIN EXISTING UTILITY SERVICES AT ALL TIMES.
9. ALL EXCESS OR UNSUITABLE TOPSOIL OR SUBSOIL TO BECOME THE PROPERTY OF THE CONTRACTOR AND REMOVED OFFSITE.
10. PROTECT EXISTING TREES UNLESS OTHERWISE NOTED. NO PARKING OR STORAGE OF MATERIALS WITHIN TREE ROOT ZONE. PLACE TREE PROTECTION FENCE WHERE SHOWN ON PLAN.
11. TREE PROTECTION FENCE - ORANGE SAFETY FENCE AROUND TREES SUPPORTED BY STEEL T-BAR FENCE POSTS. ZIP-TIE FABRIC TO POSTS. INSTALL PRIOR TO ANY CONSTRUCTION ACTIVITY AND MAINTAIN DURING ENTIRE CONSTRUCTION PERIOD.
12. CONTRACTOR TO CALL 811 AT LEAST 3 WORKING DAYS PRIOR TO CONSTRUCTION, TO CONFIRM LOCATION OF EXISTING UTILITIES.
13. CONTRACTOR MUST RESTORE AND REPAIR ANY EXISTING CONDITIONS DISTURBED BY CONSTRUCTION.
14. ANY AREA DISTURBED BY CONSTRUCTION TO BE RESTORED TO CONDITION EQUAL TO OR BETTER THAN BEFORE CONSTRUCTION BEGAN. PATCH PAVEMENT IN KIND IF REQUIRED.
15. SAWCUT FULL DEPTH ALL EDGES OF PAVEMENT TO BE REMOVED.
16. ALL GROUND AREAS DISTURBED BY CONSTRUCTION TO BE TOPSOILED AND SEEDED PER THE SITE LANDSCAPE PLAN UNLESS SHOWN OTHERWISE ON PLANS.

EROSION CONTROL NOTES

- 1. INSTALL EROSION CONTROL MEASURES AT THE LIMITS OF EARTHWORK PRIOR TO THE START OF ANY EARTHWORK OPERATIONS. ALL OTHER EROSION CONTROL MEASURES SHALL BE INSTALLED IN CONJUNCTION WITH THE CONSTRUCTION SCHEDULE AND SEQUENCE AND SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
2. MAINTAIN ALL EROSION CONTROL INSTALLATIONS DURING THE COURSE OF CONSTRUCTION. MAKE INSPECTIONS AFTER EACH STORM EVENT AND REPAIR OR REPLACE ANY DAMAGE. REMOVE ACCUMULATED SEDIMENT FROM SEDIMENT BASINS TO MAINTAIN EFFECTIVENESS OF EROSION CONTROL INSTALLATIONS. REPAIR ANY ERODED AREAS ON SLOPES OR NEAR SILT FENCE. RESEED AND RESEED ANY TEMPORARY SEEDED AREAS AS NECESSARY TO PREVENT EROSION.
3. THE EROSION CONTROL MEASURES INDICATED ON THIS PLAN ARE BASED ON THE MICHIGAN SOIL EROSION & SEDIMENTATION CONTROL HANDBOOK. THE SOIL EROSION AND SEDIMENTATION CONTROLS SHALL BE INSTALLED AND MAINTAINED PER PLANS AND SPECIFICATIONS.
4. KEEP PUBLIC ROADWAYS CLEAR OF ACCUMULATED SEDIMENT. SEDIMENTS SHALL BE RETURNED IMMEDIATELY UPON ENTERING PUBLIC ROADWAYS AND SHALL BE REMOVED TO THE LIKELY POINT OF ORIGIN. SEDIMENTS SHALL NOT BE FLUSHED OR WASHED FROM THE AREA WITH WATER.
5. SILTSACK MANUFACTURED BY CSI GEOTURF OR HANES GEO PRODUCTS OR APPROVED EQUAL SHALL BE USED FOR STORM INLET PROTECTION ITEM S58 (SEE SESC KEYING SYSTEM LEGEND).
6. CONTRACTOR SHALL INSTALL AND MAINTAIN SILT FENCE AROUND ALL SUBSOIL SPOIL AND TOPSOIL STOCKPILE AREAS. ALL SOIL PILES SHALL BE SEEDED WITH APPROVED SEED MIXTURES AND BE LOCATED AWAY FROM ANY DOWNSLOPE STREET, DRIVEWAY, DITCH OR DRAINAGE WAY.
7. REMOVE TEMPORARY CONTROL MEASURES AS FOLLOWS:
PAVEMENT AREAS - MAINTAIN IN SERVICE UNTIL PREPARATION FOR PLACEMENT OF BITUMINOUS LEVELING COURSES
LAWN AREAS - REMOVE AFTER LAWN IS WELL ESTABLISHED AND ROOTED
8. SILT FENCE SHALL BE INSPECTED AND REPAIRED ONCE A WEEK AND AFTER EVERY RAIN. SEDIMENT SHALL BE REMOVED IF DEPOSITS REACH HALF THE FENCE HEIGHT.
9. CONTRACTOR WILL BE RESPONSIBLE FOR ALL TEMPORARY SOIL EROSION. OWNER WILL BE RESPONSIBLE FOR PERMANENT SOIL EROSION CONTROL.
10. DUST CONTROL SHALL BE PROVIDED BY MEANS OF WATER DISTRIBUTION ON A REGULAR BASIS OVER AREAS THAT COULD POTENTIALLY PRODUCE DUST CONDITIONS.

