

City of Norcross

*65 Lawrenceville Street
Norcross, GA 30071*



Meeting Agenda

Thursday, August 20, 2020

6:30 PM

Teleconference

Link to join Webinar

<https://zoom.us/j/91508325662>

Mayor and Council Visioning Session

Mayor Craig Newton

Mayor Pro Tem Josh Bare

Councilmember Andrew Hixson

Councilmember Elaine Puckett

Councilmember Matt Myers

Councilmember Bruce Gaynor

- I. **Call to Order**
PLEASE TURN OFF ALL CELL PHONES AND ELECTRONIC DEVICES
- II. **Discussion Items**
1. [20-5832](#) **Census Updates**
2. [20-5788](#) **PWUP 20-01 Downtown Norcross Compactor Enclosure**
Discussion regarding proposed location of Compactor Enclosure.

[2020-07 Compactor Enclosure Memo](#)
[2020-08 Wingo St Trash Collection Matrix](#)
[2020-07-28 Compactor ALT](#)
[Boundary and Topo-Survey 24 x 36 REV1](#)
3. [20-5831](#) **2020 Construction Highlights**
4. [20-5830](#) **Library Updates**
5. [20-5829](#) **COVID Mitigation Updates**
6. [20-5833](#) **Proposed Board Retreat**
- III. **Adjourn to Exec Session Real Estate, Legal, and Personnel**
- IV. **Signed by:** _____ **Craig Newton, Mayor**
- V. **Attest:** _____ **Monique Lang, City Clerk**



MAYOR **CRAIG NEWTON** • MAYOR PRO TEM **JOSH BARE** • COUNCILMAN **ANDREW HIXSON** • COUNCILWOMAN • **ELAINE PUCKETT**
COUNCILMAN **MATT MYERS** • COUNCILMAN **BRUCE GAYNOR** • CITY MANAGER **RUDOLPH SMITH** • CITY CLERK • **MONIQUE LANG**

City of Norcross

Legislation Details (With Details)

File #:	20-5832	Version:	
Type #:	Agenda Item	Status:	Agenda Ready
On Agenda:	8/20/2020 6:30 PM	In Control:	Mayor and Council Visioning Session
Title:	Census Updates		
Sponsors:			
Code Sections:			
Title			
Census Updates			



MAYOR **CRAIG NEWTON** • MAYOR PRO TEM **JOSH BARE** • COUNCILMAN **ANDREW HIXSON** • COUNCILWOMAN • **ELAINE PUCKETT**
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City of Norcross

Legislation Details (With Details)

File #:	20-5788	Version:	
Type #:	Agenda Item	Status:	Agenda Ready
On Agenda:	8/20/2020 6:30 PM	In Control:	Mayor and Council Visioning Session
Title:	PWUP 20-01 Downtown Norcross Compactor Enclosure		

Sponsors:

Code Sections:

Attachments:

1. [2020-07 Compactor Enclosure Memo](#)
2. [2020-08 Wingo St Trash Collection Matrix](#)
3. [2020-07-28 Compactor ALT](#)
4. [Boundary and Topo-Survey 24 x 36 REV1](#)

Title

PWUP 20-01 Downtown Norcross Compactor Enclosure

Drafter

Erica Madsen



MAYOR **CRAIG NEWTON** · MAYOR PRO TEM **JOSH BARE** · COUNCILMAN **ANDREW HIXSON** · COUNCILWOMAN **ELAINE PUCKETT**
 COUNCILMAN **MATT MYERS** · COUNCILMAN **BRUCE GAYNOR** · CITY MANAGER **RUDOLPH SMITH** · CITY CLERK **MONIQUE LANG**

MEMO

To: Mayor and Council

From: Erica Madsen, City Engineer

RE: Wingo St Compactor Project, PWUP 20-01

Related Council and Staff Activities

11/5/2018 Council approves Staff to move forward with Compactor Enclosure project and issue Invitation to bid

- Architectural/Site Design commissioned, including survey

3/2/2020 Project Documents posted for Public Bid

6/1/2020 Council approves Contractor Agreement between Malco Construction and the City

6/4/2020 Pre-Con Meeting with Contractor, Agreement Executed by Contractor, Bonds Provided

- No Notice to Proceed Issued in order to allow Public Works to complete site prep.

6/4/2020 Contractor Agreement is executed by Mayor

6/5/2020 Councilmembers request to reconsider compactor location, project paused

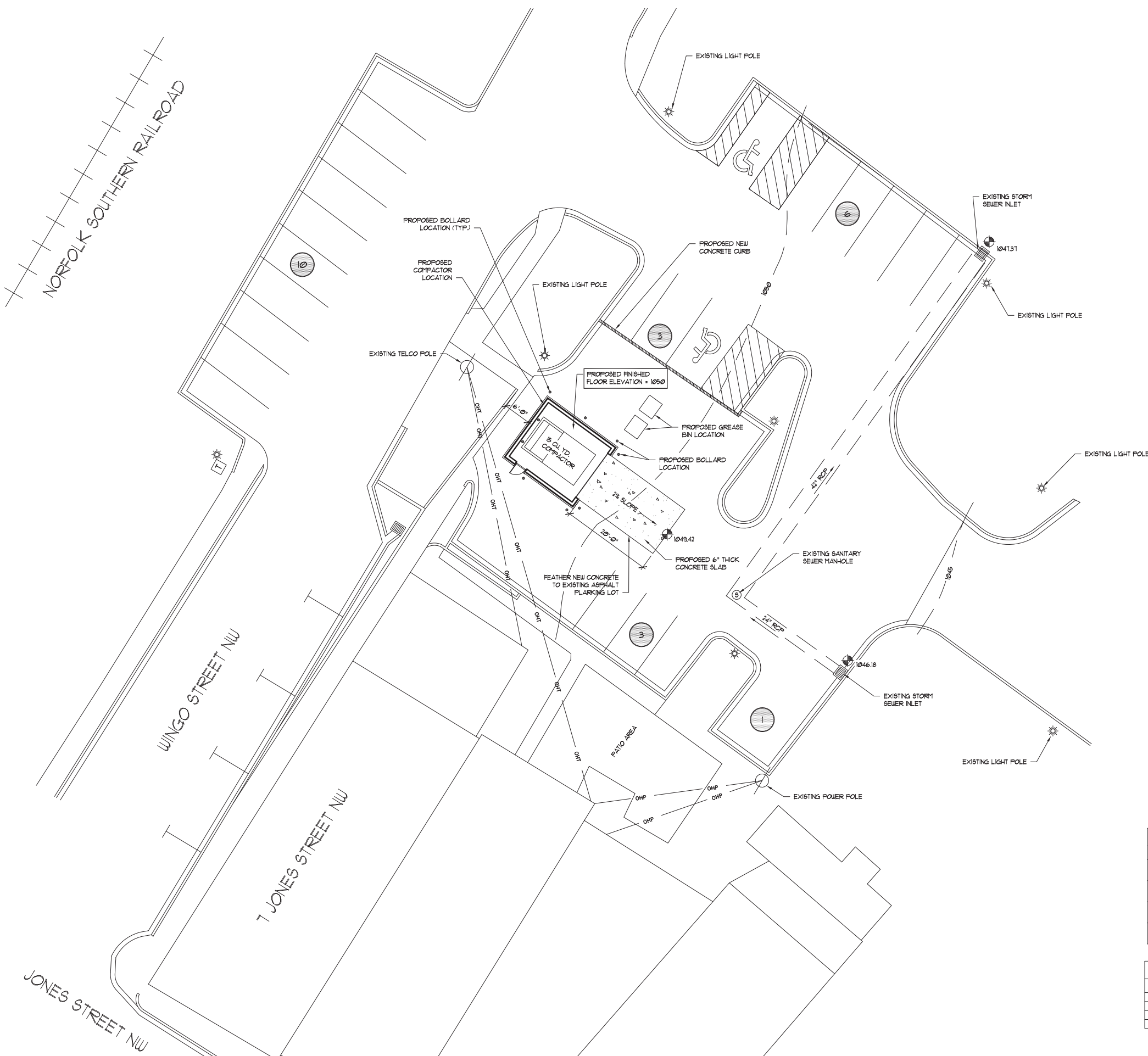
Attached:

Site Location Aerial Photo

Architectural Site Plan

Executed Agreement with Contract Documents





SITE PLAN LEGEND	
SYMBOL	DESCRIPTION
	EXISTING POWER POLE
	EXISTING LIGHT POLE
	EXISTING OVERHEAD POWER LINE
	SPOT ELEVATION

PROPOSED PARKING COUNT	
PARKING SPACE TYPE	COUNT
HANDICAP VAN ACCESS	2
REGULAR PARKING SPACE	26
TOTAL PARKING	28

NOTE:
G.C. SHALL HAVE A TOPOGRAPHY SURVEY PREFORMED FOR THIS SITE BEFORE BEGINNING WORK AND NOTIFY ARCHITECT IF DIFFERENT THAN GRADES SHOWN ON THIS DRAWING.

1
A-100
DOWNTOWN NORCROSS COMPACTOR SITE PLAN
SCALE: 3/32" = 1'-0"

2.2.a

MaxDesignGroup

Architecture · Planning · Interiors

2862 Buford Highway
Suite 106
Duluth, Georgia 30096

Tel: 770-910-9740
Cell: 770-530-5245
Email: maxdesigngroup@charter.net

THIS DRAWING IS THE PROPERTY OF MAXDESIGN GROUP, AND IS NOT TO BE REPRODUCED IN WHOLE OR IN PART. IT IS NOT TO BE USED ON ANOTHER PROJECT AND SHALL BE RETURNED UPON REQUEST.

PROFESSIONAL SEAL:

PROJECT TITLE:

DOWNTOWN NORCROSS COMPACTOR ENCLOSURE

NORCROSS, GEORGIA

PROJECT INFO:

BEHIND 7 JONES ST NW
NORCROSS, GA 30071
TRUCK ACCESS THRU WINGO STREET

OWNER:

CITY OF NORCORSS

65 LAWRENCEVILLE STREET
NORCROSS, GEORGIA 30071

PRINT RECORD

Description	Da

REVISION

No.	Description	Da

ARCHITECTURAL SITE PLAN OPTION 1

Project number D18-
Date 03/05/2
Drawn by B.C
Checked by R.M

A-100-1

Scale As indicated

APPROVAL ONLY

Packet Pg. 7

Attachment: 2020-07 Compactor Enclosure Memo (20-5788 : PWUP 20-01 Downtown Norcross Compactor Enclosure)

Contractor Agreement

AGREEMENT BETWEEN MALCO CONSTRUCTION, INC.

AND THE CITY OF NORCROSS

PROJECT: PWUP 20-01 Downtown Norcross Compactor Enclosures

Project Description

This project involves construction of a masonry compactor enclosure in the parking lot owned by the City of Norcross located on parcel number 6254 248, directly behind Paizanos restaurant at 7 Jones Street in downtown Norcross, Georgia. The City of Norcross will demolish approximately 8 asphalt parking spaces, and provide a pad-graded site for construction of the compactor enclosure. After construction of the masonry enclosure, the City of Norcross will install the final asphalt, sidewalks and landscaping. The contractor will be responsible for installation of the concrete approach apron. The compactor enclosure shall be constructed according to the plans titled Downton Norcross Compactor Enclosure, prepared by Max Design Group, dated 1/21/20, and the associated Construction Document Project Manual dated 1/27/20.

This AGREEMENT is made this 4th day of JUNE in the year two thousand twenty (2020) between **The City of Norcross**, hereinafter the "owner", and **Malso Construction, Inc.** **General Contractor**, (hereinafter the "Contractor") for the following Project.

The contractor and owner for the consideration named herein agree as follows:

A. BEGINNING OF WORK:

The Contractor shall be expected to meet with Public Works staff prior to the start of construction. This meeting shall serve as an opportunity for both parties to review the specifications and visit the project site.

Project to be completed in accordance with PWUP20-01 Bid Documents (Attachment A) ; the project should begin within ten (10) working days after notification of contract award, or as coordinated with Public Works staff.

B. ATTACHMENTS:

1. Attachment "A" PWUP20-01Bid Documents
 - Invitation to Bid
 - Project Manual Specifications
 - Construction Documents
 - Addenda 1-3
2. Attachment "B" Contractors Information
3. Attachment "C" E-Verify Contractor Affidavit
4. Attachment "D" SAVE Affidavit
5. Attachment "E" Performance & Payment Bond

C. FEE PROPOSAL:

1. The owner shall pay the contractor for the material and labor to be performed under the contract, the sum of one hundred and fourteen thousand, six hundred and eighty-one dollars and 4 cents (\$114,681.54), subject to change-order additions and deductions.
2. Payment Applications will be submitted by the 10th of each month. Payment will be made by the tenth of the following month.
3. Retainage will be held by the owner equal to 10 percent of each pay application, up to 50% of the contract amount. Retainage shall be paid in full upon completion of the work.

D. SCHEDULE:

1. The Contractor is prepared to begin work upon receipt of a signed contract and substantially complete the work within 120, achieving final completion within 150 days.

E. PROJECT INSPECTIONS:

1. The renovation project shall be inspected by the Norcross Department of Public Works or its contract engineering staff. These inspections shall be in addition to required inspection by the Department of Community Development.

F. TERMS AND CONDITIONS:

MALCO CONSTRUCTION, INC.

Kevin Malcolm
(Signature)

KEVIN MALCOLM PRESIDENT
(Printed name and title)

6-04-20
(DATE)

(SEAL)

CITY OF NORCROSS

Craig Newton
Craig Newton, Mayor
(Signature)

Craig Newton
Craig Newton, Mayor
(Printed name and title)

Attest:

Monique Lang
Monique Lang, City Clerk

June 4, 2020
(DATE)



1. This Agreement shall be administered in accordance with the Terms and Conditions listed in Attachments. This Contract together with the exhibit identified herein, shall constitute the entire agreement between the City of Norcross and The Contractor in respect to the project and may only be modified in writing signed by both parties. Receipt of the signed agreement will serve as a notice to proceed.
2. This Agreement entered into as of the day and year first written above.

G. INSURANCE REQUIREMENTS

The contractor shall maintain the following insurance: (a) comprehensive general liability, including blanket contractual, covering bodily injuries with limits of no less than \$1,000,000.00 per occurrence, and property damage with limits of no less than \$500,000.00 per occurrence; (b) statutory worker's compensation insurance, including employer's liability insurance; and (c) employee dishonesty and/or crimes coverage with respect to personnel of the contractor having access to City buildings, with limits of no less than \$50,000.00 per occurrence. All insurance shall be provided by an insurer(s) acceptable to the City, and shall provide for thirty (30) days prior notice of cancellation to the City. Upon request, the contractor shall deliver to the city a certificate or policy of insurance evidencing the contractor's compliance with this policy. The contractor shall abide by all terms and conditions of the insurance and shall do nothing to impair or invalidate the coverage; (c) employee dishonesty and/or crimes coverage with respect to personnel of the contractor having access to City buildings, with limits of no less than \$50,000.00 per occurrence.

Certificate Holder should read:

City of Norcross, its Elected Officials and
Employees, 65 Lawrenceville Street
Norcross, GA 30071



City of Norcross - Department of Public Works & Utilities
Invitation to Bid (PWUP 20-01)

Downtown Norcross Compactor Enclosure Construction

This project involves construction of a masonry compactor enclosure in the parking lot owned by the City of Norcross located on parcel number 6254 248, directly behind Paizanos restaurant at 7 Jones Street in downtown Norcross, Georgia. The City of Norcross will demolish approximately 8 asphalt parking spaces, and provide a pad-graded site for construction of the compactor enclosure. After construction of the masonry enclosure, the City of Norcross will install the final asphalt, sidewalks and landscaping. The contractor will be responsible for installation of the concrete approach apron. The compactor enclosure shall be constructed according to the plans titled Downton Norcross Compactor Enclosure, prepared by Max Design Group, dated 1/21/20, and the associated Construction Document Project Manual dated 1/27/20.

INSTRUCTIONS

All sealed bids must be submitted by Tuesday March 31, 2020, @ 11:00 AM to the address below: Please submit two hard (paper) copies and one soft (PDF or other electronic document on a CD) of your bid package to:

Mary Beth Bender
 PWUP 20-01
 Department of Public Works, Utilities & Parks
 345 Lively Avenue
 Norcross, GA 30071

Please request bidding documents/specifications and submit questions via e-mail only. Submit questions/requests to Erica Madsen via e-mail at Erica.madsen@norcrossga.net. All questions/requests must be submitted via e-mail prior to 5pm on Friday March 13, 2020.

MANDATORY: Pre Bid Meeting

Inspection of area: All bidders are required to attend pre-construction inspection Tuesday, March 10th @ 10:00 a.m. @ the project site along Wingo Street.

We appreciate your interest in the City of Norcross!

REQUIREMENT

Estimates must include labor and all materials as specified; no substitutions for materials will be approved during the bid period.

I. GENERAL CONDITIONS

BIDDERS ARE ADVISED TO THOROUGHLY UNDERSTAND THE GENERAL CONDITIONS AND SPECIAL PROVISIONS, PRIOR TO SUBMITTING THEIR BID

A. Qualifications

1. Bids will be considered only from experienced and well-equipped Contractor(s) engaged in work of this type and magnitude.
2. Bidders may be required to submit evidence setting forth qualifications, which entitle his or her company for consideration as a responsible contractor. A list of work of similar character successfully completed within the last two years may be required giving the location, size and listing of equipment available for use on this work. Before accepting any bid, the City may require evidence of the Contractor's financial ability to successfully perform the work to be accomplished under the contract.

B. Guarantee to Accompany Bid

1. If the proposer's bid is greater than \$30,000.00, Bids must be accompanied by a certified check or cashier's check or acceptable bid bond in an amount not less than five percent (5%) of the amount bid per section, and failure to submit a bid bond will be cause for rejection.

C. Authority to Sign

1. The Bidder should insure that the legal proper name of his proprietorship, firm, partnership and/or corporation is printed or typed in the space provided on the Schedule of items.

D. Rights Reserved

1. City of Norcross reserves the right to reject any and all Bids, to waive informalities or to re-advertise. It is understood that all Bids are made subject to this agreement, that City of Norcross reserves the right to decide which Bid it deems lowest and

- best. In arriving at this decision, full consideration will be given to the reputation of the Bidder, their financial responsibility, and work of this type successfully completed and past performance with the City of Norcross.
2. Bidders are advised to examine Plans and Specifications carefully and to make examinations of the site of the proposed work as are necessary to familiarize themselves with location conditions, which may affect the proposed work. Bidders are also advised to inform themselves fully in regard to conditions under which the work will be performed. The City of Norcross will not be responsible for the Bidders errors or misjudgment, nor for any information on location conditions or general laws and regulations.
 3. Any unauthorized additions, conditions, limitations, or provisions attached to the Bid shall render it informal, and may be cause for rejection.

E. Award of Contract

1. The contract will be awarded to the lowest responsive and responsible bidder whose bid will be most advantageous to the City, price and other factors considered. The City is to make the determination.
2. The bid evaluation will be made on the following criteria:
 - i. Bid price
 - ii. Compliance with specification
 - iii. Qualifications of personnel
 - iv. Commitment to complete work on a timely basis
 - v. References
3. Prior to award of the Contract, the successful bidder will be required to submit a construction schedule to the City, demonstrating the bidder's ability to commence and proceed in a timely manner. A bidder's failure to demonstrate the ability to proceed as required may result in the award to the next lowest, responsive and responsible bidder, as deemed in the City's best interest.
4. Failure to demonstrate the ability for contract execution and progression will result in, at the City's discretion, the award of any and/or all of the Bidder's contracts to the next lowest responsible bidder or the re-advertisement and re-bidding of any and/or all of these contracts.
5. Prior to execution of a Contract, if the contract amount is greater than \$30,000.00, a Contract Performance Bond and a Payment Bond, each equal to 100% of the Contract amount per section, must be provided by the successful bidder by a surety company qualified to do business in the State of Georgia with an AM Best rating of

B+ or higher and satisfactory to the City of Norcross. Bonds given shall meet the requirements as listed in this Bid package.

6. Prior to execution of a Contract, a Utility Coordination Meeting is required between Contractor(s), utility agencies and City of Norcross Public Works to ensure clarity and commitments concerning inter-related construction work schedules.

F. Production Requirements

1. Time is of the utmost importance of this project. The successful bidder will be required to commence work within ten (10) calendar days from the receipt of the Notice to Proceed, and must carry on with utmost diligence in order to complete the work within 90 Days.

G. Retainage

1. Retainage on work completed will be withheld by the City as follows: The City shall retain 10% of the gross value of the completed work, indicated by current estimates, until 50 % of the work has been completed.