S-E-S-C KEYING SYSTEM

Table with columns: KEY, BEST MANAGEMENT PRACTICES, SYMBOL, WHERE USED. Includes entry for S58 INLET PROTECTION FABRIC DROP.



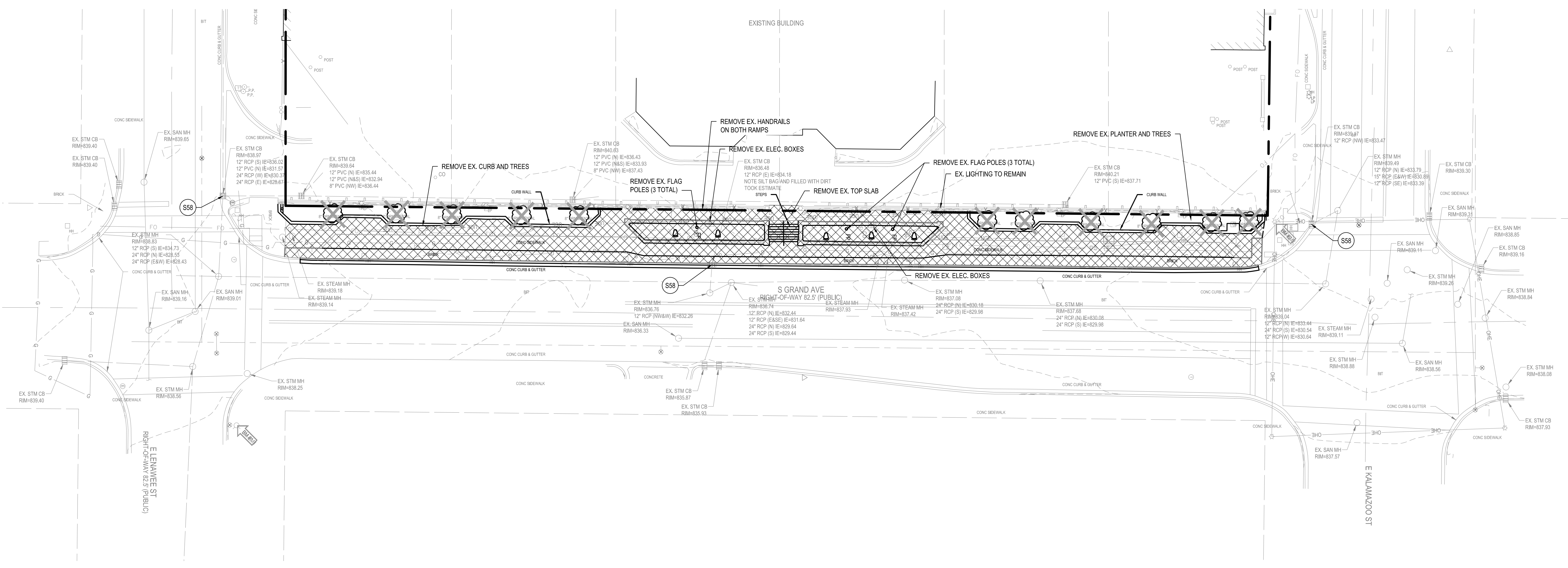
CAPITAL AREA TRANSPORTATION AUTHORITY
GRAND AVE BUS LANE

NOT FOR CONSTRUCTION

ISSUANCE
02/11/2025 SITE PLAN SUBMITTAL
05/12/2025 ISSUED FOR BID

PROJECT NUMBER: 75000205
PROJECT MANAGER: G. RUIJONS
PROFESSIONAL: B. SIMON
DRAWN BY: G. SCHAEF
CHECKED BY:

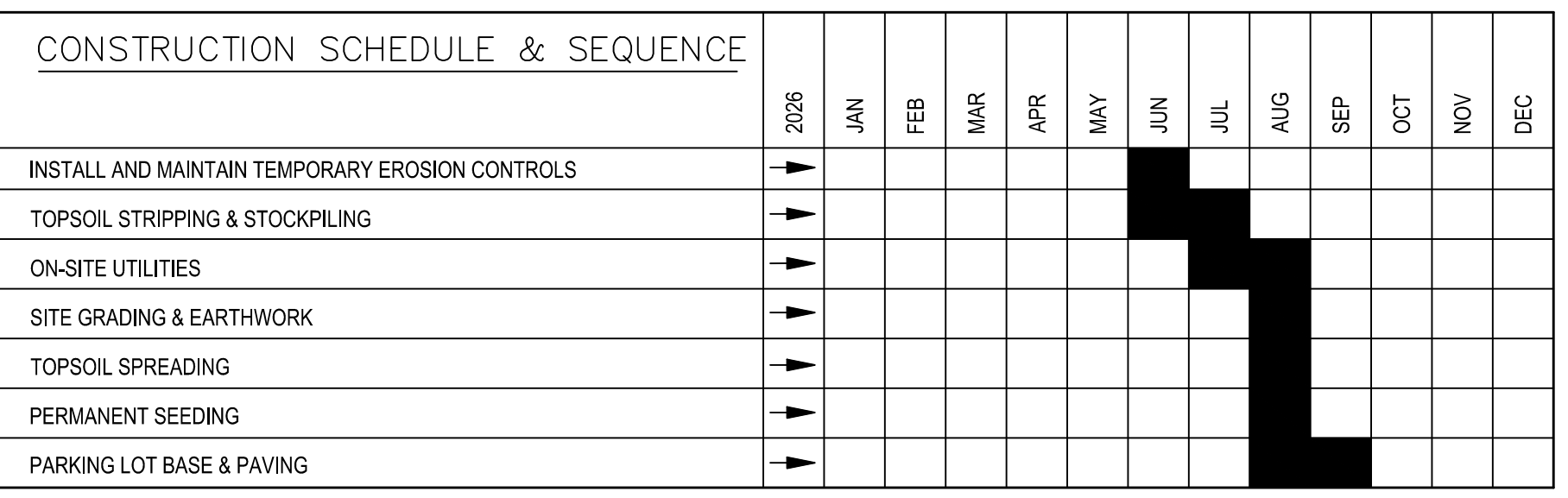
SITE DEMOLITION & SESC PLAN C102



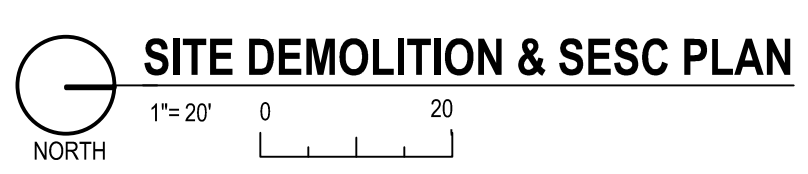
SCHEDULE OF MAINTENANCE TASKS

Table with columns: TASK, SITE AREAS, PAVED AREAS, PERVIOUS AREAS, SILT FENCE, STORM DRAINAGE SYSTEM, OCCURRENCE. Section: DURING CONSTRUCTION (RESPONSIBILITY: CONTRACTOR)