H. Location and Site

1. The site of the proposed work parcel 6254 248 within City of Norcross, Georgia.
2. The Contractor shall accept the site in its present condition and carry out all work in accordance with the requirements of the specifications as indicated on the drawings or as directed by the Department of Public Works.
3. The Contractor, before submitting a bid is required to visit the site, and acquaint himself with the actual conditions and the location of any and/or all obstructions that may exist on the site. The site visit must be confirmed by the Project Manager.
4. The Contractor is responsible for the location of above and below ground utilities and structures, which may be affected by the work.

I. Compliance with OSHA Standards and Regulations

1. The work connected with this Contract shall be performed in accordance with all applicable OSHA regulations and standards including any additions or revisions thereto, until the job is completed and accepted by the City of Norcross.

J. Non Collusion

1. Vendor(s), by submitting signed bid, certify that the accompanying bid is not the result of, or affected by, any unlawful act of collusion with any other person or company

engaged in the same line of business or commerce, or any other fraudulent act punishable under Georgia or United States law.

K. Materials

1. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the completion of the Work.
2. All materials and equipment incorporated into the Work shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner.

L. Inspection

City of Norcross does not commit to have a full time inspection or testing of work while in progress or at sources of materials furnished. Any lack of inspection and/or testing will in no way relieve the Contractor of his responsibility to provide quality workmanship in accordance with the specifications. Base placement and subgrade prep will be inspected by the City of Norcross, at the City's cost. Any test ordered under the supervision of the City that fail to meet standards and retesting is required will be at the Contractors expense.

M. Contract Requirements

1. Successful vendor is required to do the following within ten (10) days of Notice:
 - a) Return to Department of Public Works contract documents executed by the authorized representative attested by the corporate secretary treasurer.
 - b) Provide Insurance Certificates as specified in the bid documents.
 - c) Provide bonding as required by the bid documents
2. Failure to execute the Contract, Contract Performance Bond and Payment Bond, or furnish satisfactory proof of carriage of the insurance required within ten days after the date of Notice of Award of the Contract may be just cause for the annulment of the award and for the forfeiture of the bid guaranty of City of Norcross, not as a penalty, but as liquidation of damages sustained. At the discretion of the City, the award may then be made to the next lowest, responsible bidder, or the work may be re-advertised or constructed by City forces. The Contract and Contract Bonds shall be executed in duplicate.

N. Miscellaneous Provisions

1. Permits: All permits, including Land Disturbance Permits, can be obtained through the City's Community Development Department at 770-448-2122. It is the responsibility of the contractor to obtain permits needed. There is no fee for permits for City projects. For design/build projects, it is the responsibility of the contractor to obtain necessary permitting from the fire marshal.
2. Schedule: The Contractor shall provide to mbender@norcrossga.net a schedule of construction activities. The schedule must be presented at least seven (7) days prior to work commencing in order to notify residents and/or businesses.
3. Work Hours: No work shall take place on Sunday unless approved by the City of Norcross. The contractor shall submit to the City of Norcross a written request at least seven (7) days prior to the weekend work. See City Ordinance Sec. 26-22.
4. Detour/Closures: All road closures and detours shall be approved by the Norcross Department of Public Works.
5. Residential Refuse: The Contractor is required to contact Norcross Public Works department at 678-421-2069, to obtain sanitation schedules in an attempt to reduce inconveniences to the citizens of Norcross. Contractor is required to use Advanced Disposal for solid waste.
6. Disposal of Refuse: The Contractor shall be solely responsible for disposing of materials and shall take into account, before bidding the compliance with the above stated ordinances and regulations. Disposal of debris must be done in a lawful manner, in accordance with all applicable federal, state and/or local laws, statutes, rules, ordinances, and/or regulations. All trash and debris shall be collected and removed from the site(s) on a daily basis. The Contractor will not be permitted to burn any of the materials on site or within the boundary limits of Norcross, Georgia.

BID PACKET CHECKLIST**PROJECT:** _____**BID DATE:** _____

Enclosed with this Bid Packet are the following Forms and instructions. Use this checklist to ensure you have properly completed all Forms. You must return the following pages to be eligible for consideration of this project.

- _____ Two Hard Copies & One Electronic Copy of Bid
- _____ Bid Form
- _____ Bid Bond or Certified Check, if bid is over \$30,000
- _____ Certificate of Liability Insurance
- _____ E-Verify Contractor & SAVE Affidavits
- _____ Reference Page
- _____ Ship Proposal to: City of Norcross
 345 Lively Avenue
 Norcross, GA 30071
 Attn: Mary Beth Bender, Director of Public Works

References for _____

The Contractor must provide at the time of bid opening a list of contact numbers, addresses and a contact person from three (3) jobs completed having similar size and scope within the metro Atlanta area.

1. Company Name: _____

Description of Project: _____

Completion Date: _____

Contact Person: _____

Telephone: _____ Fax: _____

Email address: _____

2. Company Name: _____

Description of Project: _____

Completion Date: _____

Contact Person: _____

Telephone: _____ Fax: _____

Email address: _____

3. Company Name: _____

Description of Project: _____

Completion Date: _____

Contact Person: _____

Telephone: _____ Fax: _____

Email address: _____



City of Norcross - Department of Public Works, Utilities & Parks
PWUP20-01 BID FORM

This form is mandatory, and must be included in your bid, addressed to:

City of Norcross
 345 Lively Avenue
 Norcross, GA 30071

The Bidder has carefully examined and fully understands the Contract, Plans and Specifications and other Documents hereto attached, and has made a personal examination of the Site of the proposed Work, and has satisfied himself as to the actual conditions and requirements of the Work, and hereby proposes and agrees that if his bid is accepted, he will contract with the City of Norcross according to the bidding Documents entitled **Downtown Norcross Compactor Enclosure** and Addenda, as well as the existing conditions of the project, and conditions affecting the Work, the undersigned proposes to furnish all services, labor and materials required by them in accord with said documents, personal observations of the site conditions.

_____ Dollars

(\$) _____ which sum is hereinafter called "Base Bid".

The undersigned agrees to commence work within 10 days of the date of Notice to Proceed issued by City of Norcross and to commit adequate forces on-site to substantially complete all Work, including punch list items and clean-up, as determined by the City within **90 calendar days**.

Company Name: _____

Company Mailing Address: _____

Company Website: _____

Company Phone Number: _____

Authorized Representative: _____ Date: _____
 (signature)

Authorized Representative: _____
 (printed name)

Construction Document Project Manual
For

Downtown Norcross Compactor Enclosure

City of Norcross, Georgia

Project No. D18-134

Project For:

City of Norcross

345 Lively Avenue
Norcross, GA. 30071



Attachment: 2020-07 Compactor Enclosure Memo (20-5788 : PWUP 20-01 Downtown Norcross Compactor Enclosure)

Issued for Construction

27 January 2020

Downtown Norcross Compactor Enclosure

City of Norcross, Georgia

Owner

City of Norcross Public Works
345 Lively Avenue
Norcross, Georgia 30071
Contact: Mary Beth Bender – 678.421.2069

Architect

MaxDesign Group
2862 Buford Highway, Suite 106
Duluth, GA 30096
Contact: Richard M. Maxian, AIA - 770.910.9740

Civil Engineer

City of Norcross
345 Lively Avenue
Norcross, Georgia 30071
Contact: Erica S. Madison, PE – City Engineer

Attachment: 2020-07 Compactor Enclosure Memo (20-5788 : PWUP 20-01 Downtown Norcross Compactor Enclosure)

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013300 – SUBMITTAL PROCEDURES
014000 – QUALITY REQUIREMENTS
016000 – PRODUCT REQUIREMENTS
017300 – EXECUTION
017700 – CLOSEOUT PROCEDURES
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Norcross Compactor Enclosure
MAXDESIGN GROUP NO. D18-134

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END OF SECTION 000100

Attachment: 2020-07 Compactor Enclosure Memo (20-5788 : PWUP 20-01 Downtown Norcross Compactor Enclosure)

SECTION 01 23 00

ALTERNATES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for alternates.

1.2 DEFINITIONS

- A. Alternate: An amount proposed by General Contractor and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.3 PROCEDURES

- A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.

Norcross Compactor Enclosure
MAXDESIGN GROUP NO. D18-134

012300 - 2
ALTERNATES

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

- A. Alternate No. Contractor to insert alternate as needed

END OF SECTION 012300

Attachment: 2020-07 Compactor Enclosure Memo (20-5788 : PWUP 20-01 Downtown Norcross Compactor Enclosure)

SECTION 01 25 00

SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Requirements:
 - 1. Division 01 60 00 Section "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

1.2 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

1.3 ACTION SUBMITTALS

- A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Substitution Request Form: Use CSI Form 13.1A
 - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
 - b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. Certificates and qualification data, where applicable or requested.

- g. Research reports evidencing compliance with building code in effect for Project, from ICC-ES or similar organization.
 - h. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time.
 - i. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
 - j. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within seven days of receipt of request.
- a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
 - b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

1.4 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.
 - 1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied:
 - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - b. Requested substitution will not adversely affect Contractor's construction schedule.
 - c. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - d. Requested substitution is compatible with other portions of the Work.
 - e. Requested substitution has been coordinated with other portions of the Work.
 - f. Requested substitution provides specified warranty.

- g. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- B. Substitutions for Convenience: Architect will consider requests for substitution if received within 60 days after commencement of the Work.
- 1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied:
 - a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
 - b. Requested substitution does not require extensive revisions to the Contract Documents.
 - c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - d. Requested substitution will not adversely affect Contractor's construction schedule.
 - e. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - f. Requested substitution is compatible with other portions of the Work.
 - g. Requested substitution has been coordinated with other portions of the Work.
 - h. Requested substitution provides specified warranty.
 - i. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

PART 3 - EXECUTION (Not Used)

END OF SECTION 012500

SECTION 01 33 00
SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Requirements:
 - 1. Division 01 25 00 – Substitution Procedures.
 - 2. Division 01 40 00 – Quality Requirements.
 - 3. Division 01 77 00 – Closeout Procedures.

1.2 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action.
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements.

1.3 ACTION SUBMITTALS

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.

1.4 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Architect's Digital Data Files: Electronic copies of digital data files of the Contract Drawings will not be provided by Architect for Contractor's use in preparing submittals unless agreed upon by Owner and Architect.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.

2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow time for submittal review, including time for re-submittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including re-submittals.
 1. Initial Review: Allow **15** days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Resubmittal Review: Allow **5** days for in-house review of each re-submittal.
- D. Contractor's Signature and review approval: A shop drawing will not be reviewed by the Architect or Engineer's if the submittal does not have a contractor's stamp and signature with a date and type of approval.
- E. Paper Submittals: Place a permanent label or title block on each submittal item for identification.
 1. Indicate name of firm or entity that prepared each submittal on label or title block.
 2. Provide a space approximately **6 by 8 inches** on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
 3. Include the following information for processing and recording action taken:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Name of subcontractor.
 - f. Name of supplier.
 - g. Name of manufacturer.
 - h. Number and title of appropriate Specification Section
- F. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:
 1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
 2. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.

3. Transmittal Form for Electronic Submittals: Use electronic form acceptable to Architect, containing the following information:
 - a. Project name.
 - b. Date.
 - c. Name and address of Architect.
 - d. Name of Contractor.
 - e. Name of firm or entity that prepared submittal.
 - f. Names of subcontractor, manufacturer, and supplier.
 - g. Category and type of submittal.
 - h. Specification Section number and title.
 - i. Remarks.
- G. Options: Identify options requiring selection by Architect.
- H. Deviations: Identify deviations from the Contract Documents on submittals.
- I. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- J. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements:
 1. Submit electronic submittals via email as PDF electronic files.
 - a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.
 2. Informational Submittals: Submit two paper copies of each submittal unless otherwise indicated. Architect will not return copies.
 3. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 - a. Provide a digital signature with digital certificate on electronically-submitted certificates and certifications where indicated.
 - b. Provide a notarized statement on original paper copy certificates and certifications where indicated.

- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
 2. Mark each copy of each submittal to show which products and options are applicable.
 3. Include the following information, as applicable:
 - a. Manufacturer's catalog cuts.
 - b. Manufacturer's product specifications.
 - c. Standard color charts.
 - d. Statement of compliance with specified referenced standards.
 - e. Notation of coordination requirements.
 4. For equipment, include the following in addition to the above, as applicable:
 - a. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
 5. Submit Product Data before or concurrent with Samples.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Identification of products.
 - b. Compliance with specified standards.
 - c. Notation of dimensions established by field measurement.
 - d. Seal and signature of professional engineer if specified.
 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least **8-1/2 by 11 inches, but no larger than 24 by 36 inches**.
 3. Submit Shop Drawings in the following format:
 - a. PDF electronic file.
 - b. Four opaque (bond) copies of each submittal. Architect will return three copies.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of applicable Specification Section.

3. For projects where electronic submittals are allowed, provide corresponding paper submittal of Color Sample illustrating Sample characteristics, and identification information for record.
4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: Submit three full sets of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return two submittals with options selected.
6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Number of Samples: Submit three sets of Samples. Architect will retain one sample set; remainder will be returned as a project record sample.
- E. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Division 014000 Section "Quality Requirements."
- F. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Division 017700 Section "Closeout Procedures."
- G. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.
- H. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- I. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.

- J. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- K. Schedule of Tests and Inspections: Comply with requirements specified in Division 014000 Section "Quality Requirements."
- L. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

2.2 DELEGATED-DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
 - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit three paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
 - 1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Project Closeout and Maintenance Material Submittals: See requirements in Division 017700 Section "Closeout Procedures."
- C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

- A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action required.
- C. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for re-submittal without review.
- D. Submittals not required by the Contract Documents may not be reviewed and may be returned.

END OF SECTION 013300

SECTION 014000

QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
 - 2. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.

1.2 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.
- C. Mockups: Full-size physical assemblies that are constructed on-site, if required by City of Norcross. Mockups are constructed to verify selections made under Sample submittals; to demonstrate aesthetic effects and, where indicated, qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.
- D. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria.
- E. Source Quality-Control Testing: Tests and inspections that are performed at the source, e.g., plant, mill, factory, or shop.

- F. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- G. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- H. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.

1.3 CONFLICTING REQUIREMENTS

- A. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.4 INFORMATIONAL SUBMITTALS

- A. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

1.5 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
 1. Date of issue.
 2. Project title and number.
 3. Name, address, and telephone number of testing agency.
 4. Dates and locations of samples and tests or inspections.
 5. Names of individuals making tests and inspections.
 6. Description of the Work and test and inspection method.
 7. Identification of product and Specification Section.
 8. Complete test or inspection data.
 9. Test and inspection results and an interpretation of test results.
 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.

12. Name and signature of laboratory inspector.
13. Recommendations on retesting and re-inspecting.

- B. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.6 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar in material, design, and extent to those indicated for this Project.
- F. Specialists: Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
 1. Requirements of authorities having jurisdiction shall supersede requirements for specialists.
- G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 329; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.
 1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
 2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.

- H. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect.
 2. Notify Architect seven days in advance of dates and times when mockups will be constructed.
 3. Demonstrate the proposed range of aesthetic effects and workmanship.
 4. Obtain Architect's approval of mockups before starting work, fabrication, or construction.
 5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
 6. Demolish and remove mockups when directed unless otherwise indicated.

1.7 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
 2. Costs for retesting and re-inspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Retesting/Re-inspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and re-inspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- D. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.

3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 6. Do not perform any duties of Contractor.
- E. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
- F. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

- A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:
1. Date test or inspection was conducted.
 2. Description of the Work tested or inspected.
 3. Date test or inspection results were transmitted to Architect.
 4. Identification of testing agency or special inspector conducting test or inspection.

3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Division 01 Section "Execution."

- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

SECTION 016000

PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.
- B. Related Requirements:
 - 1. Division 01 40 00 Section "Quality Requirements".

1.2 DEFINITIONS

- A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
 - 3. Comparable Product: Product that is demonstrated and approved through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Basis-of-Design Product Specification: A specification in which a specific manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of additional manufacturers named in the specification.

1.3 ACTION SUBMITTALS

- A. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed comparable product request within 10 business days of receipt of request.
 - a. Form of Approval: As specified in Division 01 33 00 Section "Submittal Procedures."
 - b. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.
- B. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 01 Section "Submittal Procedures." Show compliance with requirements.

1.4 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.
- C. Storage:
 1. Store products to allow for inspection and measurement of quantity or counting of units.
 2. Store materials in a manner that will not endanger Project structure.
 3. Store products that are subject to damage by the elements, under cover in a weather-tight enclosure above ground, with ventilation adequate to prevent condensation.
 4. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
 5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.

6. Protect stored products from damage and liquids from freezing.

1.6 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
 1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
 2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
 1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 2. Specified Form: When specified forms are included with the Specifications, prepare a written document using indicated form properly executed.
 3. Refer to Divisions 02 through 33. Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Division 01 Section "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
 1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 4. Where products are accompanied by the term "as selected," Architect will make selection.
 5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
- B. Product Selection Procedures:

1. Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
 - a. Restricted List: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will be considered unless otherwise indicated.
 - b. Non-restricted List: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product.
 2. Manufacturers:
 - a. Restricted List: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will be considered unless otherwise indicated.
 - b. Non-restricted List: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed, or a product by an unnamed manufacturer, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed manufacturer's product.
 3. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.
- C. Visual Matching Specification: Where Specifications require "match Architect's sample", provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Division 01 25 00 Section "Substitution Procedures" for proposal of product.
- D. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 COMPARABLE PRODUCTS

- A. Conditions for Consideration: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:
1. Evidence that the proposed product does not require revisions to the Contract Documents, product is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
 2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 3. Evidence that proposed product provides specified warranty.
 4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
 5. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

SECTION 017300

EXECUTION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Construction layout.
 - 2. Field engineering and surveying.
 - 3. Installation of the Work.
 - 4. Cutting and patching.
 - 5. Progress cleaning.
 - 6. Starting and adjusting.
 - 7. Protection of installed construction.
 - 8. Correction of the Work.
- B. Related Requirements:
 - 1. Division 01 40 00 – Quality Requirements.
 - 2. Division 01 77 00 – Closeout Procedures.

1.2 INFORMATIONAL SUBMITTALS

- A. Certificates: Submit certificate signed by land surveyor certifying that location and elevation of improvements comply with requirements.
- B. Certified Surveys: Submit one copy signed by land surveyor.
- C. Final Property Survey: Submit 2 copies showing the Work performed and record survey data as requested by Owner.

1.3 QUALITY ASSURANCE

- A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing land-surveying services of the kind indicated.
- B. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
 - 1. Structural Elements: When cutting and patching structural elements, notify Architect of locations and details of cutting and await directions from Architect before proceeding.

Shore, brace, and support structural element during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection

2. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that which results in increased maintenance or decreased operational life or safety.
3. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Architect for the visual and functional performance of in-place materials.
- C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 25 00.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning site work, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.
 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services, and other utilities.
 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.

- B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
 - 1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 - 2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 - 3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
- C. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Existing Utility Information: Furnish information to local utility that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for information to Architect."

3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect promptly.
- B. General: Engage a land surveyor to lay out the Work using accepted surveying practices.
 - 1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
 - 2. Establish limits on use of Project site.
 - 3. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.

4. Inform installers of lines and levels to which they must comply.
 5. Check the location, level and plumb, of every major element as the Work progresses.
 6. Notify Architect when deviations from required lines and levels exceed allowable tolerances.
 7. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.
- C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.
- D. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.
- E. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect.

3.4 FIELD ENGINEERING

- A. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
- B. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
- C. Certified Survey: On completion of foundation walls, major site improvements, and other work requiring field-engineering services, prepare a certified survey showing dimensions, locations, angles, and elevations of construction and site work.
- D. Final Property Survey: Engage a land surveyor to prepare a final property survey showing significant features (real property) for Project. Include on the survey a certification, signed by land surveyor, that principal metes, bounds, lines, and levels of Project are accurately positioned as shown on the survey.

3.5 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
1. Make vertical work plumb and make horizontal work level.

2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
 - C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
 - D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
 - E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.
 - F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
 - G. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
 2. Allow for building movement, including thermal expansion and contraction.
 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
 - H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
 - I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.6 CUTTING AND PATCHING

- A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.

- B. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.
- C. Temporary Support: Provide temporary support of work to be cut.
- D. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- E. Adjacent Occupied Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- F. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption to occupied areas.
- G. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 - 1. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 - 2. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 - 3. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 - 4. Proceed with patching after construction operations requiring cutting are complete.
- H. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.
 - 1. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.
 - 2. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weather-tight condition and ensures thermal and moisture integrity of building enclosure.
- I. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

3.7 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.

1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 2. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
1. Remove liquid spills promptly.
 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways.
- H. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- I. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.
- 3.8 STARTING AND ADJUSTING
- A. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
 - B. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- 3.9 PROTECTION OF INSTALLED CONSTRUCTION
- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

Norcross Compactor Enclosure
MAXDESIGN GROUP NO. D18-134

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EXECUTION

- B. Comply with manufacturer's written instructions for temperature and relative humidity.

END OF SECTION 017300

Attachment: 2020-07 Compactor Enclosure Memo (20-5788 : PWUP 20-01 Downtown Norcross Compactor Enclosure)

SECTION 017700
CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion procedures.
 - 2. Final completion procedures.
 - 3. Warranties.
 - 4. Final cleaning.
 - 5. Repair of the Work.
- B. Related Requirements:
 - 1. Individual Product Sections: Specific requirements for operation and maintenance data.
 - 2. Individual Product Sections: Warranties required for specific products of Work.

1.2 ACTION SUBMITTALS

- A. Product Data: For cleaning agents.
- B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- C. Certified List of Incomplete Items: Final submittal at Final Completion.

1.3 CLOSEOUT SUBMITTALS

- A. Certificates of Release: From authorities having jurisdiction.
- B. Certificate of Insurance: For continuing coverage.
- C. Field Report: For pest control inspection.

1.4 MAINTENANCE MATERIAL SUBMITTALS

- A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

1.5 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
 1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information.
 3. Submit closeout submittals specified in individual Divisions 02 through 33 Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 4. Submit maintenance material submittals specified in individual Divisions 02 through 33 Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Architect. Label with manufacturer's name and model number where applicable.
 - a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section. Obtain Architect's signature for receipt of submittals.
 5. Submit test/adjust/balance records.
 6. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 calendar days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
 1. Advise Owner of pending insurance changeover requirements.
 2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 3. Complete startup and testing of systems and equipment.
 4. Perform preventive maintenance on equipment used prior to Substantial Completion.
 5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training information.
 6. Advise Owner of changeover in heat and other utilities.
 7. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
 8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.

9. Complete final cleaning requirements, including touchup painting.
 10. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 calendar days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.
 2. Results of completed inspection will form the basis of requirements for final completion.

1.6 FINAL COMPLETION PROCEDURES

- A. Preliminary Procedures: Before requesting final inspection for determining final completion, complete the following:
1. Submit a final Application for Payment according to Division 012900 Section "Payment Procedures."
 2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 4. Submit pest-control final inspection report and warranty.
 5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
- B. Inspection: Submit a written request for final inspection to determine acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.7 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
- a. PDF electronic file. Architect will return annotated copy.

1.8 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit Owner's rights under warranty.
- B. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
 - 1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
 - 2. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- C. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.
 - 1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.

- b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - f. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - g. Sweep concrete floors broom clean in unoccupied spaces.
 - h. Vacuum carpet and similar soft surfaces, removing debris; clean according to manufacturer's recommendations if visible soil or stains remain.
 - i. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
 - j. Remove labels that are not permanent.
 - k. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - l. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - m. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
 - n. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
 - o. Leave Project clean and ready for occupancy.
- C. Pest Control: Comply with pest control requirements in Division 313116 Section "Termite Control." Prepare written report.

3.2 REPAIR OF THE WORK

- A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.
- B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.
 - 1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
 - 2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show evidence of repair or restoration.

- a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.
3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
4. Replace burned-out bulbs, bulbs noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

END OF SECTION 017700

SECTION 017839

PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for project record documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.
 - 3. Record Product Data.
- B. Related Requirements:
 - 1. Division 01 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
 - 2. Divisions 02 through 31 Sections for specific requirements for project record documents of the Work in those Sections.

1.2 CLOSEOUT SUBMITTALS

- A. Record Drawings: Comply with the following:
 - 1. Number of Copies: Submit (2) two sets of marked-up record prints.
 - 2. Number of Copies: Submit copies of record Drawings as follows:
 - a. Submittal:
 - 1) Submit (2) two paper-copy sets of marked-up record prints.
 - 2) Submit PDF electronic files of scanned record prints (on disk).
 - 3) City of Norcross Project Manager will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.
- B. Record Specifications: Submit one paper copy of Project's Specifications, including addenda and contract modifications.
- C. Record Product Data: Submit one paper copy and PDF electronic files and directories of each submittal.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

- A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised Drawings as modifications are issued.
 - 1. Preparation: Mark record prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Record data as soon as possible after obtaining it.
 - c. Record and check the markup before enclosing concealed installations.
 - 2. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
 - 3. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
 - 4. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
 - 5. Format: Annotated PDF electronic file.
 - 6. Incorporate changes and additional information previously marked on record prints. Delete, redraw, and add details and notations where applicable.
 - 7. Architect will furnish Contractor one set of digital data files of the Contract Drawings for use in recording information if contractor needs.
- B. Format: Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.

2.2 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.

2.3 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
 - 3. Note related Change Orders and record Drawings where applicable.

- B. Format: Submit record Product Data as scanned PDF electronic file(s) of marked-up paper copy of Product Data.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for project record document purposes. Post changes and revisions to project record documents as they occur; do not wait until end of Project.
- B. Maintenance of Record Documents and Samples: Store record documents and Samples in the field office apart from the Contract Documents used for construction. Do not use project record documents for construction purposes. Maintain record documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to project record documents for Architect's reference during normal working hours.

END OF SECTION 017839

SECTION 033000

CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes cast-in-place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Design Mixtures: For each concrete mixture.
- C. Steel Reinforcement Shop Drawings: Placing drawings that detail fabrication, bending, and placement.
- D. Welding certificates.
- E. Material certificates.
- F. Material test reports.
- G. Floor surface flatness and levelness measurements.

1.3 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
 - 1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."
- B. Testing Agency Qualifications: An independent agency, acceptable to authorities having jurisdiction, qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.
- C. Concrete Testing Service: Engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixtures.
- D. Pre-installation Conference: Conduct conference at Project site.
- E. Allowable Tolerances in Exposed Finished Work

1. Linear Building Lines, Elevations and Conspicuous lines and arises. Maximum 3/16" in 20'-0"; 3/8" in 40'-0" or more.
2. In Cross-Section Dimension- 3/16".
3. In surface Plane, Plumb and Level. 1/8" in 10'-0" in any direction when measured with a 10'-0" straight edge.

PART 2 - PRODUCTS

2.1 FORM-FACING MATERIALS

- A. Smooth-Formed Finished Concrete: Form-facing panels that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.
- B. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.

2.2 STEEL REINFORCEMENT

- A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.
 1. Epoxy-Coated Reinforcing Bars: ASTM A 775/A 775M, epoxy coated, with less than 2 percent damaged coating in each 12-inch bar length.
- B. Plain-Steel Welded Wire Reinforcement: ASTM A 185/A 185M, plain, fabricated from as-drawn steel wire into flat sheets.
- C. Deformed-Steel Welded Wire Reinforcement: ASTM A 497/A 497M, flat sheet.
- D. Galvanized-Steel Welded Wire Reinforcement: ASTM A 185/A 185M, plain, fabricated from galvanized-steel wire into flat sheets.
- E. Epoxy-Coated Welded Wire Reinforcement: ASTM A 884/A 884M, Class A coated, Type 1, plain steel.
- F. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice.
- G. Contractor to coordinate above listed items with the Structural Engineering drawings and if there are any discrepancies notify the Architect before starting work.

2.3 CONCRETE MATERIALS

- A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:
 1. Portland Cement: ASTM C 150, Type I gray. Only one brand of cement shall be used for all concrete work.

- B. Normal-Weight Aggregates: ASTM C 33, and as specified. Provide aggregates from a single source for exposed concrete.
- C. Water: ASTM C 94/C 94M clean and potable.
- D. Contractor to coordinate above listed items with the Structural Engineering drawings and if there are any discrepancies notify the Architect before starting work.

2.4 ADMIXTURES

- A. Air-Entraining Admixture: ASTM C 260.
- B. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.
 - 1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
 - 2. Retarding Admixture: ASTM C 494/C 494M, Type B.
 - 3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
 - 4. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
 - 5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
 - 6. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.
- C. Contractor to coordinate above listed items with the Structural Engineering drawings and if there are any discrepancies notify the Architect before starting work.

2.5 WATERSTOPS

- A. Flexible PVC Waterstops: CE CRD-C 572, for embedding in concrete to prevent passage of fluids through joints. Factory fabricate corners, intersections, and directional changes.
- B. Self-Expanding Rubber Strip Waterstops: Manufactured rectangular or trapezoidal strip, bentonite-free hydrophilic polymer modified chloroprene rubber, for adhesive bonding to concrete, 3/8 by 3/4 inch.

2.6 VAPOR RETARDERS.

- A. Provide vapor retarder that is resistant to deterioration when tested according to ASTM E 154, as indicated on the drawings.

2.7 CURING MATERIALS

- A. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.

- B. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf weighing approximately 9oz./sq.yd., complying with AASHTO M 182, Class 2.
- C. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet or Waterproof paper.
- D. Water: Potable.

2.8 CURING AND SEALING COMPOUND

- A. The compound shall conform to Federal Specification TT-C-800A, 30% solids content minimum, and have test data from an independent laboratory indication a maximum moisture loss of 0.030 grams per sq. cm. when applied as a coverage rate of 300sq.ft. per gallon. Manufacturer's certification required. The compatibility of the compound with tile and/or carpet adhesives shall be verified before use.
 - 1. Acceptable Products:
 - a. "Super Diamond Clear" by the Euclid Chemical Company.
 - b. "Kure-N-Seal 30" by Sonneborn/ChemRex.
 - c. "Cure & Seal 31% UV" Symons Corporation.
 - d. "Kurez DR" by the Euclid Chemical Company.
 - 2. Type: Styrene butadiene acrylic based compound except "Kurez DR" which is a resin cure.

2.9 RELATED MATERIALS

- A. Expansion- and Isolation-Joint-Filler Strips: ASTM D 1752, cork or self-expanding cork.
- B. Construction Joints for Slab on Grade: Minimum 24 ga. galvanized steel forming keyed joint full depth of slab. Furnish complete with stake pins.
- C. Contraction (control) Joints for Slab on Grade:
 - 1. Saw cut or plastic inserts.
 - 2. Acceptable Products are:
 - a. Greenstreak Plastic Products, "Zipcap".
 - b. Vinylex Corp., "Zip-per Strip".
 - 3. Depth: 1" or ¼" slab thickness, whichever is greater.
- D. Contractor to coordinate above listed items with the Structural Engineering drawings and if there are any discrepancies notify the Architect before starting work.

2.10 CONCRETE MIXTURES

- A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301.
- B. Cementitious Materials: Use fly ash, pozzolan, ground granulated blast-furnace slag, and silica fume as needed to reduce the total amount of portland cement, which would otherwise be used.

- C. Admixtures: Use admixtures according to manufacturer's written instructions.
 - 1. Use water-reducing or plasticizing admixture in concrete, as required, for placement and workability.
 - 2. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
- D. Submit written reports to Architect of each proposed mix for each class of concrete at least 15 days prior to start of Work. Do not begin concrete production until proposed mix designs have been reviewed by Architect.
- E. Design mixes to provide normal weight concrete with the following properties as indicated on the structural drawings.
- F. Proportion normal-weight concrete mixture per notes on Structural drawings:
 - 1. Water-Cement Ratio: Provide concrete for following conditions with maximum water-cement (W/C) ratio as follows
 - a. Subjected to freezing and thawing: W/C 0.45.
 - b. Subjected to deicers/watertight: W/C 0.40.
 - c. Subjected to brackish water, salt spray or deicers: W/C 0.40.
 - 2. Slump Limits: Proportion and design mixes to result in concrete slump at point of placement as follows:
 - a. Ramps and sloping surfaces: Not more than 4 inches.
 - b. Reinforced foundation systems: Not more than 4 +/- 1 inches.
 - c. Slabs: Not more than 4 +/- 1 inches.
 - d. Other concrete: Not more than 5 inches.
 - 3. Air Content: 5.5 percent, plus or minus 1.5 percent at point of delivery for 1-1/2-inch nominal maximum aggregate size.
 - 4. Air Content: Do not allow air content of trowel-finished floors to exceed 3 percent.
- G. Contractor to coordinate above listed items with the Structural Engineering drawings and if there are any discrepancies notify the Architect before starting work.

2.11 FABRICATING REINFORCEMENT

- A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

PART 3 - EXECUTION

3.1 FORMWORK

- A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.
- B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.

- C. Do not chamfer exterior corners and edges of permanently exposed concrete unless noted wise on the drawings.

3.2 VAPOR RETARDERS

- A. Sheet Vapor Retarders: Place, protect, and repair sheet vapor retarder according to ASTM E 1643 and manufacturer's written instructions.
 - 1. Lap joints 6 inches and seal with manufacturers recommended tape.

3.3 STEEL REINFORCEMENT

- A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.
 - 1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

3.4 JOINTS

- A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.
- B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Architect.
- C. Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness as follows:
 - 1. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.
- D. Isolation Joints in Slabs-on-Grade: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.
- E. Waterstops: Install in construction joints and at other joints indicated according to manufacturer's written instructions.

3.5 CONCRETE PLACEMENT

- A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.
- B. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.

1. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.
- C. Cold-Weather Placement: Comply with ACI 306.1.
- D. Hot-Weather Placement: Comply with ACI 301.

3.6 FINISHING FLOORS AND SLABS

- A. General: Comply with ACI 302.1R recommendations for screeding, re-straightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.
 1. Apply scratch finish to surfaces indicated on drawings.
- B. Float Finish: Consolidate surface with power-driven floats or by hand floating if area is small or inaccessible to power driven floats. Re-straighten, cut down high spots, and fill low spots. Repeat float passes and re-straightening until surface is left with a uniform, smooth, granular texture.
 1. Apply float finish to surfaces indicated on drawings.
- C. Broom Finish: Apply a broom finish to exterior concrete platforms, steps, ramps, and elsewhere as indicated. If Civil Drawings refer to a different finish follow their drawing requirements.

3.7 CONCRETE PROTECTING AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.
- B. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.
- C. Cure concrete according to ACI 308.1, by one or a combination of the following methods:
 1. Moisture Curing: Keep surfaces continuously moist for not less than seven days.
 2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
 3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

- a. Removal: After curing period has elapsed, remove curing compound without damaging concrete surfaces by method recommended by curing compound manufacturer unless manufacturer certifies curing compound will not interfere with bonding of floor covering used on Project.
4. Curing and Sealing Compound: Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

3.8 CONCRETE SURFACE REPAIRS

- A. Defective Concrete: Repair and patch defective areas when approved by Architect. Remove and replace concrete that cannot be repaired and patched to Architect's approval.

3.9 FIELD QUALITY CONTROL

- A. Testing and Inspecting: Owner will engage a qualified testing and inspecting agency to perform field tests and inspections and prepare test reports.

END OF SECTION 033000

SECTION 042000

UNIT MASONRY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Concrete masonry units (CMU's).
2. Building (common) brick.

B. Related Sections:

1. Division 05 50 00 Section "Metal Fabrications" for furnishing steel lintels and shelf angles for unit masonry.
2. Division 07 62 00 Section "Sheet Metal Flashing and Trim" for furnishing manufactured reglets installed in masonry joints.

1.2 REFERENCES

- A. ACI 530.1/ASCE 6/TMS 602 – Specification for Masonry Structures; American Concrete Institute International; 2005.
- B. ASTM A 82 – Standard Specification for Steel Wire, Plain, for Concrete Reinforcement; 2002.
- C. ASTM A 153/A 153M – Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2004.
- D. ASTM A 615/ A 615M – Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement; 2005b.
- E. ASTM A 653/ A 653M – Standard Specification for Steel Sheet, Zinc-Coated (galvanized) or Zinc-Iron Alloy-Coated (galvanized) by the Hot-Dip Process; 2004a.
- F. ASTM C 90 – Standard Specification for Load bearing Concrete Masonry Units; 2003.
- G. ASTM C 91 – Standard Specification for Masonry Cement; 2003a.
- H. ASTM C 150 – Standard Specification for Portland Cement; 2004a.
- I. ASTM C 207 – Standard Specification for Hydrated Lime for Masonry Purposes; 2004.
- J. ASTM C 216 – Standard Specification for Facing Brick (Solid Masonry Units Made from Clay or Shale) 2004b.

- K. ASTM C 404 – Standard Specification for Aggregates for Masonry Grout; 2004.
- L. ASTM C 780 – Standard Test Method for Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry; 2002.

1.3 SUBMITTALS

- A. See Section 01 33 00 Section “Submittal Procedures”.
- B. Product Data & Manufacture’s Certificate: Submit manufacturer’s product data for each type of masonry unit, accessory and other manufactured products, including certifications that each type meet or exceed specified requirements.
- C. Shop Drawings: For reinforcing steel. Detail bending and placement of unit masonry reinforcing bars. Comply with ACI 315, "Details and Detailing of Concrete Reinforcement."
- D. Samples for Verification: For each type and color of colored mortar.

1.4 QUALITY ASSURANCE

- A. Masonry Standard: Detailing of masonry reinforcement and grout shall be in accordance with “Building Code Requirements for Masonry Structures (ACI 530/ASCE 5/TMS 402-2)”.
- B. Masonry material, quality assurance and field execution for reinforced and grouted masonry construction shall be in accordance with “Specifications for Masonry Structures (ACI 530.1/ASCE 6/TMS 602)”.
- C. Mock-up Panel: Build mock-up panel to verify selections made under sample submittals and to demonstrate aesthetic effects. Comply with requirements on drawings for mockup panel.
- D. Testing Laboratory Duties:
 - 1. Perform tests to document submittals, certify product compliance prior to use in construction, and establish grout and mortar mix design. Verify that placement, splices and reinforcement sizes are in accordance with the plans and specs. Verify full placement of grout in required cells as called for on plans.
 - 2. Perform specified tests and report results on field test data sheet to Architect.
 - 3. Notify Architect immediately of any results not meeting design requirements.
- E. Testing and Inspection (if required by City of Norcross):
 - 1. A special inspector, which is an independent testing laboratory selected and paid for by the Owner (or by the Contractor as assigned by the Owner and acceptable to the Architect), shall ensure that materials, construction and workmanship are in compliance with the plans and specifications. Coordinate erection and testing to facilitate construction. Testing agency shall be qualified according to ASTM C 1093-95 (2001).
- F. Prism Testing:

1. Prism Tests: Masonry compressive strengths shall be verified by prism tests in accordance with ASTM C 1314-03b.
 - a. Prisms shall be built by the Contractor and tested by an independent testing agency selected and paid for by the Contractor and acceptable to the Architect.
 - b. Prisms shall be built by utilizing materials being placed in the building, by the masons construction the bearing walls.
 - c. Masons for building the units for prism testing shall be selected at random, and at least two (2) masons shall be selected to construct the prisms for any one test.
 - d. Prisms shall be built on pallets as required for handling and storage.
2. Test Requirements: Each test shall consist of three prisms. One test shall be required for each 5,000 square feet of masonry work. Where, in any one-story height, both grouted and non-grouted walls occur, one set of "A" prisms and one set of "B" prisms shall be constructed.
 - a. Correction factors for pier sizes from the NCMA code shall be applied to the failure stress and the minimum acceptable corrected ultimate strength shall be 1500 psi.
 - b. Should any prisms fail to meet the minimum strength or prove to have been improperly prepared, additional testing and all corrective measures shall be at the expense of the Contractor.

1.5 PROJECT CONDITIONS

- A. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Remove any ice or snow formed on masonry bed by carefully applying heat until top surface is dry to the touch. Comply with cold-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.
- B. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.
- C. Protection of Work: During erection, cover top of wall with heavy waterproof sheeting at end of each day's work. Cover partially completed structures when work is not in progress.
- D. Extend cover minimum of 24" down both sides and hold cover securely in place.
- E. Do not apply uniform floor or roof loading for at least 12 hours after building masonry walls.
- F. Do not apply concentrated loads for at least 3 days after building masonry walls or columns.
- G. Staining: Prevent grout or mortar or soil from staining the face of masonry to be left exposed or painted. Immediately remove grout or mortar in contact with such masonry.
- H. Protect sills, ledges and projections from droppings of mortar.

PART 2 - PRODUCTS

2.1 MASONRY UNITS, GENERAL

- A. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated in the standard. Do not use units where such defects will be exposed in the completed Work.
- B. Manufacturer: Obtain masonry units from one manufacturer, of uniform texture and color for each kind required, for each continuous area and visually related area.
- C. Masonry Unit Characteristics: Provide units complying with standards referenced and requirements indicated.