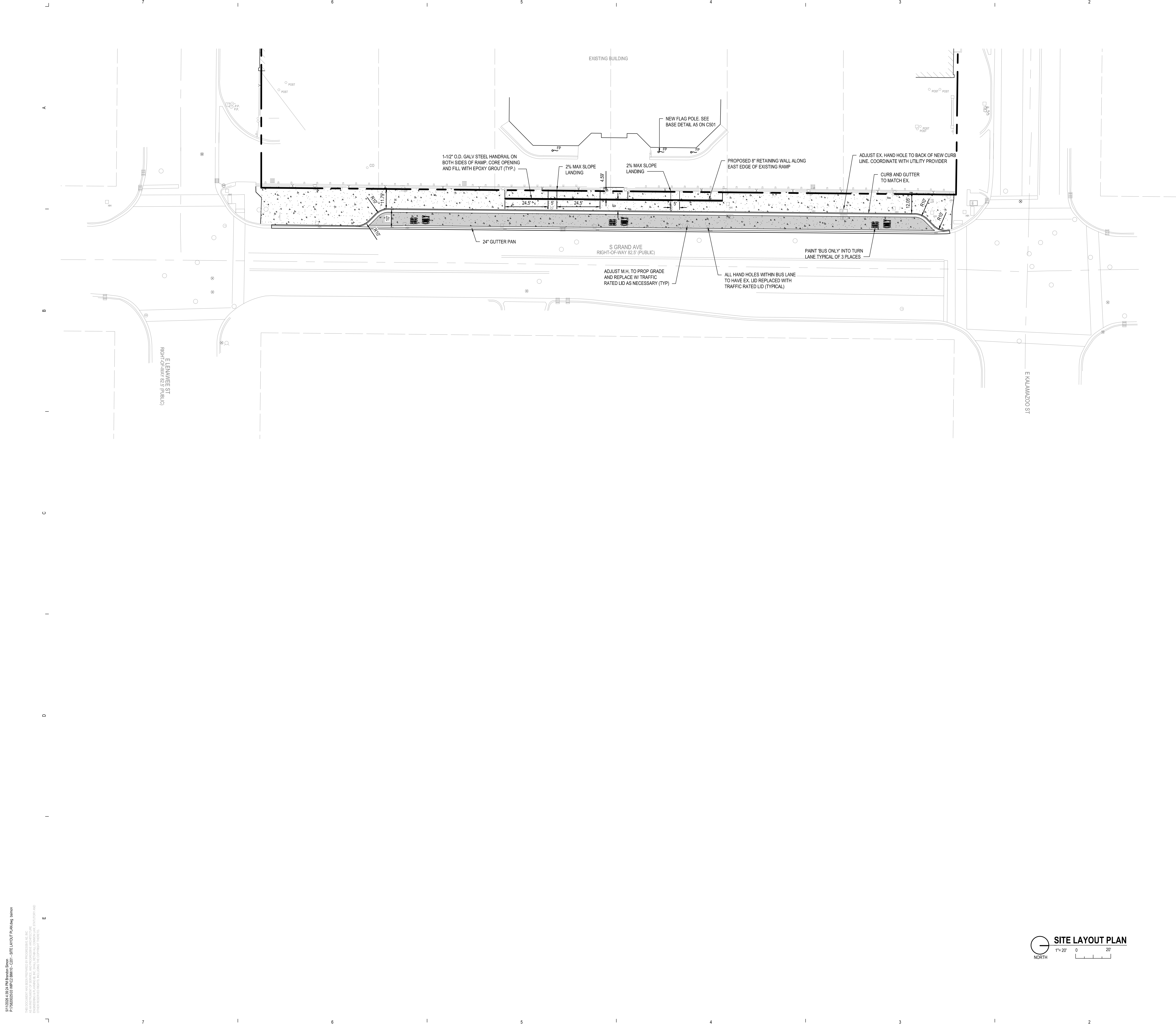
Table with columns: TASK, SITE AREAS, PAVED AREAS, PERVIOUS AREAS, SILT FENCE, STORM DRAINAGE SYSTEM, OCCURRENCE. Section: PERMANENT MAINTENANCE (RESPONSIBILITY: OWNER)



THIS CONSTRUCTION SCHEDULE IS PROVIDED TO INDICATE ANTICIPATED START DATES FOR SITE DISTURBANCE AND ANTICIPATED COMPLETION DATES FOR SITE STABILIZATION AS REQUIRED BY CITY OF LANSING FOR SOIL EROSION AND SEDIMENTATION CONTROL. EXACT START AND COMPLETION DATES FOR EACH ACTIVITY SHOULD BE COORDINATED WITH THE CONSTRUCTION MANAGER.