2.2 CONCRETE MASONRY UNITS

- A. Concrete Block: Comply with referenced standards as follows:
 - 1. Size: Standard units with nominal face dimensions of 16 x 8 inches and nominal depths as indicated on the drawings for specific locations.
 - 2. Load-Bearing Units: ASTM C 90, normal weight. (f'm = 1500 psi)
 - a. Hollow block as indicated.
 - 3. Exposed Faces: Provide manufacturer's standard color and texture unless otherwise indicated.
 - 4. Provide cleanouts at base of each grout pour height that exceeds 5' - 0".

2.3 MASONRY LINTELS

- A. General: Provide one of the following:
- B. Masonry Lintels: Prefabricated or built-in-place masonry lintels made from bond beam CMUs with reinforcing bars placed as indicated and filled with coarse grout.

2.4 MORTAR AND GROUT MATERIALS

- A. Mortar Pre-mixed type S, complying with ASTM C 270.
 - 1. Color mortar: Premixed cement as required to match Architect's color sample.
- B. Portland Cement: ASTM C 150, Type I; (Type II can be substituted for cold weather construction) color as required to produce approved color sample
 - 1. Hydrated Lime: ASTM C 207, Type S.
 - 2. Grout aggregate: ASTM C 404.
- C. Water: Clean and potable

- D. Cold-Weather Admixture: Non-chloride, noncorrosive, accelerating admixture complying with ASTM C 494/C 494M, Type C, and recommended by manufacturer for use in masonry mortar of composition indicated.

1. Products: Subject to compliance with requirements, provide the following:

- a. Euclid Chemical Company (The); Accelguard 80.
- b. Grace Construction Products, W. R. Grace & Co. - Conn.; Morset.
- c. Sonneborn Products, BASF Aktiengesellschaft; Trimix-NCA.

- E. Water-Repellent Admixture: Liquid water-repellent mortar admixture intended for use with CMUs containing integral water repellent by same manufacturer.

1. Products: Subject to compliance with requirements, provide the following:

- a. ACM Chemistries; RainBloc for Mortar.
- b. BASF Aktiengesellschaft; Rheopel Mortar Admixture.
- c. Grace Construction Products, W. R. Grace & Co. - Conn.; Dry-Block Mortar Admixture.

2.5 REINFORCEMENT

- A. Uncoated Steel Reinforcing Bars: ASTM A 615/A 615M or ASTM A 996/A 996M, Grade 60.
- B. Masonry Joint Reinforcement, General: ASTM A 951/A 951M.
- C. Masonry Joint Reinforcement for Single-Wythe Masonry: Truss type with single pair of side rods.
- D. Reinforcing bar supports shall be used to hold reinforcement in place during construction. Supports shall be placed at the top and bottom of the reinforcing masonry section and at the intervals of 8' 0" o.c. max.

2.6 TIES AND ANCHORS

- A. Materials: Provide ties and anchors specified in this article that are made from materials that comply with the following unless otherwise indicated.
 1. Hot-Dip Galvanized, Carbon-Steel Wire: ASTM A 82/A 82M; with ASTM A 153/A 153M, Class B-2 coating.
 2. Steel Sheet, Galvanized after Fabrication: ASTM A 1008/A 1008M, Commercial Steel, with ASTM A 153/A 153M, Class B coating.
 3. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.
 4. Reinforcing Steel: ASTM A 615/A 615M Grade 60 (420) plain billet bars; uncoated
- B. Single Wythe Joint Reinforcement: Truss type; ASTM A 82 steel wire, hot dip galvanized after fabrication to ASTM A 153/A 153M, Class B; 0.1483 inch side rods with 0.1483 inch cross

rods; width as required to provide not more than 1 inch and not less than ½ inch of mortar coverage on each exposure.

- C. Multiple Wythe Joint Reinforcement: Truss type; fabricated with moisture drip; ASTM A 82 steel wire, hot dip galvanized after fabrication to ASTM A 153/153M, Class B; 0.1483 inch side rods with 0.1483 inch cross rods; width as required to provide not more than 1 inch and not less than ½ inch of mortar coverage on each exposure..
- D. Flexible Anchors: 2-piece anchors that permit differential movement between masonry and building frame, sized to provide not more than 1 inch and not less than ½ inch of mortar coverage on each exposure.
- E. Adjustable Masonry-Veneer Anchors:
 - 1. General: Provide anchors that allow vertical adjustment but resist tension and compression forces perpendicular to plane of wall, for attachment over sheathing to wood or metal studs, and as follows:
 - a. Structural Performance Characteristics: Capable of withstanding a 100-lbf load in both tension and compression without deforming or developing play in excess of 0.05 inch.
 - 2. Screw-Attached, Masonry-Veneer Anchors: Units consisting of a wire tie and a metal anchor section.
 - a. Products: Subject to compliance with requirements, provide the following:
 - 1) Dayton Superior Corporation, Dur-O-Wal Division
 - 2) Heckmann Building Products Inc.; 315-D with 316.
 - 3) Hohmann & Barnard, Inc.
 - 4) Wire-Bond.
 - b. Anchor Section: Rib-stiffened, sheet metal plate with screw holes top and bottom, having slotted holes for inserting wire tie.
 - c. Fabricate sheet metal anchor sections and other sheet metal parts from 0.075-inch-thick, steel sheet, galvanized after fabrication.
 - d. Wire Ties: Triangular-, rectangular-, or T-shaped wire ties fabricated from 0.187-inch-diameter, hot-dip galvanized steel wire.

2.7 EMBEDDED FLASHING MATERIALS

- A. Metal Flashing: Provide metal flashing complying with SMACNA's "Architectural Sheet Metal Manual" and Division 07 62 00 Section "Sheet Metal Flashing and Trim" and as follows:
 - 1. Metal Drip Edge: Fabricate from stainless steel. Extend at least 3 inches into wall and 1/2 inch out from wall, with outer edge bent down 30 degrees.
 - 2. Metal Sealant Stop: Fabricate from stainless steel. Extend at least 3 inches into wall and out to exterior face of wall. At exterior face of wall, bend metal back on itself for 3/4 inch and down into joint 1/4 inch to form a stop for retaining sealant backer rod.
 - 3. Metal Expansion-Joint Strips: Fabricate from copper to shapes indicated.

B. Flexible Flashing: Use the following unless otherwise indicated:

1. Rubberized-Asphalt Flashing: Composite flashing product consisting of a pliable, adhesive rubberized-asphalt compound, bonded to a high-density, cross-laminated polyethylene film to produce an overall thickness of not less than 0.030 inch.
 - a. Products: Subject to compliance with requirements, provide the following:
 - 1) Advanced Building Products Inc.; Peel-N-Seal.
 - 2) Carlisle Coatings & Waterproofing; CCW-705-TWF Thru-Wall Flashing.
 - 3) Dayton Superior Corporation, Dur-O-Wal Division; Dur-O-Barrier Thru-Wall Flashing.
 - 4) Fiberweb, Clark Hammerbeam Corp.; Aquaflash 500.
 - 5) Grace Construction Products, W. R. Grace & Co. - Conn.; Perm-A-Barrier Wall Flashing.
 - 6) Heckmann Building Products Inc.; No. 82 Rubberized-Asphalt Thru-Wall Flashing.
 - 7) Hohmann & Barnard, Inc.; Textroflash.
 - 8) W. R. Meadows, Inc.; Air-Shield Thru-Wall Flashing.
 - 9) Polyguard Products, Inc.
 - 10) Sandell Manufacturing Co., Inc.; Sando-Seal.
 - 11) Williams Products, Inc.; Everlastic MF-40.
2. Elastomeric Thermoplastic Flashing: Composite flashing product consisting of a polyester-reinforced ethylene interpolymers alloy.

C. Solder and Sealants for Sheet Metal Flashings: As specified in Division 07 62 00 Section "Sheet Metal Flashing and Trim."

D. Adhesives, Primers, and Seam Tapes for Flashings: Flashing manufacturer's standard products or products recommended by flashing manufacturer for bonding flashing sheets to each other and to substrates.

2.8 MISCELLANEOUS MASONRY ACCESSORIES

- A. Compressible Filler: Pre-molded filler strips complying with ASTM D 1056, Grade 2A1; compressible up to 35 percent; formulated from neoprene.
- B. Preformed Control-Joint: Made from rubber compound, complying with ASTM D 2000, Designation M2AA-805 and designed to fit standard sash block and to maintain lateral stability in masonry wall; size and configuration as indicated.
- C. Bond-Breaker Strips: Asphalt-saturated, organic roofing felt complying with ASTM D 226, Type I (No. 15 asphalt felt).
- D. Weeps: CavClear weeps. Contractor to submit colors for architect to select and match with mortar.

- E. Cavity Drainage Material: Free-draining mesh, made from polymer strands that will not degrade within the wall cavity.

1. Provide one of the following configurations:
 - a. Strips, full-depth of cavity and 10 inches high, with dovetail shaped notches 7 inches deep.
 - b. Strips, not less than 1-1/2 inches thick and 10 inches high, with dimpled surface designed to catch mortar droppings and prevent weep holes from clogging with mortar.
 - c. Sheets or strips full depth of cavity and installed to full height of cavity.

2.9 MASONRY CLEANERS

- A. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces. Use product expressly approved for intended use by cleaner manufacturer and manufacturer of masonry units being cleaned.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Diedrich Technologies, Inc.
 - b. EaCo Chem, Inc.
 - c. ProSoCo, Inc.

2.10 MORTAR AND GROUT MIXES

- A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures, unless otherwise indicated.
1. Do not use calcium chloride in mortar or grout.
 2. Use masonry cement mortar Type S unless otherwise indicated.
 3. Add cold-weather admixture (if used) at same rate for all mortar that will be exposed to view, regardless of weather conditions, to ensure that mortar color is consistent.
- B. Mortar for Unit Masonry: Comply with ASTM C 270. Provide the following types of mortar for applications stated unless another type is indicated. Refer to structural general notes on the structural sheet.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, un-chipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.
- B. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures.
- C. Wetting of Brick: Wet brick before laying if initial rate of absorption exceeds 30 g/30 sq. in. per minute when tested per ASTM C 67. Allow units to absorb water so they are damp but not wet at time of laying.
- D. Do not wet concrete masonry units.

3.2 TOLERANCES

- A. Dimensions and Locations of Elements:
 - 1. For dimensions in cross section or elevation do not vary by more than plus or minus 1/4 inch.
 - 2. For location of elements in plan do not vary from that indicated by more than plus or minus 1/2 inch.
 - 3. For location of elements in elevation do not vary from that indicated by more than plus or minus 1/4 inch in a story height or 1/2 inch total.
- B. Lines and Levels:
 - 1. For bed joints and top surfaces of bearing walls do not vary from level by more than 1/4 inch in 10 feet, or 1/2 inch maximum.
 - 2. For vertical lines and surfaces do not vary from plumb by more than 1/4 inch in 10 feet, or 1/2 inch maximum.
 - 3. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet.
- C. Joints:
 - 1. For bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch, with a maximum thickness limited to 1/2 inch.
 - 2. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch.

3.3 LAYING MASONRY WALLS

- A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint widths and thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.
- B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in running bond; do not use units with less than nominal 4-inch horizontal face dimensions at corners or jambs. Lay concealed masonry with all units in a wythe bonded by lapping not less than 2". Bond and interlock each course of each wythe at corners, unless otherwise shown.
- C. Fill cores in hollow CMUs with grout 24 inches under bearing plates, beams, lintels, posts, and similar items unless otherwise indicated.
- D. Stopping and Resuming Work: Rake back $\frac{1}{2}$ - masonry unit length in each course; do not tooth. Clean exposed surfaces of set masonry, wet units lightly (if specified to be wetted), and remove loose masonry units and mortar prior to laying fresh masonry.
- E. Built-in Work: As the work progresses, build in items specified under this and other sections of these specifications. Fill in solidly with masonry around built-in items.
- F. Fill space between hollow metal frames and masonry solidly with mortar.
- G. Where built-in items are to be embedded in cores of hollow masonry units, place a layer of metal lath in the joint below and rod mortar or grout into core.
- H. Intersecting Loadbearing Walls: If carried up separately, block vertical joint with 8" maximum offsets and provide rigid steel anchors spaced not more than 4'-0" o.c. vertically, or omit blocking and provide rigid steel anchors at not more than 2'-0" vertically. Form anchors of galvanized steel not less than 1-1/2" x 1/4" x 2'-0" long with ends turned up not less than 2" or with cross-pins. If used with hollow masonry units, embed ends in mortar filled cores.
- I. Non-Loadbearing Interior Partition Walls: Build full height of story to underside of solid structure above, unless otherwise indicated.
- J. Install bullnose units at all exposed corners.

3.4 MORTAR BEDDING AND JOINTING

- A. Lay solid masonry units with completely filled bed and head & collar joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.
- B. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.
- C. Cut joints flush for masonry walls to receive plaster or other direct-applied finishes (other than paint) unless otherwise indicated.

- D. Lay hollow concrete masonry units with full mortar coverage on horizontal and vertical face shells.
- E. Joints: Maintain joint widths shown, except for minor variations required to maintain bond alignment. If not otherwise indicated, lay walls with 3/8" joints. Rake out mortar in preparation for application of caulking or sealants where shown.
- F. Remove masonry units disturbed after laying; clean and relay in fresh mortar. Do not pound corners at jambs to fit stretcher units which have been set in position. If adjustments are required, remove units, clean off mortar, and reset in fresh mortar.

3.5 REINFORCED UNIT MASONRY

- A. Align vertical unit masonry cells to be filled to maintain clear, unobstructed vertical cell, continuous to foundation. Remove mortar droppings and debris from cells to be grouted.
- B. Provide cleanouts at bottom of each vertically reinforced cell, at each pour of grout. Seal cleanouts after inspection of reinforcement, before grouting begins.
- C. Place reinforcement in accordance with drawings, lapping as indicated. Secure at bottom and top and at intervals not exceeding 8'-0" bar diameters, refer to structural drawings for final directions.
- D. Except as otherwise indicated, provide at least 8" of solid end bearing full height of wall for lintels, beams and other load supporting members.
- E. Fill reinforced cells with cement grout, consolidating by vibrating and puddling.
- F. Form horizontal construction joints in grout lifts by stopping grout pour 1-1/2" below top of uppermost course in pour.

3.6 CAVITY WALLS

- A. Keep cavity clean of mortar droppings and other materials during construction. Strike joints flush facing cavity.
- B. Provide weep holes in exterior wythe of cavity, composite and veneer walls located immediately above ledges and flashing, spaced 2'-0" o.c., unless otherwise indicated.

3.7 LINTELS

- A. Install loose lintels of steel and other materials where shown.

3.8 MASONRY JOINT REINFORCEMENT

- A. General: Install entire length of longitudinal side rods in mortar with a minimum cover of 5/8 inch on exterior side of walls, 1/2 inch elsewhere. Lap reinforcement a minimum of 6 inches.

- B. Interrupt joint reinforcement at control and expansion joints unless otherwise indicated.
- C. Provide continuity at wall intersections by using prefabricated T-shaped units.
- D. Provide continuity at corners by using prefabricated L-shaped units.
- E. Reinforce masonry openings greater than 1'-0" wide, with horizontal joint reinforcing placed in 2 horizontal joints approximately 8" apart, both immediately above lintels and below sills. Extend reinforcing a minimum of 24" beyond jambs of the opening.

3.9 ANCHORING MASONRY TO STRUCTURAL STEEL AND CONCRETE

- A. Anchor masonry to structural steel and concrete where masonry abuts or faces structural steel or concrete to comply with the following:
 - 1. Provide an open space not less than 1 inch wide between masonry and structural steel or concrete unless otherwise indicated. Keep open space free of mortar and other rigid materials.
 - 2. Anchor masonry with anchors embedded in masonry joints and attached to structure.
 - 3. Space anchors as indicated, but not more than 24 inches o.c. vertically and 24 inches o.c. horizontally.

3.10 ANCHORING MASONRY VENEERS

- A. Anchor masonry veneers to wall framing and masonry backup masonry-veneer anchors to comply with the following requirements:
 - 1. Fasten screw-attached anchors through sheathing to wall framing and masonry backup with metal fasteners of type indicated. Use two fasteners.
 - 2. Embed connector sections and continuous wire in masonry joints. Provide not less than 2 inches of air space between back of masonry veneer and face of sheathing.
 - 3. Locate anchor sections to allow maximum vertical differential movement of ties up and down.
 - 4. Space anchors as indicated, but not more than 16 inches o.c. vertically and 24 inches o.c. horizontally with not less than 1 anchor for each of wall area. Install additional anchors within 12 inches of openings and at intervals, not exceeding 36 inches, around perimeter.

3.11 CONTROL AND EXPANSION JOINTS

- A. Provide vertical expansion, control and isolation joints in masonry where shown. Build in related masonry accessory items as the masonry work progresses.
 - 1. See Division 7 sections for "Joint Sealants".

3.12 FLASHING, WEEP HOLES, CAVITY DRAINAGE, AND VENTS

- A. Install flashing as follows unless otherwise indicated:

1. Prepare masonry surfaces so they are smooth and free from projections that could puncture flashing. Where flashing is within mortar joint, place through-wall flashing on sloping bed of mortar and cover with mortar. Before covering with mortar, seal penetrations in flashing with adhesive, sealant, or tape as recommended by flashing manufacturer.
 2. At lintels and shelf angles, extend flashing a minimum of 6 inches into masonry at each end. At heads and sills, extend flashing 6 inches at ends and turn up not less than 2 inches to form end dams.
 3. Install metal drip edges beneath flexible flashing at exterior face of wall. Stop flexible flashing 1/2 inch back from outside face of wall and adhere flexible flashing to top of metal drip edge.
- B. Install weep holes in head joints in exterior wythes of first course of masonry immediately above embedded flashing and as follows:
1. Use specified weep/vent products as required by Section 2.8 D.
 2. Space weep holes 24 inches o.c. unless otherwise indicated.
 3. Cover cavity side of weep holes with plastic insect screening at cavities insulated with loose-fill insulation.
- C. Place cavity drainage material in cavities to comply with configuration requirements for cavity drainage material in "Miscellaneous Masonry Accessories" Article.

3.13 SPECIAL INSPECTIONS

- A. Testing and Inspecting: If Owner chooses to engage special inspectors to perform tests and inspections and prepare reports. Allow inspectors access to scaffolding and work areas, as needed to perform tests and inspections. Retesting of materials that fail to comply with specified requirements shall be done at Contractor's expense.
1. A Special Inspector is an independent testing laboratory selected and paid for by the Owner (or by the Contractor as assigned by the Owner & acceptable to the Architect). The Special Inspector shall perform tests & inspections per the "Schedule of Special Inspections." Testing & inspections to be coordinated to facilitate construction.

3.14 REPAIRING, POINTING, AND CLEANING

- A. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.
- B. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:
1. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes.
 2. Protect surfaces from contact with cleaner.
 3. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.

4. Clean masonry with a proprietary acidic cleaner applied according to manufacturer's written instructions.
 5. Clean concrete masonry by cleaning method indicated in NCMA TEK 8-2A applicable to type of stain on exposed surfaces.
- C. Remove and replace masonry units which are loose, chipped, broken, stained or otherwise damaged, or if units do not match adjoining units & install in fresh mortar or grout, pointed to eliminate evidence or replacement.
- D. Pointing: During the tooling of joints, enlarge any voids or holes and completely fill with mortar. Point-up all joints at corners, openings and adjacent work to provide a neat, uniform appearance, properly prepared for application of caulking or sealant compounds.

3.15 MASONRY WASTE DISPOSAL

- A. Waste Disposal as Fill Material: Dispose of clean masonry waste, including excess or soil-contaminated sand, waste mortar, and broken masonry units, by crushing and mixing with fill material as fill is placed.
- B. Excess Masonry Waste: Remove excess clean masonry waste that cannot be used as fill, as described above, and other masonry waste, and legally dispose of off Owner's property.

END OF SECTION 042000

SECTION 042113
BRICK MASONRY

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Face brick.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples: For each type and color of brick and colored mortar located on mock-up panel.

1.3 QUALITY ASSURANCE

- A. Masonry Standard: Comply with ACI 530.1/ASCE 6/TMS 602 unless modified by requirements in the Contract Documents.
- B. Mock-up Panel: Build mock-up panel to verify selections made under sample submittals and to demonstrate aesthetic effects. Comply with requirements on drawings for mockups.

1.4 PROJECT CONDITIONS

- A. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.
- B. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

PART 2 - PRODUCTS

2.1 MASONRY UNITS, GENERAL

- A. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated in the standard. Do not use units where such defects will be exposed in the completed Work.

2.2 BRICK

- A. General: Provide shapes indicated and as follows.
 - 1. For ends of sills and caps and for similar applications that would otherwise expose unfinished brick surfaces, provide units without cores or frogs and with exposed surfaces finished.
 - 2. Provide special shapes for applications where shapes produced by sawing would result in sawed surfaces being exposed to view.
- B. Face Brick: Facing brick complying with ASTM C 216.
 - a. Color and texture: As scheduled on the drawings.
 - b. Nominal size: As scheduled on the drawings.
- 2. Manufacturers:
 - a. Boral, Cherokee and General Shale.
 - b. Substitutions: See Section 01 25 – and Section 01 60 00.
- 3. Initial Rate of Absorption: Less than 30 g/30 sq. in. per minute when tested per ASTM C 67.
- 4. Efflorescence: Provide brick that has been tested according to ASTM C 67 and is rated "not effloresced."

2.3 MORTAR MATERIALS

- A. Portland Cement: ASTM C 150, Type I, except Type III may be used for cold-weather construction. Color as required to produce approved color sample.
- B. Masonry Cement: ASTM C 91, Type N.
 - 1. Color mortar: Premixed cement as required to match Architect's color sample.
- C. Cold-Weather Admixture: Non-chloride, noncorrosive, accelerating admixture complying with ASTM C 494/C 494M, Type C, and recommended by manufacturer for use in masonry mortar of composition indicated.
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Euclid Chemical Company (The); Accelguard 80.
 - b. Grace Construction Products, W. R. Grace & Co. - Conn.; Morset.
 - c. Sonneborn Products, BASF Aktiengesellschaft; Trimix-NCA.

2.4 TIES AND ANCHORS

- A. Materials: Provide ties and anchors specified in this article that are made from materials that comply with the following unless otherwise indicated:
1. Hot-Dip Galvanized, Carbon-Steel Wire: ASTM A 82/A 82M; with ASTM A 153/A 153M, Class B-2 coating.
 2. Steel Sheet, Galvanized after Fabrication: ASTM A 1008/A 1008M, Commercial Steel, with ASTM A 153/A 153M, Class B coating.
 3. Tie Section: Triangular-shaped wire tie, sized to extend within 1 inch of masonry face, made from 0.187-inch diameter, hot-dip galvanized steel wire.

2.5 EMBEDDED FLASHING MATERIALS

- A. Refer to Section 04 20 00:

2.6 MASONRY CLEANERS

- A. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces. Use product expressly approved for intended use by cleaner manufacturer and manufacturer of masonry units being cleaned.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following.
 - a. Diedrich Technologies, Inc.
 - b. EaCo Chem, Inc.
 - c. ProSoCo, Inc.

2.7 MORTAR MIXES

- A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures unless otherwise indicated.
1. Do not use calcium chloride in mortar.
 2. Use masonry cement mortar unless otherwise indicated.
 3. Add cold-weather admixture (if used) at same rate for all mortar that will be exposed to view, regardless of weather conditions, to ensure that mortar color is consistent.
- B. Mortar for Unit Masonry: Comply with ASTM C 270, Proportion Specification. Provide Type N unless another type is indicated.

2.8 MISCELLANEOUS MASONRY ACCESSORIES

- A. Compressible Filler: Pre-molded filler strips complying with ASTM D 1056, Grade 2A1; compressible up to 35 percent; formulated from neoprene.
- B. Preformed Control-Joint: Made from rubber compound, complying with ASTM D 2000, Designation M2AA-805 and designed to fit standard sash block and to maintain lateral stability in masonry wall; size and configuration as indicated.
- C. Bond-Breaker Strips: Asphalt-saturated, organic roofing felt complying with ASTM D 226, Type I (No. 15 asphalt felt).
- D. Weeps: CavClear weeps. Contractor to submit colors for architect to select and match with mortar.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before lying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.

3.2 MORTAR BEDDING AND JOINTING

- A. Lay solid masonry units with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.
- B. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.

3.3 ANCHORING MASONRY VENEERS

- A. Anchor masonry veneers to wall framing and CMU with masonry-veneer anchors to comply with the following requirements:
 - 1. Fasten screw-attached anchors through sheathing to wall framing with metal fasteners of type indicated. Use two fasteners unless anchor design only uses one fastener.
 - 2. Embed connector sections and continuous wire in masonry joints. Provide not less than 1-1/2 inches of air space between back of masonry veneer and face of sheathing.
 - 3. Locate anchor sections to allow maximum vertical differential movement of ties up and down.

4. Space anchors as indicated, but not more than 16 inches o.c. vertically and 16 inches o.c. horizontally with not less than 1 anchor for each of wall area. Install additional anchors within 12 inches of openings and at intervals, not exceeding 24 inches, around perimeter.

3.4 FLASHING, WEEP HOLES, CAVITY DRAINAGE, AND VENTS

A. Install flashing as follows unless otherwise indicated:

1. Prepare masonry surfaces so they are smooth and free from projections that could puncture flashing. Where flashing is within mortar joint, place through-wall flashing on sloping bed of mortar and cover with mortar. Before covering with mortar, seal penetrations in flashing with adhesive, sealant, or tape as recommended by flashing manufacturer.
2. At lintels and shelf angles, extend flashing a minimum of 6 inches into masonry at each end. At heads and sills, extend flashing 6 inches at ends and turn up not less than 2 inch to form end dams.
3. Install metal drip edges beneath flexible flashing at exterior face of wall. Stop flexible flashing 1/2 inch back from outside face of wall and adhere flexible flashing to top of metal drip edge.
4. Install metal flashing termination beneath flexible flashing at exterior face of wall. Stop flexible flashing 1/2 inch back from outside face of wall and adhere flexible flashing to top of metal flashing termination.

B. Install weep holes in head joints in exterior wythes of first course of masonry immediately above embedded flashing and as follows:

1. Use specified weep/vent products as required by Section 2.8 D.
2. Space weep holes 24 inches o.c. unless otherwise indicated.

C. Place cavity drainage material in cavities to comply with configuration requirements for cavity drainage material in "Miscellaneous Masonry Accessories" Article.

3.5 FIELD QUALITY CONTROL

A. Testing and Inspecting: If owner chooses to engage special inspectors to perform tests and inspections and prepare reports. Allow inspectors access to scaffolding and work areas, as needed to perform tests and inspections. Retesting of materials that fail to meet specified requirements shall be done at Contractor's expense.

B. Inspections: Level 1 special inspections according to the "International Building Code."

1. Begin masonry construction only after inspectors have verified proportions of site-prepared mortar.

3.6 CLEANING

- A. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.
- B. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:
 - 1. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes
 - 2. Protect adjacent surfaces from contact with cleaner.
 - 3. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.
 - 4. Clean masonry with a proprietary acidic cleaner applied according to manufacturer's written instructions.
 - 5. Clean concrete masonry by cleaning method indicated in NCMA TEK 8-2A applicable to type of stain on exposed surfaces.

END OF SECTION 042113

SECTION 055000
METAL FABRICATIONS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Miscellaneous steel framing and supports.
2. Shelf angles.
3. Miscellaneous steel trim.
4. Metal bollards.

B. Products furnished, but not installed, under this Section:

1. Loose steel lintels.
2. Anchor bolts, steel pipe sleeves, slotted-channel inserts, and wedge-type inserts indicated to be cast into concrete or built into unit masonry.

1.2 PERFORMANCE REQUIREMENTS

A. Field Measurements: Take field measurements prior to preparation of shop drawings and fabrication, where possible. Do not delay job progress; allow for trimming and fitting where taking measurements before fabrication might delay work.

B. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes acting on exterior metal fabrications by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects.

1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.

1.3 SUBMITTALS

A. Product Data: For the following:

1. Prefabricated building columns.
2. Paint products.
3. Grout.

B. Shop Drawings: Show fabrication and installation details for metal fabrications.

1. Include plans, elevations, sections, and details of metal fabrications and their connections. Show anchorage and accessory items.

PART 2 - PRODUCTS

2.1 METALS, GENERAL

- A. Metal Surfaces, General: Provide materials with smooth, flat surfaces without blemishes.

2.2 FERROUS METALS

- A. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.
- B. Rolled-Steel Floor Plate: ASTM A 786/A 786M, rolled from plate complying with ASTM A 36/A 36M or ASTM A 283/A 283M, Grade C or D these requirements are for 30 ksi.

2.3 MISCELLANEOUS MATERIALS

- A. Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79 and compatible with topcoat.
- B. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it. Refer to drawings for locations.
- C. Non-shrink, Nonmetallic Grout: Factory-packaged, non-staining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer for interior and exterior applications.

2.4 FABRICATION, GENERAL

- A. Shop Assembly: Preassemble items in the shop to greatest extent possible. Use connections that maintain structural value of joined pieces.
- B. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges. Remove sharp or rough areas on exposed surfaces.
- C. Weld corners and seams continuously to comply with the following:
 - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - 2. Obtain fusion without undercut or overlap.
 - 3. Remove welding flux immediately.
 - 4. At exposed connections, finish exposed welds and surfaces smooth and blended.
- D. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners or welds where possible. Locate joints where least conspicuous.
- E. Fabricate seams and other connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.

- F. Where units are indicated to be cast into concrete or built into masonry, equip with integrally welded steel strap anchors not less than 24 inches o.c.

2.5 MISCELLANEOUS FRAMING AND SUPPORTS

- A. General: Provide steel framing and supports not specified in other Sections as needed to complete the Work.
- B. Fabricate units from steel shapes, plates, and bars of welded construction unless otherwise indicated. Fabricate to sizes, shapes, and profiles indicated and as necessary to receive adjacent construction.
- C. Loose Bearing and Leveling Plates: Provide loose bearing and leveling plates for steel items bearing on masonry or concrete construction, made flat, free from warps or twists, and of required thickness and bearing area. Drill plates to receive anchor bolts and for grouting as required. Galvanize after fabrication.
- D. Provide necessary reinforcements and drill and tap as required for finish hardware.

2.6 MISCELLANEOUS STEEL TRIM

- A. Unless otherwise indicated, fabricate units from steel shapes, plates, and bars of profiles shown with continuously welded joints and smooth exposed edges. Miter corners and use concealed field splices where possible.
- B. Provide cutouts, fittings, and anchorages as needed to coordinate assembly and installation with other work.
- C. Galvanize exterior miscellaneous steel trim.
- D. Prime miscellaneous steel trim with primer specified in Division 09 96 00 Section "High-Performance Coatings."

2.7 LOOSE BEARING AND LEVELING PLATES

- A. Provide loose bearing and leveling plates for steel items bearing on masonry or concrete construction. Drill plates to receive anchor bolts and for grouting.

2.8 LOOSE STEEL LINTELS

- A. Fabricate loose steel lintels from steel angles and shapes of size indicated for openings and recesses in masonry walls and partitions at locations indicated.
- B. Galvanize loose steel lintels located in exterior walls.
- C. Prime loose steel lintels located in exterior walls with primer specified in Division 09 96 00 Section "High-Performance Coatings."

2.9 STEEL WELD PLATES AND ANGLES

- A. Provide steel weld plates and angles not specified in other Sections, for items supported from concrete construction as needed to complete the Work. Provide each unit with no fewer than two integrally welded steel strap anchors for embedding in concrete.

2.10 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Finish metal fabrications after assembly.

2.11 STEEL AND IRON FINISHES

- A. Galvanizing: Hot-dip galvanize items as indicated to comply with ASTM A 153/A 153M for steel and iron hardware and with ASTM A 123/A 123M for other steel and iron products.
- B. Shop Priming: Apply shop primer to comply with SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.
- B. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Do not weld, cut, or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication and are for bolted or screwed field connections.
- C. Field Welding: Comply with the following requirements:
 - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - 2. Obtain fusion without undercut or overlap.
 - 3. Remove welding flux immediately.
 - 4. At exposed connections, finish exposed welds and surfaces smooth and blended.
- D. Fastening to In-Place Construction: Provide anchorage devices and fasteners where metal fabrications are required to be fastened to in-place construction.
- E. Provide temporary bracing or anchors in formwork for items that are to be built into concrete, masonry, or similar construction.

3.2 INSTALLING BEARING AND LEVELING PLATES

- A. Clean concrete and masonry bearing surfaces of bond-reducing materials, and roughen to improve bond to surfaces. Clean bottom surface of plates.
- B. Set bearing and leveling plates on wedges, shims, or leveling nuts. After bearing members have been positioned and plumbed, tighten anchor bolts. Do not remove wedges or shims but, if protruding, cut off flush with edge of bearing plate before packing with grout.
- C. Pack grout solidly between bearing surfaces and plates to ensure that no voids remain.

3.3 ADJUSTING AND CLEANING

- A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas. Paint uncoated and abraded areas with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.
- B. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A 780.

END OF SECTION 055000

SECTION 061000
ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Framing with dimension lumber.
2. Wall and roof sheathing.
3. Wood blocking, cants, and nailers.
4. Wood furring.
5. Preservative treatment of wood.

B. Related Section.

1. Section - 07 62 00 "Sheet Metal Flashing and Trim".

1.2 REFERENCES

- A. ASTM E 84-09c – Standard Test Method for Surface Burning Characteristics of Building Materials; 2005
- B. AWWA C9 – Plywood: Perservative Treatment by Pressure Processes; American Wood-Preservres' Association; 2003.
- C. PS 1 – Construction and Industrial Plywood; National Institute of Standards and Technology (Department of Commerce); 2005.
- D. PS 20 – American Softwood Lumber Standard; National Institute of Standards and Technology (Department of Commerce); 2005

1.3 ACTION SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product.

1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements
2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements.

1.4 INFORMATIONAL SUBMITTALS

- A. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the ALSC Board of Review.
- B. Evaluation Reports: For the following, from ICC-ES:
 - 1. Wood-preservative-treated wood.
 - 2. Engineered wood products.
 - 3. Metal framing anchors.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
- B. Maximum Moisture Content of Lumber: 15 percent for 2-inch nominal thickness or less, 19 percent for more than 2-inch nominal thickness 19 percent for 2-inch nominal thickness or less, no limit for more than 2-inch nominal thickness unless otherwise indicated.

2.2 FACTORY WOOD TREATMENT

- A. Treated Lumber and Plywood: Comply with AWWA U1 – Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
- B. Preservative Treatment:
 - 1. Manufacturers:
 - a. Arch Wood Protection, Inc.
 - b. Chemical Specialties, Inc.
 - c. Osmose, Inc.
 - d. Substitutions: See Section 01 60 00 – Product Requirements.
- C. Preservative Pressure Treatment of Lumber Above Grade: AWWA Use Category UC3B, Commodity Specification A (Treatment C2) using waterborne preservative to 0.25 lb/cu ft retention.
 - 1. Kiln dry plywood after treatment to maximum moisture content of 19 percent.
 - 2. Treat plywood in contact with roofing, flashing, or waterproofing.
 - 3. Treat plywood in contact with masonry or concrete.
 - 4. Treat plywood less than 18 inches above grade.
- D. Preservative Pressure Treatment of Lumber in Contact with Soil: AWWA Use Category UC4A Commodity Specification A (Treatment C2) using waterborne preservative to 0.4 lb/cu ft retention.

1. Preservative for Field Application to Cut Surfaces: As recommended by manufacturer of factory treatment chemicals for brush-application in the field.
2. Restrictions: Do not use lumber or plywood treated with chromate copper arsenate (CCA) in exposed exterior applications subject to leaching.

2.3 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
 1. Blocking.
 2. Nailers.
 3. Cants.
 4. Furring.
 5. Grounds.
- B. For items of dimension lumber size, provide Standard, Stud, or No. 3 grade lumber of any species.

2.4 PLYWOOD BACKING PANELS

- A. Equipment Backing Panels: DOC PS 1, fire-retardant treated, in thickness indicated or, if not indicated, not less than 3/4-inch nominal thickness.

2.5 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
 1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity (such as furring strips for composite siding, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

2.6 MISCELLANEOUS MATERIALS

- A. Sill-Sealer Gaskets: Glass-fiber-resilient insulation, fabricated in strip form, for use as a sill sealer; 1-inch nominal thickness, compressible to 1/32 inch; selected from manufacturer's standard widths to suit width of sill members indicated.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit.

Locate furring, nailers, blocking, and similar supports to comply with requirements for attaching other construction.

- B. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.
- C. Framing with Engineered Wood Products: Install engineered wood products to comply with manufacturer's written instructions.
- D. Metal Framing Anchors: Install metal framing anchors to comply with manufacturer's written instructions. Install fasteners through each fastener hole.
- E. Do not splice structural members between supports unless otherwise indicated.
- F. Comply with AWPAC M4 for applying field treatment to cut surfaces of preservative-treated lumber.
- G. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.
- H. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:

END OF SECTION 061000

SECTION 061600

SHEATHING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Wall sheathing.
2. Roof sheathing.
3. Sheathing joint and penetration treatment.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.

1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated plywood complies with requirements.
2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated plywood complies with requirements.

1.3 INFORMATIONAL SUBMITTALS

A. Evaluation Reports: For following products, from ICC-ES:

1. Preservative-treated plywood.
2. Foam-plastic sheathing.

PART 2 - PRODUCTS

2.1 PRESERVATIVE-TREATED PLYWOOD

- A. Preservative Treatment by Pressure Process: AWP A U1; Use Category use category UC3b for exterior construction.
- B. Mark plywood with appropriate classification marking of an inspection agency acceptable to authorities having jurisdiction.
- C. Application: Treat plywood in contact with masonry or concrete or used with roofing, flashing, vapor barriers, and waterproofing.

2.2 WALL SHEATHING

- A. Plywood Wall Sheathing: Exterior and Exposure 1 sheathing – refer to drawings for locations.
- B. Paper-Surfaced Gypsum Wall Sheathing: ASTM C 1396/C 1396M, gypsum sheathing; with water-resistant-treated core and with water-repellent paper bonded to core's face, back, and long edges.
 - 1. Type and Thickness: Regular 5/8 inch thick.
- C. Cementitious Backer Units: ASTM C 1325, Type A.
 - 1. Thickness: As indicated on drawings.

2.3 ROOF SHEATHING

- A. Plywood Roof Sheathing: Exterior Exposure 1 sheathing – refer to drawings for locations.

2.4 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
 - 1. For roof and wall sheathing, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

2.5 SHEATHING JOINT-AND-PENETRATION TREATMENT MATERIALS

- A. Sealant for Glass-Mat Gypsum Sheathing: Elastomeric, medium-modulus, neutral-curing silicone joint sealant compatible with joint substrates formed by gypsum sheathing and other materials, recommended by sheathing manufacturer for application indicated and complying with requirements for elastomeric sealants specified in Section 079200 "Joint Sealants."
- B. Sealant for Glass-Mat Gypsum Sheathing: Silicone emulsion sealant complying with ASTM C 834, compatible with sheathing tape and sheathing and recommended by tape and sheathing manufacturers for use with glass-fiber sheathing tape and for covering exposed fasteners.
 - 1. Sheathing Tape: Self-adhering glass-fiber tape, minimum 2 inches wide, 10 by 10, of type recommended by sheathing and tape manufacturers for use with silicone emulsion sealant in sealing joints in glass-mat gypsum sheathing and with a history of successful in-service use.
- C. Sheathing Tape for Foam-Plastic Sheathing: Pressure-sensitive plastic tape recommended by sheathing manufacturer for sealing joints and penetrations in sheathing.

2.6 MISCELLANEOUS MATERIALS

- A. Adhesives for Field Gluing Panels to Framing: Formulation complying with ASTM D 3498 that is approved for use with type of construction panel indicated by manufacturers of both adhesives and panels.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement. Arrange joints so that pieces do not span between fewer than three support members.
- B. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction unless otherwise indicated.
- C. Securely attach to substrate by fastening as indicated, complying with the following:
 - 1. NES NER-272 for power-driven fasteners.
 - 2. Table 2304.9.1, "Fastening Schedule," in ICC's "International Building Code."
- D. Coordinate wall and roof sheathing installation with flashing and joint-sealant installation so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed assembly.
- E. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements.

END OF SECTION 061600

SECTION 071113

BITUMINOUS DAMPPROOFING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. ASTM D 41 – Standard Specification for Asphalt Primer Used in Roofing, Dampproofing and Waterproofing; 2000.
2. ASTM D 1227 – Standard Specification for Emulsified Asphalt Used as a Protective Coating for Roofing; 2000.
3. ASTM D 2822 – Standard Specification for Asphalt Roof Cement; 1997.