5/11/2025, 4:38:59 PM (Project) Simon
P:\5000205\500205\WP\25\BIM\10_C102_Site Demolition Plan.dwg
Author: G. Schaefer
Date: 5/11/2025 4:38:59 PM
Title: 102 - SITE DEMOLITION PLAN
Description:
Comments:



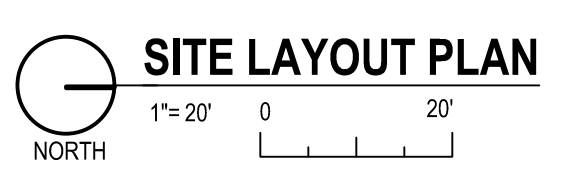
CALL 811 NOTE:
 CONTRACTOR TO CONTACT 811 SERVICE AT LEAST 3 WORKING DAYS PRIOR TO CONSTRUCTION, TO CONFIRM LOCATION OF EXISTING UTILITIES. DIAL 811.

PAVEMENT LEGEND

CONCRETE SIDEWALK	4" CONCRETE 4" MDOT CLASS II GRANULAR BASE APPROVED COMPACTED SUBBASE
HEAVY DUTY DRIVE APPROACH CONCRETE	8" CONCRETE, MDOT P1 18" COMPACTED SUBBASE, CLASS II SAND

- GENERAL NOTES**
- VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
 - PROTECT AND MAINTAIN CROSSINGS OF OTHER UTILITIES.
 - REFER TO DRAWING C101 FOR BENCHMARK INFORMATION.
 - ALL MATERIAL, SPECIFICATIONS AND CONSTRUCTION METHODS SHALL BE IN CONFORMANCE WITH ALL APPLICABLE MUNICIPAL AGENCIES.
 - RESTORE ALL STREET SURFACES, DRIVEWAYS, CULVERTS, ROADSIDE DRAINAGE DITCHES, AND OTHER PUBLIC OR PRIVATE STRUCTURES THAT ARE DISTURBED OR DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES TO MATCH AT A MINIMUM EXISTING CONDITIONS.
 - CONTRACTOR'S MANNER AND METHOD OF INGRESS AND EGRESS WITH RESPECT TO THE PROJECT AREAS SHALL IN NO WAY PROHIBIT OR DISTURB NORMAL PEDESTRIAN OR VEHICULAR TRAFFIC IN THE VICINITY AND IS SUBJECT TO REGULATION AND WRITTEN APPROVAL OF APPROPRIATE GOVERNING AGENCIES.

- GENERAL SITE LAYOUT NOTES**
- ALL WORKMANSHIP AND MATERIALS SHALL BE ACCORDING TO THE CURRENT MICHIGAN DEPARTMENT OF TRANSPORTATION (M.D.O.T) STANDARD SPECIFICATIONS FOR CONSTRUCTION.
 - CONTACT 'MISS DIG' TOLL FREE AT 1-800-482-7171 THREE (3) DAYS PRIOR TO THE START OF CONSTRUCTION, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS.
 - NO DIMENSION MAY BE SCALED. REFER UNCLER ITEMS TO THE ENGINEER FOR INTERPRETATION.
 - DIMENSIONS SHOWN ARE TO FACE OF CURB UNLESS OTHERWISE NOTED AS B-B (BACK TO BACK) OR E-E (EDGE OF METAL TO EDGE OF METAL).
 - CONTRACTOR TO PAINT STRIPE ALL PARKING SPACES SHOWN. PAINT COLOR TO BE YELLOW.
 - UPON REQUEST, ELECTRONIC INFORMATION WILL BE PROVIDED FOR SITE LAYOUT PURPOSES. CONTRACTOR SHALL REQUEST ALL INFORMATION IN WRITING THROUGH PROGRESSIVE AE. LAYOUT OF ALL NEW CONSTRUCTION SHALL BE DONE BY A LICENSED SURVEYOR.
 - ALL CONCRETE JOINTS SHALL BE TOOLED PER SPECIFICATIONS.
 - CONTRACTOR MUST RESTORE AND REPAIR ANY EXISTING CONDITIONS DISTURBED BY CONSTRUCTION, THIS IS TO INCLUDE BURIED UTILITIES, LIGHTING, LANDSCAPING, SPRINKLING, ETC.
 - ANY AREA DISTURBED BY CONSTRUCTION TO BE RESTORED TO CONDITION EQUAL TO OR BETTER THAN BEFORE CONSTRUCTION BEGAN.
 - ALL PAVEMENT, CURB & GUTTER, SIDEWALK AND UTILITIES WITHIN PUBLIC RIGHT OF WAY SHALL MEET CITY OF LANSING STANDARDS.
 - CONTRACTOR TO PROTECT EXISTING IRRIGATION SYSTEM AS MUCH AS POSSIBLE. REPAIR DAMAGE TO EXISTING IRRIGATION SYSTEM AND RECONFIGURE SPRINKLER LAYOUT TO ACCOMMODATE THE NEW IMPROVEMENTS.