1.2 SUBMITTALS

- A. Product Data: Provide properties of primer, bitumen and mastics.
- B. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.

1.3 PROJECT CONDITIONS

PART 2 - PRODUCTS

2.1 COLD ASPHALTIC MATERIALS

- A. Bitumen: Emulsified asphalt, ASTM D 1227; with fiber reinforcement (Type I or II).
- B. Asphalt Primer: ASTM D 41, compatible with substrate.
- C. Sealing Mastic: Asphalt roof cement, ASTM D 2822, Type I.
- D. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. ChemMasters Corp.
 2. Degussa Building Systems; Sonneborn Brand Products.
 3. BASF – The Chemical Company
 4. Gardner Gibson, Inc.
 5. Henry Company.
 6. Karnak Corporation.
 7. Malarkey Roofing Products.

8. Meadows, W. R., Inc.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Clean substrates of projections and substances detrimental to work; fill voids, seal joints, and apply bond breakers if any, as recommended by prime material manufacturer.
- B. Protect adjacent surfaces not designated to receive damp-proofing.
- C. Do not apply damp-proofing to surfaces unacceptable to manufacturer
- D. Apply mastic to seal penetrations, small cracks, or minor honeycomb in substrate.

3.2 APPLICATION, GENERAL

- A. Comply with manufacturer's written recommendations unless more stringent requirements are indicated or required by Project conditions to ensure satisfactory performance of damp-proofing.
- B. Apply damp-proofing to provide continuous plane of protection on exterior face of inner wythe of exterior masonry cavity walls.
- C. Apply damp-proofing with a roller.
- D. Apply damp-proofing in two coats, continuous and uniform, at a rate of 5 gal/100sq.ft.
- E. Seal items projecting through damp-proofing surface with mastic. Seal watertight.

END OF SECTION 071113

SECTION 072500

WEATHER BARRIERS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Building paper.
2. Building wrap.
3. Flexible flashing.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.3 INFORMATIONAL SUBMITTALS

A. Evaluation Reports: For water-resistive barrier, from ICC-ES.

PART 2 - PRODUCTS

2.1 WATER-RESISTIVE BARRIER

A. Building Paper: Water-vapor-permeable, asphalt-saturated kraft building paper.

1. Water vapor transmission not less than 35 g/sq. m x 24 hr per ASTM D 779.
2. Water resistance not less than 20 minutes per ASTM F 1249.

B. Building Wrap: ASTM E 1677, Type I air barrier; with flame-spread and smoke-developed indexes of less than 25 and 450, respectively, when tested according to ASTM E 84; UV stabilized; and acceptable to authorities having jurisdiction.

1. Products: Subject to compliance with requirements, provide one of the following.

- a. Dow Chemical Company.
- b. DuPont; Tyvek CommercialWrap.
- c. Ludlow Coated Products; Barricade Building Wrap.
- d. Raven Industries Inc.; Fortress Pro Weather Protective Barrier.

2. Water-Vapor Permeance: Not less than 50 g through 1 sq. m of surface in 24 hours per ASTM E 96/E 96M, Desiccant Method (Procedure A).

- C. Building-Wrap Tape: Pressure-sensitive plastic tape recommended by building-wrap manufacturer for sealing joints and penetrations in building wrap.

2.2 MISCELLANEOUS MATERIALS

- A. Flexible Flashing: Self-adhesive butyl rubber or rubberized-asphalt compound, bonded to a high-density polyethylene film, aluminum foil, or spunbonded polyolefin.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. DuPont (E. I. du Pont de Nemours and Company); DuPont Flashing Tape.
 - b. Grace Construction Products, a unit of W. R. Grace & Co. - Conn.; Vycor Butyl Self Adhered Flashing.
 - c. Protecto Wrap Company; BT-25 XL.
 - d. Raven Industries Inc.; Fortress Flashshield.
 - e. Advanced Building Products Inc.; Wind-o-wrap.
 - f. Carlisle Coatings & Waterproofing; CCW-705-TWF Thru-Wall Flashing.
 - g. Fiberweb, Clark Hammerbeam Corp.; Aquaflash 500.
 - h. Grace Construction Products, a unit of W. R. Grace & Co. - Conn.;
 - i. MFM Building Products Corp.; Window Wrap.
 - j. Polyguard Products, Inc.

PART 3 - EXECUTION

3.1 WATER-RESISTIVE BARRIER INSTALLATION

- A. Cover sheathing with water-resistive barrier as follows:
1. Cut back barrier 1/2 inch on each side of the break in supporting members at expansion- or control-joint locations.
 2. Apply barrier to cover vertical flashing with a minimum 4-inch overlap unless otherwise indicated.
- B. Building Paper: Apply horizontally with a 2-inch overlap and a 6-inch end lap; fasten to sheathing with galvanized staples or roofing nails.
- C. Building Wrap: Comply with manufacturer's written instructions.
1. Seal seams, edges, fasteners, and penetrations with tape.
 2. Extend into jambs of openings and seal corners with tape.

3.2 FLEXIBLE FLASHING INSTALLATION

- A. Apply flexible flashing where indicated to comply with manufacturer's written instructions.

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WEATHER BARRIERS

1. Lap seams and junctures with other materials at least 4 inches except that at flashing flanges of other construction, laps need not exceed flange width.
2. Lap flashing over water-resistive barrier at bottom and sides of openings.

END OF SECTION 072500

Attachment: 2020-07 Compactor Enclosure Memo (20-5788 : PWUP 20-01 Downtown Norcross Compactor Enclosure)

SECTION 072610
SHEATHING MEMBRANE

PART 1 - GENERAL

1.1 SUMMARY

- A. Sheathing membrane for light commercial buildings in high humidity locations.

1.2 RELATED SECTIONS

1.3 SUBMITTALS

- A. Section 013300 – Submittal Procedures.
- B. Product Data: Manufacturer's data sheets, samples and installation instructions.

1.4 DELIVERY, STORAGE AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.5 WARRANTY

- A. Provide manufacturer's warranty that material will not be damaged by weather or normal construction conditions, to include furnishing of replacement material.

1.6 PRE-INSTALLATION MEETING

- A. Convene one week before starting work of this section to discuss details about this material and installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Pactiv, Green Guard.

- B. Substitutions: Submit to Architect for approval

2.2 MATERIALS

- A. Air Infiltration Membrane: Green Guard Raindrop, cross-woven with drainage channels and relatively lower vapor permeability and transmission ratings.
1. Weight: 16.0lb/1000SF.
 2. UV Resistance: 4 months.
 3. Tear Strength: 56 lbf in machine direction, 30 lbf in cross-machine direction, when tested in accordance with ASTM D 4533 (trapezoidal tear).
 4. Burst Strength: ASTM D-751, 155 psi.
 5. Water Vapor Transmission Rate: ASTM E 96 Procedure A 10.0 perms.
- B. Joint Tape: As recommended by manufacturer.
- C. Mechanical Fasteners: As recommended by manufacturer
- D. Sealant: As recommended by manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions over entire exterior wall area except windows and doors. Lap into openings per manufacturer's instructions.
- B. Lap over flashings per manufacturer's instructions
- C. Comply with manufacturer's requirements for honoring warranty.
- D. Locate joints over solid backing, lap 4 inches, and seal with tape.
- E. Trim membrane close to penetrations and seal with tape.

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SHEATHING MEMBRANE

3.4 PROTECTION

- A. Protect installed membrane until installation of covering.
- B. Repair or replace damaged membrane before installing covering.

END OF SECTION 072610

Attachment: 2020-07 Compactor Enclosure Memo (20-5788 : PWUP 20-01 Downtown Norcross Compactor Enclosure)

SECTION 074113
METAL ROOF PANELS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Exposed-fastener, lap-seam metal roof panels.
2. Concealed-fastener, lap-seam metal roof panels.
3. Standing-seam metal roof panels.
4. Batten-seam metal roof panels.
5. Metal soffit panels.

B. Related Sections:

1. Section 076200 - "Sheet Metal Flashing and Trim".
2. Section 079200 - "Joint Sealers".

1.2 PERFORMANCE REQUIREMENTS

A. Wind-Uplift Resistance: Provide metal roof panel assemblies that comply with UL 580 for wind-uplift-resistance class indicated.

1. Uplift Rating: Per local requirements.

B. Structural Performance: Provide metal roof panel assemblies capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated, based on testing according to ASTM E 1592:

1.3 SUBMITTALS

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

B. Shop Drawings: Show fabrication and installation layouts of metal roof panels; details of edge conditions, side-seam and endlap joints, panel profiles, corners, anchorages, trim, flashings, closures, and accessories; and special details. Contractor needs to distinguish between factory- and field-assembled work.

C. Samples: For each type of exposed finish required.

D. Delegated-Design Submittal: For metal roof panel assembly indicated to comply with performance requirements and design criteria, including analysis data and calculations signed and sealed by the qualified professional engineer responsible for their preparation.

- E. Coordination Drawings: Roof plans, drawn to scale, based on input from installers of the items involved.
- F. Field quality-control reports.
- G. Warranties: Samples of special warranties.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: An employer of workers trained and approved by manufacturer.
- B. Pre-installation Conference: Conduct conference at project site.

1.5 DELIVERY, STORAGE, AND PROTECTION

- A. Protect panels from accelerated weathering by removing or venting sheet plastic shipping wrap.
- B. Store prefinished material off ground and protected from weather. Prevent twisting, bending, or abrasion, and provide ventilation to stored materials. Slope metal sheets to ensure drainage.
- C. Prevent contact with materials that may cause discoloration or staining of products.

1.6 WARRANTY

- A. See Section 017700 – Closeout Procedures, for additional warranty requirements.
- B. Manufacturer's Warranties:
 - 1. Manufacturer's warranty against failure of roof panel due to rupture, structure failure, or perforation due to exposure to normal atmospheric corrosion warranty period, 20 years and six months.
 - 2. Correct defective materials within a ten year period after Substantial Completion for degradation of panel finish, including color fading, crazing, chipping and peeling.
 - 3. Correct defective work within a five year period after Substantial Completion, including defects in water tightness and integrity of seals.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Berridge Manufacturing Company
- B. Peterson Aluminum Corporation (Pac-Clad)
- C. Substitutions: 012500 – "Substitution Procedures".

2.2 PANEL MATERIALS

- A. Panel System: Performed and prefinished metal panel system vertical; site assembled
 - 1. System: "Tee-Panel" standing seam panel with 1" standing seam with performed seam cap and continuous vinyl gasket.
 - 2. Thickness: 24 gage
 - 3. Seam spacing: 12 inches
 - 4. Color: As per specified on Construction Drawings
 - 5. Interlocking edges, fitted with continuous gaskets.
 - 6. Factory Finish: as scheduled on drawings.
- B. Internal and External Corners: Same material, thickness and finish as exterior sheets; profile to suit system; shop cut and factory mitered profile to suit system.
- C. Expansion Joints: Same material, thickness and finish as exterior sheets; 24 gage; manufacturer's standard brake formed type, of profile to suit system.
- D. Trim: Same material, thickness and finish as exterior sheets; brake formed to required profiles
- E. Anchors: Galvanized steel.

2.3 UNDERLAYMENT MATERIALS

- A. Self-Adhering, High-Temperature Sheet: 30mils thick minimum, consisting of slip-resisting, polyethylene-film top surface laminated to layer of butyl or SBS-modified asphalt adhesive, with release-paper backing; cold applied. Provide primer when recommended by underlayment manufacturer.
- B. Felts: ASTM D 226, Type I (No. 30), asphalt-saturated organic felts.
- C. Slip Sheet: Manufacturer's recommended slip sheet, of type required for application.

2.4 MISCELLANEOUS METAL FRAMING

- A. Miscellaneous Metal Framing, General: ASTM C 645, cold-formed metallic-coated steel sheet, ASTM A 653/A 653M, hot-dip galvanized or coating with equivalent corrosion resistance unless otherwise indicated.

2.5 MISCELLANEOUS MATERIALS

- A. Panel Fasteners: Self-tapping screws, bolts, nuts, self-locking rivets and bolts, end-welded studs, and other suitable fasteners designed to withstand design loads. Provide exposed fasteners with heads matching color of metal roof panels by means of plastic caps or factory-applied coating. Provide EPDM, PVC, or neoprene sealing washers.
- B. Bituminous Coating: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

- C. Galvanized Steel Sheet: ASTM A653. G90 steel sheet, zinc coated (galvanized) by hot dip process, structural quality, 24 ga.
- D. Topside coating to be: Full-strength fluoreopolymer (70% Kynar 500 or Hylar 5000 resin) system of 1.0 mil total dry film thickness. Underside coating to be: Wash coat of 0.3-0.4 mil dry film thickness coating. Color shall be as indicated on drawings or as selected by Architect from manufacturer's standard color options.

2.6 METAL SOFFIT PANELS

- A. General: Provide factory-formed perforated metal soffit panels designed to be installed by lapping and interconnecting side edges of adjacent panels and mechanically attaching through panel to supports using concealed fasteners and factory-applied sealant in side laps. Include accessories required for weathertight installation.

2.7 ACCESSORIES

- A. Roof Panel Accessories: Provide components approved by roof panel manufacturer and as required for a complete metal roof panel assembly including trim, copings, fasciae, corner units, ridge closures, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal roof panels unless otherwise indicated.
 - 1. Closures: Provide closures at eaves and ridges, fabricated of same metal as metal roof panels.
 - 2. Closure Strips: Closed-cell, expanded, cellular, rubber or cross-linked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch thick, flexible closure strips; cut or pre-molded to match metal roof panel profile. Provide closure strips where indicated or necessary to ensure weather-tight construction.
 - 3. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
- B. Flashing and Trim: Formed from same material as roof panels, pre-painted with coil coating, minimum 0.018 inch thick. Provide flashing and trim as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, eaves, rakes, corners, bases, framed openings, ridges, fasciae, and fillers. Finish flashing and trim with same finish system as adjacent metal roof panels.
- C. Gutters: Formed from same material roof panels. Match profile of gable trim, complete with end pieces, outlet tubes, and other special pieces as required. Fabricate in minimum 96-inch long sections, of size and metal thickness according to SMACNA's "Architectural Sheet Metal Manual." Furnish gutter supports spaced a maximum of 36 inches o.c., fabricated from same metal as gutters. Provide wire ball strainers of compatible metal at outlets. Finish gutters to indicated on drawings.
- D. Downspouts: Formed from same material as roof panels or as indicated on Architectural drawings. Fabricate with formed elbows and offsets, of size and metal thickness according to SMACNA's "Architectural Sheet Metal Manual". Finish downspouts to match gutters.

2.8 FABRICATION

- A. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.
- B. Sheet Metal Accessories: Fabricate flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to the design, dimensions, metal, and other characteristics of item indicated.

PART 3 - EXECUTION

3.1 PREPARATION

- 1. Install substrate board with long joints in continuous straight lines, perpendicular to roof slopes with end joints staggered between rows. Tightly butt substrate boards together.
- 2. Comply with UL requirements for fire-rated construction.
- B. Miscellaneous Framing: Install subpurlins, eave angles, furring, and other miscellaneous roof panel support members and anchorage according to metal roof panel manufacturer's written instructions.

3.2 METAL ROOF PANEL INSTALLATION

- A. Lap-Seam Metal Roof Panels: Fasten metal roof panels to supports with fasteners at each lapped joint at location and spacing recommended by manufacturer.
 - 1. Apply panels and associated items for neat and weather-tight enclosure. Avoid "panel creep" or application not true to line.
 - 2. Lap ribbed or fluted sheets one full rib corrugation.
 - 3. Provide metal-backed neoprene or EPDM washers under heads of exposed fasteners bearing on weather side of metal roof panels.
 - 4. Locate and space exposed fasteners in uniform vertical and horizontal alignment. Use proper tools to obtain controlled uniform compression for positive seal without rupture of washer.
 - 5. Install screw fasteners with power tools having controlled torque adjusted to compress washer tightly without damage to washer, screw threads, or panels. Install screws in predrilled holes.
 - 6. Provide sealant tape at lapped joints of metal roof panels and between panels and protruding equipment, vents, and accessories.
 - 7. Apply a continuous ribbon of sealant tape to weather-side surface of fastenings on end laps, and on side laps of nesting-type panels; on side laps of corrugated nesting-type, ribbed, or fluted panels; and elsewhere as needed to make panels weatherproof to driving rains.
 - 8. At panel end splices, nest panels with minimum 6-inch end lap, sealed with butyl-rubber sealant and fastened together by interlocking clamping plates.

- B. Standing-Seam Metal Roof Panels: Fasten metal roof panels to supports with concealed clips at each standing-seam joint at location, spacing, and with fasteners recommended by manufacturer.
1. Install clips to supports with self-tapping fasteners.
 2. Install pressure plates at locations indicated in manufacturer's written installation instructions.
 3. Snap Joint: Nest standing seams and fasten together by interlocking and completely engaging factory-applied sealant.

3.3 ACCESSORY INSTALLATION

- A. General: Install accessories with positive anchorage to building and weather-tight mounting and provide for thermal expansion. Coordinate installation with flashings and other components.
1. Install components required for a complete metal roof panel assembly including trim, copings, ridge closures, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items.
 2. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.
 3. Provide elbows at base of downspouts to direct water away from building.

3.4 CLEANING

- A. Remove temporary protective coverings and strippable films, if any, as metal roof panels are installed unless otherwise indicated in manufacturer's written installation instructions. On completion of metal roof panel installation, clean finished surfaces as recommended by metal roof panel manufacturer. Maintain in a clean condition during construction.

END OF SECTION 074113

SECTION 076200

SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Manufactured reglets and counter-flashing.
2. Formed roof drainage sheet metal fabrications.
3. Formed slope roof sheet metal fabrications.

1.2 SUBMITTALS

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

B. Shop Drawings: Show installation layouts of sheet metal flashing and trim, including plans, elevations, expansion-joint locations, and keyed details. Distinguish between shop- and field-assembled work.

1. Include details for forming, joining, supporting, and securing sheet metal flashing and trim, including pattern of seams, termination points, fixed points, expansion joints, expansion-joint covers, edge conditions, special conditions, and connections to adjoining work.

C. Samples: For each exposed product and for each finish specified.

D. Maintenance data.

E. Warranty: Sample of special warranty.

1.3 QUALITY ASSURANCE

A. Sheet Metal Flashing and Trim Standard: Comply with SMACNA's "Architectural Sheet Metal Manual" unless more stringent requirements are specified or shown on Drawings.

B. Pre-installation Conference: Conduct conference at Project site.

1.4 WARRANTY

A. Special Warranty on Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace sheet metal flashing and trim that shows evidence of deterioration of factory-applied finishes within 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 SHEET METALS

- A. General: Protect mechanical and other finishes on exposed surfaces from damage by applying a strippable, temporary protective film before shipping.
 - 1. Pre-Painted -Sheet Finish: Refer to drawings for color, pre-painted according to ASTM B 882.
- B. Aluminum Sheet: ASTM B 209 , alloy as standard with manufacturer for finish required, with temper as required to suit forming operations and performance required.
 - 1. As-Milled Finish: One-side bright mill finish.
 - a. Two-Coat Fluoropolymer: AAMA 620. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat.

2.2 UNDERLAYMENT MATERIALS

- A. Polyethylene Sheet: 6-mil thick polyethylene sheet complying with ASTM D 4397.
- B. Felt: ASTM D 226, Type II (No. 30), asphalt-saturated organic felt, non-perforated.
- C. Self-Adhering, High-Temperature Sheet: Minimum 30 to 40 mils thick, consisting of slip-resisting polyethylene-film top surface laminated to layer of butyl or SBS-modified asphalt adhesive, with release-paper backing; cold applied. Provide primer when recommended by underlayment manufacturer.
 - 1. Thermal Stability: ASTM D 1970; stable after testing at 240 deg F.
 - 2. Low-Temperature Flexibility: ASTM D 1970; passes after testing at minus 20 deg F.
- D. Slip Sheet: Building paper, 3-lb/100 sq. ft. minimum, rosin sized.

2.3 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and recommended by manufacturer of primary sheet metal unless otherwise indicated.
- B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal.
 - 1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.
 - a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating.

- b. Blind Fasteners: High-strength aluminum or stainless-steel rivets suitable for metal being fastened.
 - c. Spikes and Ferrules: Same material as gutter; with spike with ferrule matching internal gutter width.
- 2. Fasteners for Aluminum Sheet: Aluminum or Series 300 stainless steel.
- 3. Fasteners for Aluminum-Zinc Alloy-Coated Steel Sheet: Hot-dip galvanized steel according to ASTM A 153/A 153M or ASTM F 2329 or Series 300 stainless steel.
- C. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, non-sag, nontoxic, non-staining tape 1/2 inch wide and 1/8 inch thick.
- D. Elastomeric Sealant: ASTM C 920, elastomeric polymer sealant; low modulus; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.
- E. Butyl Sealant: ASTM C 1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type expansion joints with limited movement.
- F. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D 1187.