5/11/2026 4:52:24 PM G:\Projects\Simon P15802026\02 SITE LAYOUT PLAN.dwg Simon
 PROJECT NUMBER: P15802026
 PROJECT NAME: 429 S GRAND AVE BUS LANE
 DRAWN BY: G. SCHAEF
 CHECKED BY: B. SIMON

PROGRESSIVE COMPANIES
 Charlotte, NC | Detroit, MI | Grand Rapids, MI
 www.progressive.com

CAPITAL AREA TRANSPORTATION AUTHORITY
GRAND AVE BUS LANE
 429 S GRAND AVE, LANSING, MI 48933

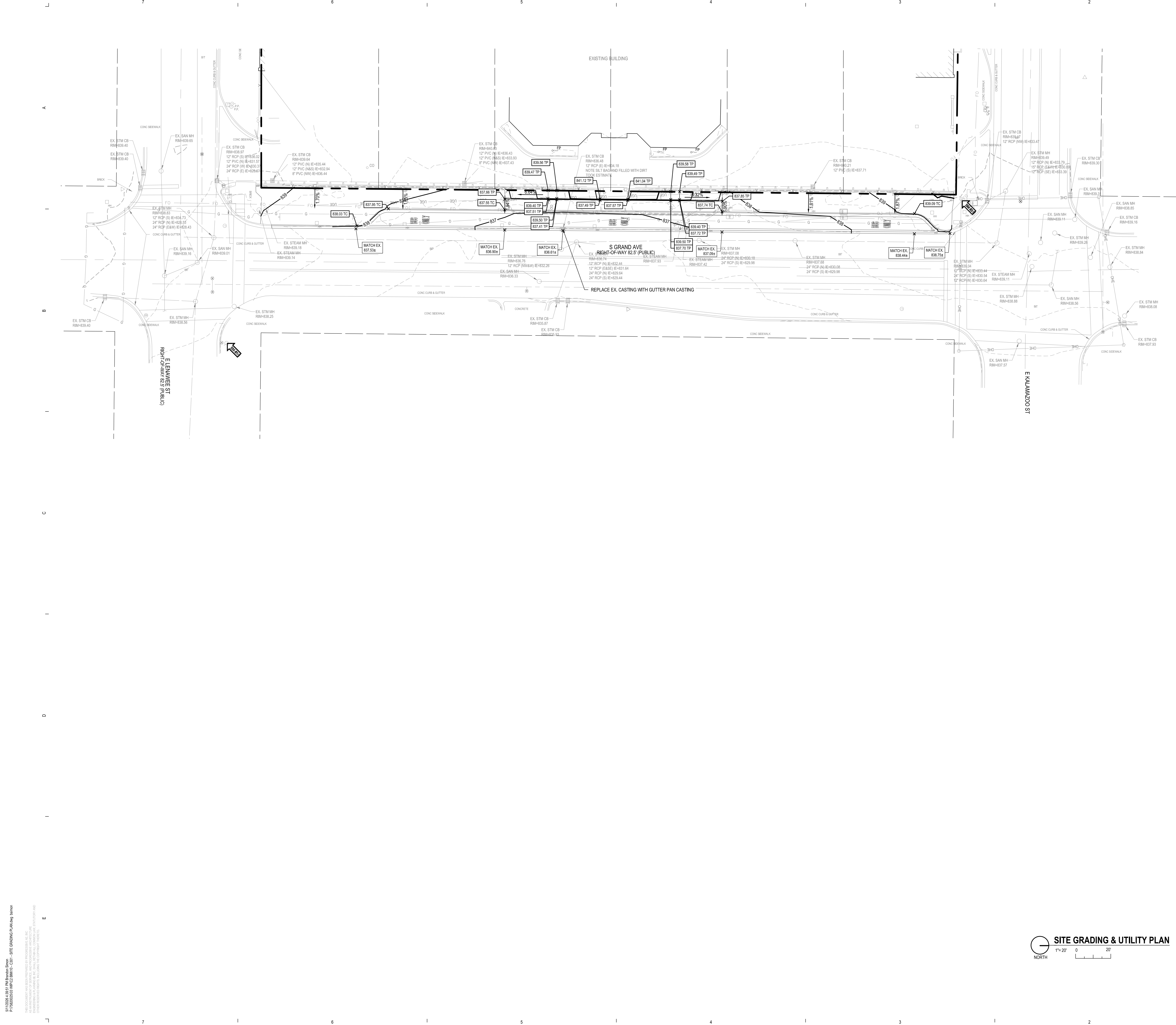
NOT FOR CONSTRUCTION

If this document is sealed and signed in a digital or electronic format and is received from someone other than the sealing professional identified in the document, you must contact the sealing professional in writing to verify the authenticity of the document. The sealing professional disclaims the seal and signature and shall not be liable for any liability associated with it where the authenticity of any digital or electronic seal or signature has not been validated in this manner.

ISSUANCE
 02/11/2026 SITE PLAN SUBMITTAL
 05/12/2026 ISSUED FOR BID

PROJECT NUMBER: 75800026
 PROJECT MANAGER: G. RUIJONS
 PROFESSIONAL: B. SIMON
 DRAWN BY: G. SCHAEF
 CHECKED BY:

SITE LAYOUT PLAN C201



CALL 811 NOTE:
 CONTRACTOR TO CONTACT 811 SERVICE AT LEAST 3 WORKING DAYS PRIOR TO CONSTRUCTION, TO CONFIRM LOCATION OF EXISTING UTILITIES. DIAL 811.

GRADING LEGEND

→	FLOW ARROW
TP	TOP OF PAVEMENT
TC	TOP OF CURB
TW	TOP OF WALL
BW	BOTTOM OF WALL
GR	GROUND
GP	GUTTER PAN
FF	FINISH FLOOR ELEVATION
EX	EXISTING ELEVATION
HP	HIGH POINT
LP	LOW POINT
L	LANDING
R	RAMP

- EARTHWORK & GRADING NOTES**
- EARTHWORK AND PAVEMENT CONSTRUCTION ARE TO BE PERFORMED IN ACCORDANCE WITH THE 2012 EDITION OF THE MOST STANDARD SPECIFICATIONS FOR CONSTRUCTION UNLESS OTHERWISE NOTED IN THE FOLLOWING ITEMS.
 - THE SUBGRADE SHALL BE THOROUGHLY PROOFROLLED USING THE EQUIVALENT OF A FULLY LOADED TANDEM AXLE TRUCK HAVING A MINIMUM AXLE WEIGHT OF 10 TONS. SOFT OR YIELDING AREAS THAT CANNOT BE MECHANICALLY STABILIZED SHOULD BE REMOVED AND REPLACED WITH ENGINEERED FILL.
 - PROOFROLLING SHALL BE PERFORMED UNDER THE OBSERVATION OF A GEOTECHNICAL/PAVEMENT ENGINEER.
 - FINISHED SUBGRADE SURFACE SHALL NOT BE MORE THAN 0.1 FEET ABOVE OR BELOW ESTABLISHED FINISHED SUBGRADE ELEVATIONS AND ALL GROUND SURFACES SHALL VARY UNIFORMLY BETWEEN INDICATED ELEVATIONS. FINISHED DITCHES SHALL BE GRADED TO ALLOW FOR PROPER DRAINAGE WITHOUT PONDING AND IN A MANNER THAT WILL MINIMIZE EROSION.
 - GRADE THE AGGREGATE BASE MATERIAL TO PROVIDE POSITIVE DRAINAGE AT A MINIMUM OF 1.5 PERCENT.
 - THE AGGREGATE BASE AND SUBBASE SHALL EXTEND 12 INCHES BEYOND THE PAVED EDGE.
 - ANY ON-SITE SOILS USED FOR ENGINEERED FILL SHALL BE EVALUATED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.
 - ENGINEERED FILL LOCATED WITHIN PAVEMENT AND BUILDING AREAS SHALL BE PLACED IN 8 INCH MAXIMUM LOOSE THICKNESS AND MOISTURE CONDITIONED TO WITHIN 2 PERCENT OF OPTIMUM MOISTURE CONTENT. COMPACT TO MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY PER ASTM D-1557, MODIFIED PROCTOR METHOD.
 - ALL FILL OPERATIONS SHALL BE OBSERVED BY A QUALIFIED SOIL TECHNICIAN. A MINIMUM OF ONE COMPACTION TEST SHALL BE CONDUCTED PER 2,500 SFT AREA AT EACH LIFT. WITHIN TRENCH EXCAVATIONS, ONE TEST SHALL BE CONDUCTED FOR EACH 100 LINEAR FEET PER LIFT.
 - SIDE SLOPES SHALL NOT EXCEED 1 VERTICAL OVER 3 HORIZONTAL SLOPE UNLESS SHOWN OTHERWISE.
 - PARKING LOT CURBS SHALL BE BUILT WITH REVERSE SLOPE ON THE DOWNHILL SIDE OF THE ISLAND TO ASSURE POSITIVE STORM WATER RUNOFF TO CATCH BASINS.
 - UNLESS SHOWN OTHERWISE, FINISH GRADES OF LANDSCAPE ADJACENT TO BUILDING WALLS SHALL BE 6" BELOW FINISH FLOOR ELEVATION.
 - PLACE 6" MINIMUM TOPSOIL IN ALL LANDSCAPE AREAS TO BE SEED. PROVIDE POSITIVE DRAINAGE AT ALL TIMES TO ENSURE NO STANDING WATER WITHIN PAVEMENT, BUILDING PAD, OR GREEN AREAS.
 - FOR ALL CURB ISLANDS, CENTER OF ISLANDS TO BE A MINIMUM OF 6" HIGHER THAN TOP OF CURB.
 - THE SITE MAY BE DESIGNATED AS A FACILITY BECAUSE OF ENVIRONMENTAL IMPACTS. IN THE EVENT MATERIALS MUST BE REMOVED FROM THE SITE, TRANSPORTATION, HANDLING AND DISPOSAL OF EXCAVATED SOIL MATERIALS SHOULD BE PERFORMED IN ACCORDANCE WITH APPLICABLE ENVIRONMENTAL REGULATIONS.