2.4 REGLETS

- A. Reglets: Units of type, material, and profile indicated, formed to provide secure interlocking of separate reglet and counter-flashing pieces, and compatible with flashing indicated with interlocking counter-flashing on exterior face, of same metal as reglet.
 - 1. Material: Aluminum, 0.024 inch thick.
 - 2. Finish: Mill with color selected on Construction Drawings.

2.5 FABRICATION, GENERAL

- A. General: Custom fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, geometry, metal thickness, and other characteristics of item indicated. Fabricate items at the shop to greatest extent possible.
 - 1. Obtain field measurements for accurate fit before shop fabrication.
 - 2. Form sheet metal flashing and trim without excessive oil canning, buckling, and tool marks and true to line and levels indicated, with exposed edges folded back to form hems.
 - 3. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces exposed to view.
- B. Sealed Joints: Form non-expansion but movable joints in metal to accommodate elastomeric sealant.

- C. Expansion Provisions: Where lapped expansion provisions cannot be used, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with butyl sealant concealed within joints.
- D. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.
- E. Seams: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with elastomeric sealant unless otherwise recommended by sealant manufacturer for intended use.

2.6 ROOF DRAINAGE SHEET METAL FABRICATIONS

- A. Gutter: Profile as indicated on drawings
- B. Downspouts: Profile as indicated on drawings
- C. Accessories: Profiled to suit gutters and downspouts.
 - 1. Anchorage Devices: In accordance with SMACNA requirements.
 - 2. Gutter Supports: Brackets.
 - 3. Downspout Supports: Straps.
- D. Splash Pads, where indicated on drawings and as needed for surface drainage control: Precast concrete type, of size and profiles indicated; minimum 3000psi at 28 days, with a minimum 5 percent air entrainment:
- E. Downspout boots where indicated on drawings: steel.
- F. Seal metal joints.

PART 3 - EXECUTION

3.1 UNDERLAYMENT INSTALLATION

- A. Polyethylene Sheet: Install polyethylene sheet with adhesive for anchorage. Apply in shingle fashion to shed water, with lapped and taped joints of not less than 2 inches.
- B. Felt Underlayment: Install felt underlayment with adhesive for temporary anchorage. Apply in shingle fashion to shed water, with lapped joints of not less than 2 inches.
- C. Self-Adhering Sheet Underlayment: Install self-adhering sheet underlayment, wrinkle free. Comply with temperature restrictions of underlayment manufacturer for installation; use primer rather than nails for installing underlayment at low temperatures. Apply in shingle fashion to shed water, with end laps of not less than 6 inches staggered 24 inches between courses. Overlap side edges not less than 3-1/2 inches. Roll laps with roller. Cover underlayment within 14 days.

3.2 INSTALLATION, GENERAL

- A. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement so that completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight. Use fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
 - 1. Install sheet metal flashing and trim true to line and levels indicated. Provide uniform, neat seams with minimum exposure of solder, welds, and sealant.
 - 2. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
 - 3. Space cleats not more than 12 inches apart. Anchor each cleat with two fasteners. Bend tabs over fasteners.
 - 4. Install exposed sheet metal flashing and trim without excessive oil canning, buckling, and tool marks.
 - 5. Install sealant tape where indicated.
 - 6. Torch cutting of sheet metal flashing and trim is not permitted.
- B. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating or by other permanent separation as recommended by SMACNA.
 - 1. Coat back side of uncoated aluminum and stainless-steel sheet metal flashing and trim with bituminous coating where flashing and trim will contact wood, ferrous metal, or cementitious construction.
 - 2. Underlayment: Where installing metal flashing directly on cementitious or wood substrates, install a course of felt underlayment and cover with a slip sheet or install a course of polyethylene sheet.
- C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet with no joints allowed within 24 inches of corner or intersection. Where lapped expansion provisions cannot be used or would not be sufficiently watertight, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with sealant concealed within joints.
- D. Fastener Sizes: Use fasteners of sizes that will penetrate wood sheathing not less than 1-1/4 inches for nails and not less than 3/4 inch for wood screws metal decking not less than recommended by fastener manufacturer to achieve maximum pull-out resistance.
- E. Seal joints as shown and as required for watertight construction.
- F. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pre-tin edges of sheets to be soldered to a width of 1-1/2 inches, except reduce pre-tinning where pre-tinned surface would show in completed Work.
 - 1. Do not solder metallic-coated steel and aluminum sheet.
 - 2. Do not use torches for soldering. Heat surfaces to receive solder and flow solder into joint. Fill joint completely. Completely remove flux and spatter from exposed surfaces.

- G. Rivets: Rivet joints in uncoated aluminum where indicated and where necessary for strength.

3.3 ROOF FLASHING INSTALLATION

- A. General: Install sheet metal flashing and trim to comply with performance requirements, sheet metal manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, set units true to line, and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.
- B. Roof Edge Flashing: Anchor to resist uplift and outward forces according to recommendations in SMACNA's "Architectural Sheet Metal Manual" and as indicated. Interlock bottom edge of roof edge flashing with continuous cleat anchored to substrate at staggered 3-inch centers.
- C. Copings: Anchor to resist uplift and outward forces according to recommendations in SMACNA's "Architectural Sheet Metal Manual" and as indicated.
- D. Counter-flashing: Coordinate installation of counter-flashing with installation of base flashing. Insert counter-flashing in reglets or receivers and fit tightly to base flashing. Extend counter-flashing 4 inches over base flashing. Lap counter-flashing joints a minimum of 4 inches and bed with sealant.
- E. Roof-Penetration Flashing: Coordinate installation of roof-penetration flashing with installation of roofing and other items penetrating roof. Seal with butyl sealant and clamp flashing to pipes that penetrate roof.

3.4 WALL FLASHING INSTALLATION

- A. General: Install sheet metal wall flashing to intercept and exclude penetrating moisture according to SMACNA recommendations and as indicated. Coordinate installation of wall flashing with installation of wall-opening components such as windows, doors, and louvers.
- B. Through-Wall Flashing: Installation of through-wall flashing is specified in Division 04 Section "Unit Masonry."
- C. Reglets: Installation of reglets is specified in Division 04 Section "Unit Masonry."

3.5 CLEANING AND PROTECTION

- A. Clean and neutralize flux materials. Clean off excess solder and sealants.
- B. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturers written installation instructions.

END OF SECTION 076200

SECTION 079200

JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Silicone joint sealants.
2. Urethane joint sealants.
3. Preformed joint sealants.

1.2 PRECONSTRUCTION TESTING

- A. Preconstruction Compatibility and Adhesion Testing: Submit to joint-sealant manufacturers eight samples of materials that will contact or affect joint sealants. Use ASTM C 1087 to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.
- B. Preconstruction Field-Adhesion Testing: Before installing sealants, field test their adhesion to Project joint substrates. Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C 1193 or Method A, Tail Procedure, in ASTM C 1521.

1.3 SUBMITTALS

- A. Product Data: For each joint-sealant product indicated.
- B. Samples: For each kind and color of joint sealant required.
- C. Joint-Sealant Schedule: Include the following information:
1. Joint-sealant application, joint location, and designation.
 2. Joint-sealant manufacturer and product name.
 3. Joint-sealant formulation.
 4. Joint-sealant color.
- D. Product test reports.
- E. Preconstruction compatibility and adhesion test reports.
- F. Preconstruction field-adhesion test reports.
- G. Field-adhesion test reports.

H. Warranties.

1.4 ENVIRONMENTAL REQUIREMENTS

- A. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.

1.5 COORDINATION

- A. Coordinate the work with all sections referencing this section:
1. Sheet Metal Flashing and Trim

1.6 QUALITY ASSURANCE

- A. Testing Agency Qualifications: Qualified according to ASTM C 1021 to conduct the testing indicated.

1.7 WARRANTY

- A. Special Installer's Warranty: Manufacturer's standard form in which Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements.
1. Warranty Period: Two years from date of Substantial Completion.
- B. Special Manufacturer's Warranty: Manufacturer's standard form in which joint-sealant manufacturer agrees to furnish joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.
1. Warranty Period: One year from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. VOC Content of Interior Sealants: Provide sealants and sealant primers for use inside the weatherproofing system that comply with the following limits for VOC content when calculated according to 40 CFR 59, Part 59, Subpart D (EPA Method 24):
1. Architectural Sealants: 250 g/L.
2. Sealant Primers for Nonporous Substrates: 250 g/L.
3. Sealant Primers for Porous Substrates: 775 g/L.
- B. Liquid-Applied Joint Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied joint sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.

1. Suitability for Immersion in Liquids. Where sealants are indicated for Use I for joints that will be continuously immersed in liquids, provide products that have undergone testing according to ASTM C 1247. Liquid used for testing sealants is deionized water, unless otherwise indicated.

2.2 SEALANTS

- A. Non-sag Polyurethane Sealant (Joint Sealer-1): ASTM C 920; single component, chemical curing, non-staining, non-bleeding.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
2. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings.
 - a. BASF Building Systems.
 - b. Dow Corning Corporation.
 - c. GE Advanced Materials - Silicones.
 - d. Polymeric Systems, Inc.
 - e. Tremco Incorporated.
3. Color: As indicated on drawings or selected by Architect.
4. Service Temperature Range: -40 to 180 degrees.
5. Class: 25.
6. Movement Capability: Plus and minus 50 percent.

- B. Acrylic Emulsion Latex (Joint Sealer-2): ASTM C 834, single component, non-staining, non-bleeding, non-sagging.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following.
 - a. BASF Building Systems.
 - b. Bostik, Inc.
 - c. Pecora Corporation.
 - d. Polymeric Systems, Inc.
 - e. Tremco Incorporated.
2. Color: As indicated on drawings or selected by Architect
3. Shore A Hardness Range: 15 to 40.
4. Movement Capability: 2 to 5 percent

- C. Silicone Sealant (Joint Sealer-3): ASTM C 920, single component, solvent curing, non-sagging, non-staining, fungus resistant, non-bleeding.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. BASF Building Systems.
 - b. Bostik, Inc.

- c. Pecora Corporation.
 - d. Tremco Incorporated.
 - 2. Color: As indicated on drawings or selected by Architect
 - 3. Class: 25.
 - 4. Movement Capability: Plus and minus 50 percent
 - 5. Service Temperature Range: -65 to 300 degrees.
 - 6. Shore A Hardness Range: 15 to 35.
- D. Butyl Sealant (Joint Sealer-4): TT-S-001657, Type 1; single component, solvent release, non-skinning, non-sagging.
- 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Dayton Superior Specialty Chemicals.
 - b. EMSEAL Joint Systems, Ltd.
 - c. Sandell Manufacturing Co.
 - d. Tremco Incorporated.
 - e. Willseal USA, LLC.
 - 2. Color: As indicated on drawings or selected by Architect
 - 3. Shore A Hardness Range: 10 to 30.
 - 4. Movement Capability: Plus and minus 10 percent
 - 5. Service Temperature Range: -13 to 180 degrees.

2.3 JOINT SEALANT BACKING

- A. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer.

2.4 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials.
- C. Masking Tape: Non-staining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions.
 - 1. Remove laitance and form-release agents from concrete.
 - 2. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.
- B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.2 INSTALLATION

- A. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- B. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
 - 1. Do not leave gaps between ends of sealant backings.
 - 2. Do not stretch, twist, puncture, or tear sealant backings.
 - 3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.
- C. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- D. Tooling of Non-sag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
 - 1. Remove excess sealant from surfaces adjacent to joints.
 - 2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
 - 3. Provide concave joint profile per Figure 8A in ASTM C 1193, unless otherwise indicated.

- E. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.3 JOINT-SEALANT SCHEDULE

- A. Exterior joints for which no other sealant is indicated use Joint Sealer-3
- B. Control, expansion and soft joints in masonry and between masonry and adjacent work use Joint Sealer-1.
- C. Lap joints in exterior sheet metal work use Joint Sealer-3
- D. Under exterior door thresholds use Joint Sealer-4.
- E. Interior joints for which no other sealant is indicated use Joint Sealer-2.

END OF SECTION 079200

SECTION 089000

LOUVERS AND VENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Fixed, extruded-aluminum and formed-metal louvers.

1.2 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Louvers shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated without permanent deformation of louver components, noise or metal fatigue caused by louver blade rattle or flutter, or permanent damage to fasteners and anchors.

1. Wind Loads: Determine loads based on pressures as indicated on Drawings.

- B. Louver Performance Ratings: Provide louvers complying with requirements specified, as demonstrated by testing manufacturer's stock units identical to those provided, except for length and width according to AMCA 500-L.

1.3 SUBMITTALS

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

1. For louvers specified to bear AMCA seal, include printed catalog pages showing specified models with appropriate AMCA Certified Ratings Seals.

- B. Shop Drawings: For louvers and accessories. Include plans, elevations, sections, details, and attachments to other work. Show frame profiles and blade profiles, angles, and spacing.

- C. Samples: For each type of metal finish required.

- D. Product Test Reports: Based on tests performed according to AMCA 500-L.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Aluminum Extrusions: ASTM B 221, Alloy 6063-T5, T-52, or T6.

- B. Aluminum Sheet: ASTM B 209, Alloy 3003 or 5005 with temper as required for forming, or as otherwise recommended by metal producer for required finish.
- C. Galvanized-Steel Sheet: ASTM A 653/A 653M, G60 zinc coating, mill phosphatized.
- D. Fasteners: Use types and sizes to suit unit installation conditions.
 - 1. For fastening aluminum, use aluminum or 300 series stainless-steel fasteners.
 - 2. For fastening galvanized steel, use hot-dip-galvanized steel or 300 series stainless-steel fasteners.
 - 3. For fastening stainless steel, use 300 series stainless-steel fasteners.
 - 4. For color-finished louvers, use fasteners with heads that match color of louvers.
- E. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187.

2.2 FABRICATION, GENERAL

- A. Fabricate frames, including integral sills, to fit in openings of sizes indicated, with allowances made for fabrication and installation tolerances, adjoining material tolerances, and perimeter sealant joints.

2.3 FIXED, EXTRUDED-ALUMINUM LOUVERS

- A. Horizontal Storm-Resistant Louver, location as indicated on drawings:
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Air Balance Inc.; a Mestek company.
 - b. Airolite Company, LLC (The).
 - c. All-Lite Architectural Products.
 - d. Industrial Louvers, Inc.
 - e. NCA Manufacturing, Inc.
 - f. Nystrom Building Products.
 - g. Ruskin Company; Tomkins PLC.
 - 2. Louver Depth: Refer to drawings
 - 3. AMCA Seal: Mark units with AMCA Certified Ratings Seal.
- B. Vertical Storm-Resistant Louver, location as indicated on drawings.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Air Balance Inc.; a Mestek company.
 - b. Airolite Company, LLC (The).
 - c. All-Lite Architectural Products.
 - d. Industrial Louvers, Inc.

- e. Louvers & Dampers, Inc.; a division of Mestek, Inc.
 - f. NCA Manufacturing, Inc.
 - g. Nystrom Building Products.
 - h. Ruskin Company; Tomkins PLC.
- 2. Louver Depth: Refer to drawings
 - 3. Frame Nominal Thickness: not less than 0.080 inch for frames.
 - 4. AMCA Seal: Mark units with AMCA Certified Ratings Seal.

2.4 FIXED, FORMED-METAL LOUVERS

- A. Horizontal, Drainable Blade Louver, location as indicated on drawings:
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Air Balance Inc.; a Mestek company.
 - b. Airolite Company, LLC (The).
 - c. Industrial Louvers, Inc.
 - d. Metal Form Manufacturing Inc.
 - e. NCA Manufacturing, Inc.
 - f. Ruskin Company; Tomkins PLC.
 - 2. Louver Depth: Refer to drawings.
 - 3. AMCA Seal: Mark units with AMCA Certified Ratings Seal.

2.5 LOUVER SCREENS

- A. General: Provide screen at each exterior louver.
- B. Louver Screen Frames: Same kind and form of metal as indicated for louver to which screens are attached.
- C. Louver Screening:
 - 1. Bird Screening: Aluminum, 1/2-inch- square mesh, 0.063-inch wire.
 - 2. Bird Screening: Stainless steel, 1/2-inch- square mesh, 0.047-inch wire.

2.6 ALUMINUM FINISHES

- A. Clear Anodic Finish: AAMA 611, AA-M12C22A41, Class I, 0.018 mm or thicker.
- B. Color Anodic Finish: AAMA 611, AA-M12C22A42/A44, Class I, 0.018 mm or thicker.
 - 1. Color: To match material adjacent to louver and screen.

- C. High-Performance Organic Finish: 2-coat fluoropolymer finish complying with AAMA 2605 and containing not less than 50 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Locate and place louvers and vents level, plumb, and at indicated alignment with adjacent work.
- B. Use concealed anchorages where possible. Provide brass or lead washers fitted to screws where required to protect metal surfaces and to make a weathertight connection.
- C. Provide perimeter reveals and openings of uniform width for sealants and joint fillers, as indicated.
- D. Repair damaged finishes so no evidence remains of corrective work. Return items that cannot be refinished in the field to the factory and refinish entire unit or provide new units.
- E. Protect galvanized and nonferrous-metal surfaces that will be in contact with concrete, masonry, or dissimilar metals from corrosion and galvanic action by applying a heavy coating of bituminous paint.

END OF SECTION 089000

SECTION 099113
EXTERIOR PAINTING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes surface preparation and the application of paint systems on the following exterior substrates:
1. Concrete.
 2. Concrete masonry units (CMU).
 3. Steel.
 4. Galvanized metal.
 5. Exterior fiber cement siding.

1.2 DEFINITIONS

- A. Gloss Level 1: Not more than 5 units at 60 degrees and 10 units at 85 degrees, according to ASTM D 523.
- B. Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.
- C. Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D 523.
- D. Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D 523.
- E. Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523.
- F. Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D 523.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product. Include preparation requirements and application instructions.
- B. Samples: For each type of paint system and each color and gloss of topcoat.
- C. Product List: For each product indicated. Include printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.

1.4 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Paint: 5 percent, but not less than 1 gal. of each material and color applied.

1.5 QUALITY ASSURANCE

- A. Mockups: Apply mockups of each paint system indicated and each color and finish selected to verify preliminary selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 - 1. City of Norcross will select one surface to represent surfaces and conditions for application of each paint system specified in Part 3.
 - a. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft.
 - b. Other Items: Architect will designate items or areas required.
 - 2. Final approval of color selections will be based on mockups.
 - a. In addition to preliminary color selections are not approved, apply additional mockups of additional colors selected by City of Norcross at no added cost to Owner.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Products: Subject to compliance with requirements, provide product listed in other Part 2 articles for the paint category indicated.

2.2 PAINT, GENERAL

- A. MPI Standards: Provide products that comply with MPI standards indicated and that are listed in its "MPI Approved Products List."
- B. Material Compatibility:
 - 1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
 - 2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.
- C. VOC Content: Provide materials that comply with VOC limits of authorities having jurisdiction.

- D. Colors: As indicated in the finish schedule on the Architectural Drawings.

2.3 BLOCK FILLERS

- A. Block Filler, Latex, Interior/Exterior: MPI #4.
1. Sherwin-Williams as specified on Architectural Finish Schedule
 2. Substitution is acceptable as approved by Architect.

2.4 PRIMERS/SEALERS

- A. Primer, Alkali Resistant, Water Based: MPI #3.
1. Sherwin-Williams as specified on Architectural Finish Schedule
 2. Substitution is acceptable as approved by Architect.
- B. Primer, Bonding, Water Based: MPI #17.
1. Sherwin-Williams as specified on Architectural Finish Schedule
 2. Substitution is acceptable as approved by Architect.
- C. Primer, Bonding, Solvent Based: MPI #69.
1. Sherwin-Williams as specified on Architectural Finish Schedule
 2. Substitution is acceptable as approved by Architect.

2.5 METAL PRIMERS

- A. Primer, Alkyd, Anti-Corrosive for Metal: MPI #79.
1. Sherwin-Williams as specified on Architectural Finish Schedule
 2. Substitution is acceptable as approved by Architect.
- B. Primer, Galvanized, Water Based: MPI #134.
1. Sherwin-Williams as specified on Architectural Finish Schedule
 2. Substitution is acceptable as approved by Architect.
- C. Primer, Galvanized: As recommended in writing by topcoat manufacturer.
1. Sherwin-Williams as specified on Architectural Finish Schedule
 2. Substitution is acceptable as approved by Architect.