- BARRIER FREE NOTES**
- BARRIER FREE PARKING AND ACCESSIBLE ROUTE(S) MUST COMPLY WITH THE AMERICANS WITH DISABILITIES ACT, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 - 2% MAXIMUM CROSS SLOPE ON ACCESSIBLE ROUTE(S)
 - 5% MAXIMUM LONGITUDINAL SLOPE (DIRECTION OF TRAVEL) UNLESS AT BARRIER FREE RAMP
 - 2% MAXIMUM SLOPE LONGITUDINAL AND TRANSVERSE SLOPES AT BARRIER FREE PARKING SPACES AND ASSOCIATED ACCESS AISLES
 - ACCESSIBLE ENTRIES - 2% MAXIMUM SLOPE IN ANY DIRECTION FOR THE FIRST 5' FROM ENTRY DOOR
 - CONTRACTOR TO CONTACT ENGINEER PRIOR TO PAVING IF BARRIER FREE SLOPES DO NOT COMPLY OR FOR CLARIFICATION OF ANY DISCREPANCIES.

- STORM SEWER NOTES**
- STORM SEWER PIPE 10" DIA. OR LARGER SHALL BE ASTM C-76 CL IV REINFORCED CONCRETE PIPE OR ASTM F2306, HIGH DENSITY POLYETHYLENE PIPE. STORM SEWER PIPE SMALLER THAN 12" SHALL BE SDR 35 PVC.
 - YARD DRAINS (YD) TO BE 12" SQUARE DRAINTECH CATCH BASIN BY NDS WITH SQUARE POLYPROPYLENE GRATE OR APPROVED EQUAL.
 - CATCH BASINS (CB) TO BE 4" DIA. UNLESS NOTED OTHERWISE.
 - CONNECT ALL ROOF DRAINS TO PROVIDED STORM SEWER UNLESS OTHERWISE NOTED.

ISSUANCE
 02/11/2025 SITE PLAN SUBMITTAL
 05/12/2025 ISSUED FOR BID

PROJECT NUMBER: 75000025
 PROJECT MANAGER: G. RUIJONS
 PROFESSIONAL: B. SIMON
 DRAWN BY: G. SCHAEF
 CHECKED BY:

SITE GRADING & UTILITY PLAN C301

PROGRESSIVE COMPANIES
 PROGRESSIVE, INC.
 Charlotte, NC | Detroit, MI | Grand Rapids, MI
 www.progressive.com

CAPITAL AREA TRANSPORTATION AUTHORITY
GRAND AVE BUS LANE
 429 S GRAND AVE, LANSING, MI 48933

NOT FOR CONSTRUCTION

5/11/2025 4:35:51 PM Project: Simon
 P:\35000025\MP\25\SUBMITTAL\CD\1 SITE GRADING PLAN.dwg Simon