2.6 WATER-BASED PAINTS

- A. Latex, Exterior Flat (Gloss Level 1): MPI #10.
 - 1. Sherwin-Williams as specified on Architectural Finish Schedule
 - 2. Substitution is acceptable as approved by Architect.
- B. Latex, Exterior Semi-Gloss (Gloss Level 5): MPI #11.
 - 1. Sherwin-Williams as specified on Architectural Finish Schedule
 - 2. Substitution is acceptable as approved by Architect.
- C. Latex, Exterior, Gloss (Gloss Level 6): MPI #119.
 - 1. Sherwin-Williams as specified on Architectural Finish Schedule
 - 2. Substitution is acceptable as approved by Architect.

2.7 SOLVENT-BASED PAINTS

- A. Alkyd, Exterior Flat (Gloss Level 1): MPI #8.
 - 1. Sherwin-Williams as specified on Architectural Finish Schedule
 - 2. Substitution is acceptable as approved by Architect.
- B. Alkyd, Exterior, Semi-Gloss (Gloss Level 5): MPI #94.
 - 1. Sherwin-Williams as specified on Architectural Finish Schedule
 - 2. Substitution is acceptable as approved by Architect.
- C. Alkyd, Exterior Gloss (Gloss Level 6): MPI #9.
 - 1. Sherwin-Williams as specified on Architectural Finish Schedule
 - 2. Substitution is acceptable as approved by Architect.
- D. Alkyd, Quick Dry, Semi-Gloss (Gloss Level 5): MPI #81.
 - 1. Sherwin-Williams as specified on Architectural Finish Schedule
 - 2. Substitution is acceptable as approved by Architect.
- E. Alkyd, Quick Dry, Gloss (Gloss Level 7): MPI #96.
 - 1. Sherwin-Williams as specified on Architectural Finish Schedule
 - 2. Substitution is acceptable as approved by Architect.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
- B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
 - 1. Concrete: 12 percent.
- C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- D. Proceed with coating application only after unsatisfactory conditions have been corrected.
 - 1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates and paint systems indicated.
- B. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
 - 1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.

3.3 APPLICATION

- A. Apply paints according to manufacturer's written instructions and recommendations in "MPI Manual."
- B. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

3.4 CLEANING AND PROTECTION

- A. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- B. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.5 EXTERIOR PAINTING SCHEDULE

A. CMU Substrates:

1. Latex System:
 - a. Prime Coat: Block filler, latex, interior/exterior.
 - b. Intermediate Coat: Latex, exterior, matching topcoat.
 - c. Topcoat: Latex, exterior flat (Gloss Level 1).
 - d. Topcoat: Latex, exterior, low sheen (Gloss Level 3-4).
 - e. Topcoat: Latex, exterior semi-gloss (Gloss Level 5).
 - f. Topcoat: Latex, exterior gloss (Gloss Level 6).
2. Latex over Alkali-Resistant Primer System:
 - a. Prime Coat: Primer, alkali resistant, water based.
 - b. Intermediate Coat: Latex, exterior, matching topcoat.
 - c. Topcoat: Latex, exterior flat (Gloss Level 1).
 - d. Topcoat: Latex, exterior, low sheen (Gloss Level 3-4).
 - e. Topcoat: Latex, exterior semi-gloss (Gloss Level 5).
 - f. Topcoat: Latex, exterior gloss (Gloss Level 6).
3. Latex Aggregate System:
 - a. Prime Coat: As recommended in writing by topcoat manufacturer.
 - b. Intermediate Coat: As recommended in writing by topcoat manufacturer.
 - c. Topcoat: Textured coating, latex, flat.

B. Steel Substrates:

1. Water-Based Light Industrial Coating System:
 - a. Prime Coat: Primer, alkyd, anti-corrosive for metal.
 - b. Prime Coat: Shop primer specified in Section where substrate is specified.
 - c. Intermediate Coat: Light industrial coating, exterior, water based, matching topcoat.
 - d. Topcoat: Light industrial coating, exterior, water based (Gloss Level 3).
 - e. Topcoat: Light industrial coating, exterior, water based, semi-gloss (Gloss Level 5).
 - f. Topcoat: Light industrial coating, exterior, water based, gloss (Gloss Level 6).
2. Alkyd System:
 - a. Prime Coat: Primer, alkyd, anticorrosive for metal.
 - b. Prime Coat: Shop primer specified in Section where substrate is specified.
 - c. Intermediate Coat: Exterior alkyd enamel matching topcoat.
 - d. Topcoat: Alkyd, exterior, flat (Gloss Level 1).
 - e. Topcoat: Alkyd, exterior, semi-gloss (Gloss Level 5).
 - f. Topcoat: Alkyd, exterior, gloss (Gloss Level 6).
3. Quick-Drying Enamel System:

- a. Prime Coat: Primer, alkyd, quick dry, for metal.
- b. Intermediate Coat: Alkyd, quick dry, matching topcoat.
- c. Topcoat: Alkyd, quick dry, semi-gloss (Gloss Level 5).
- d. Topcoat: Alkyd, quick dry, gloss (Gloss Level 7).

C. Galvanized-Metal Substrates:

1. Latex System:

- a. Prime Coat: Primer, galvanized, water based.
- b. Prime Coat: Primer, galvanized metal, as recommended in writing by topcoat manufacturer for exterior use on galvanized-metal substrates with topcoat indicated.
- c. Intermediate Coat: Latex, exterior, matching topcoat.
- d. Topcoat: Latex, exterior flat (Gloss Level 1).
- e. Topcoat: Latex, exterior, low sheen (Gloss Level 3-4).
- f. Topcoat: Latex, exterior semi-gloss (Gloss Level 5).
- g. Topcoat: Latex, exterior gloss (Gloss Level 6).

2. Alkyd System:

- a. Prime Coat: Primer, galvanized metal, as recommended in writing by topcoat manufacturer for exterior use on galvanized-metal substrates with topcoat indicated.
- b. Intermediate Coat: Exterior alkyd enamel matching topcoat.
- c. Topcoat: Alkyd, exterior, flat (Gloss Level 5).
- d. Topcoat: Alkyd, exterior, semi-gloss (Gloss Level 5).
- e. Topcoat: Alkyd, exterior, gloss (Gloss Level 5).

D. Aluminum Substrates:

1. Water-Based Light Industrial Coating System:

- a. Prime Coat: Primer, quick dry, for aluminum.
- b. Intermediate Coat: Light industrial coating, exterior, water based, matching topcoat.
- c. Topcoat: Light industrial coating, exterior, water based (Gloss Level 3).
- d. Topcoat: Light industrial coating, exterior, water based, semi-gloss (Gloss Level 5).
- e. Topcoat: Light industrial coating, exterior, water based, gloss (Gloss Level 6).

2. Alkyd System:

- a. Prime Coat: Primer, quick dry, for aluminum.
- b. Intermediate Coat: Exterior alkyd enamel matching topcoat.
- c. Topcoat: Alkyd, exterior, flat (Gloss Level 5).
- d. Topcoat: Alkyd, exterior, semi-gloss (Gloss Level 5).
- e. Topcoat: Alkyd, exterior, gloss (Gloss Level 5).

END OF SECTION 099113

SECTION 10 44 16
FIRE EXTINGUISHERS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes portable, hand-carried fire extinguishers and mounting brackets for fire extinguishers.

1.2 ACTION SUBMITTALS

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

1.3 INFORMATIONAL SUBMITTALS

- A. Warranty: Sample of special warranty.

1.4 CLOSEOUT SUBMITTALS

- A. Operation and maintenance data.

1.5 COORDINATION

- A. Coordinate type and capacity of fire extinguishers with fire-protection cabinets to ensure fit and function.

1.6 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace fire extinguishers that fail in materials or workmanship within specified warranty period.

- 1. Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. NFPA Compliance: Fabricate and label fire extinguishers to comply with NFPA 10, "Portable Fire Extinguishers."
- B. Fire Extinguishers: Listed and labeled for type, rating, and classification by an independent testing agency acceptable to authorities having jurisdiction.

2.2 PORTABLE, HAND-CARRIED FIRE EXTINGUISHERS

- A. Fire Extinguishers: Type, size, and capacity for each mounting bracket indicated.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Amerex Corporation.
 - b. Ansul Incorporated.
 - c. Buckeye Fire Equipment Company.
 - d. Guardian Fire Equipment, Inc.
 - e. Larsens Manufacturing Company.
 - f. Moon American.
 - g. Nystrom Building Products.
 - h. Pem All Fire Extinguisher Corp.
 - i. Strike First Corporation of America.
 - 2. Instruction Labels: Include pictorial marking system complying with NFPA 10, Appendix B.
- B. Regular Dry-Chemical Type : 2-A; 10-B:C

2.3 MOUNTING BRACKETS

- A. Mounting Brackets: Manufacturer's standard galvanized steel, designed to secure fire extinguisher to wall or structure, of sizes required for types and capacities of fire extinguishers indicated, with plated or black baked-enamel finish.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Amerex Corporation.
 - b. Ansul Incorporated.
 - c. Buckeye Fire Equipment Company.
 - d. Guardian Fire Equipment, Inc.

- e. Larsens Manufacturing Company.
 - f. Strike First Corporation of America.
- B. Identification: Lettering complying with authorities having jurisdiction for letter style, size, spacing, and location. Locate as indicated by Architect.
- 1. Identify bracket-mounted fire extinguishers with the words "FIRE EXTINGUISHER" in red letter decals applied to mounting surface.

PART 3 - EXECUTION

- 3.1 General Contractor must coordinate with local Fire Marshal on types and locations of Fire Extinguishers before the purchase of the Fire Extinguishers.
- 3.2 INSTALLATION
- A. Examine fire extinguishers for proper charging and tagging.
 - 1. Remove and replace damaged, defective, or undercharged fire extinguishers.
 - B. Install fire extinguishers and mounting brackets in locations indicated and in compliance with requirements of authorities having jurisdiction.
 - 1. Mounting Brackets: 54 inches above finished floor to top of fire extinguisher.
 - C. Mounting Brackets: Fasten mounting brackets to surfaces, square and plumb, at locations indicated.

END OF SECTION 10 44 16

SECTION 31 31 16

TERMITE CONTROL

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Soil treatment with termiticide.
2. Bait-station system.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include the EPA-Registered Label for termiticide products.

1.3 INFORMATIONAL SUBMITTALS

A. Product certificates.

B. Soil Treatment Application Report: Include the following:

1. Date and time of application.
2. Moisture content of soil before application.
3. Termiticide brand name and manufacturer.
4. Quantity of undiluted termiticide used.
5. Dilutions, methods, volumes used, and rates of application.
6. Areas of application.
7. Water source for application.

C. Bait-Station System Application Report: Include the following:

1. Location of areas and sites conducive to termite feeding and activity.
2. Plan drawing showing number and locations of bait stations.
3. Dated report for each monitoring and inspection occurrence indicating level of termite activity, procedure, and treatment applied before time of Substantial Completion.
4. Termiticide brand name and manufacturer.
5. Quantities of termiticide used.
6. Schedule of inspections for one year from date of Substantial Completion.

D. Warranties: Sample of special warranties.

1.4 QUALITY ASSURANCE

- A. **Installer Qualifications:** A specialist who is licensed according to regulations of authorities having jurisdiction to apply termite control treatment and products in jurisdiction where Project is located and who employs workers trained and approved by manufacturer to install manufacturer's products.
- B. **Regulatory Requirements:** Formulate and apply termiticides and termiticide devices according to the EPA-Registered Label.

1.5 PROJECT CONDITIONS

- A. **Environmental Limitations:** To ensure penetration, do not treat soil that is water saturated or frozen. Do not treat soil while precipitation is occurring. Comply with requirements of the EPA-Registered Label and requirements of authorities having jurisdiction.
- B. **Coordinate soil treatment application with excavating, filling, grading, and concreting operations.** Treat soil under footings, grade beams, and ground-supported slabs before construction.
- C. **Install bait-station system during construction to determine areas of termite activity.**

1.6 WARRANTY

- A. **Soil Treatment Special Warranty:** Manufacturer's standard form, signed by Applicator and Contractor, certifying that termite control work, consisting of applied soil termiticide treatment, will prevent infestation of subterranean termites. If subterranean termite activity or damage is discovered during warranty period, re-treat soil and repair or replace damage caused by termite infestation.

- 1. **Warranty Period:** Five years from date of Substantial Completion.

1.7 MAINTENANCE SERVICE

- A. **Continuing Service:** Beginning at Substantial Completion, provide 12 months continuing service including monitoring, inspection, and re-treatment for occurrences of termite activity. Provide a standard continuing service agreement. State services, obligations, conditions, terms for agreement period, and terms for future renewal options.

PART 2 - PRODUCTS

2.1 SOIL TREATMENT

- A. Termiticide: Provide an EPA-Registered termiticide, complying with requirements of authorities having jurisdiction, in an aqueous solution formulated to prevent termite infestation. Provide quantity required for application at the label volume and rate for the maximum termiticide concentration allowed for each specific use, according to product's EPA-Registered Label.
1. Products: Subject to compliance with requirements, provide one of the following:
 - a. BASF Corporation, Agricultural Products; Termidor.
 - b. Bayer Environmental Science; Premise 75.
 - c. FMC Corporation, Agricultural Products Group
 - d. Syngenta
 - e. Submit Approved Equal to DWR Staff and Architect
 2. Service Life of Treatment: Soil treatment termiticide that is effective for not less than five years against infestation of subterranean termites.

2.2 BAIT-STATION SYSTEM

- A. Provide bait stations based on the dimensions of building perimeter indicated on Drawings, according to manufacturer's EPA-Registered Label for product, manufacturer's written instructions, and the following:
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. BASF Corporation, Agricultural Products; Subterfuge.
 - b. Dow AgroSciences LLC; Sentricon System.
 - c. Ensysstex, Inc.; Exterra System.
 - d. FMC Corporation, Agricultural Products Group; First Line.
 - e. Whitmire Micro-Gen Research Laboratories, Inc.; Advance TBS.
 - f. Submit Approved Equal to DWR Staff and Architect
 2. Bait station per City of Norcross request.

PART 3 - EXECUTION

3.1 APPLICATION, GENERAL

- A. General: Comply with the most stringent requirements of authorities having jurisdiction and with manufacturer's EPA-Registered Label for products.

3.2 APPLYING SOIL TREATMENT

- A. Proceed with application only after unsatisfactory conditions have been corrected.
- B. Soil Treatment Preparation: Remove foreign matter and impermeable soil materials that could decrease treatment effectiveness on areas to be treated. Loosen, rake, and level soil to be treated except previously compacted areas under slabs and footings. Termiticides may be applied before placing compacted fill under slabs if recommended in writing by termiticide manufacturer.
 1. Fit filling hose connected to water source at the site with a backflow preventer, complying with requirements of authorities having jurisdiction.
- C. Application: Mix soil treatment termiticide solution to a uniform consistency. Provide quantity required for application at the label volume and rate for the maximum specified concentration of termiticide, according to manufacturer's EPA-Registered Label, to the following so that a continuous horizontal and vertical termiticidal barrier or treated zone is established around and under building construction. Distribute treatment evenly.
 1. Slabs-on-Grade: Underground-supported slab construction, including footings, building slabs, and attached slabs as an overall treatment. Treat soil materials before concrete footings and slabs are placed.
 2. Foundations: Adjacent soil, including soil along the entire inside perimeter of foundation walls; along both sides of interior partition walls; around plumbing pipes and electric conduit penetrating the slab; around interior column footers, piers, and chimney bases; and along the entire outside perimeter, from grade to bottom of footing. Avoid soil washout around footings.
 3. Penetrations: At expansion joints, control joints, and areas where slabs will be penetrated.
- D. Avoid disturbance of treated soil after application. Keep off treated areas until completely dry.
- E. Protect termiticide solution, dispersed in treated soils and fills, from being diluted until ground-supported slabs are installed. Use waterproof barrier according to EPA-Registered Label instructions.
- F. Post warning signs in areas of application.
- G. Reapply soil treatment solution to areas disturbed by subsequent excavation, grading, landscaping, or other construction activities following application.

3.3 INSTALLING BAIT-STATION SYSTEM

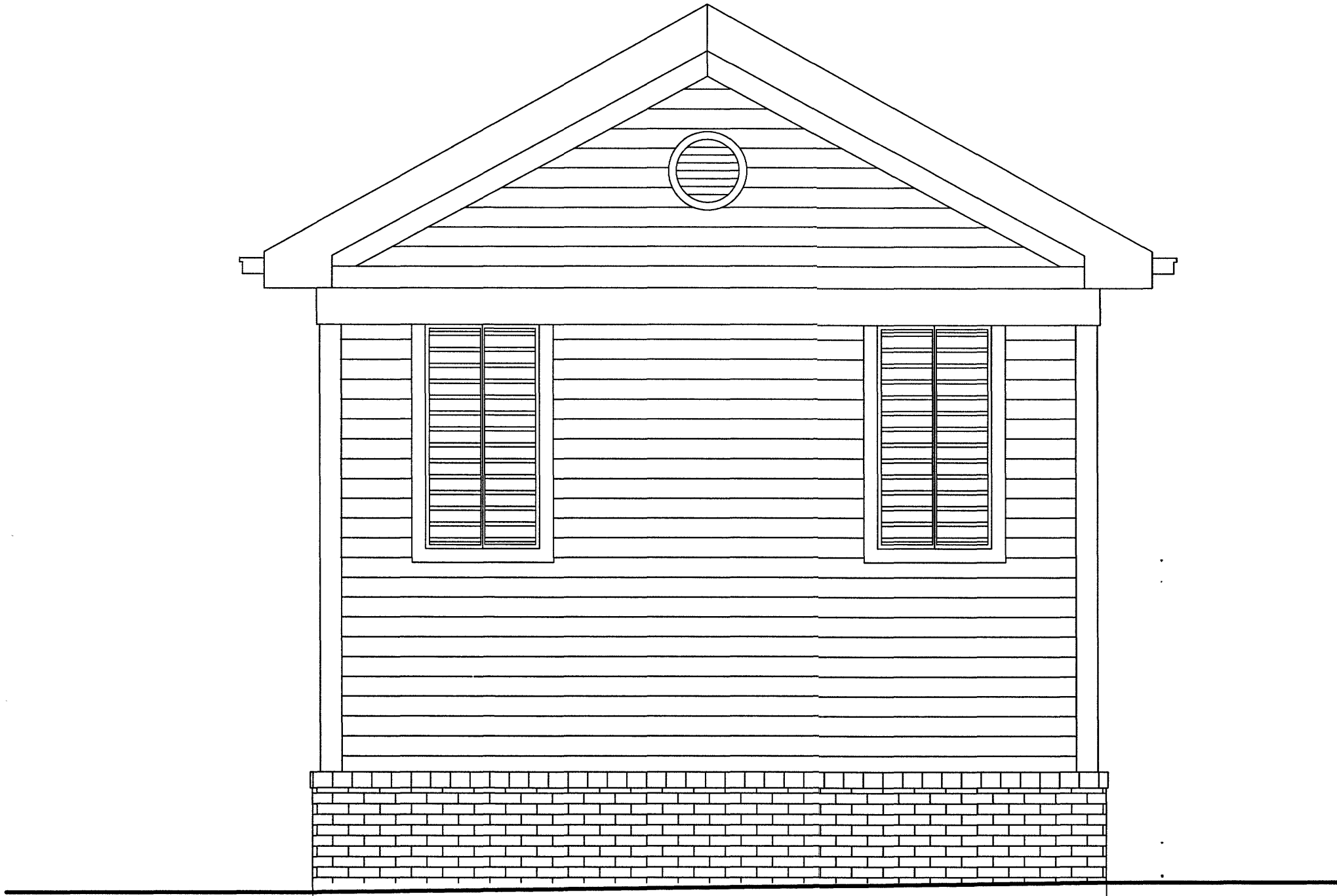
- A. Place bait stations according to the EPA-Registered Label for the product and manufacturer's written instructions, in the following areas that are conducive to termite feeding and activity:

1. Conductive sites and locations indicated on Drawings.
 2. In and around infested trees and stumps.
 3. In mulch beds.
 4. Where wood directly contacts soil.
 5. Areas of high soil moisture.
 6. Near irrigation sprinkler heads.
 7. Each area where roof drainage system, including downspouts and scuppers, drains to soil.
 8. Along driplines of roof overhangs without gutters.
 9. Where condensate lines from mechanical equipment drip or drain to soil.
 10. At plumbing penetrations through ground-supported slabs.
 11. Other sites and locations as determined by licensed Installer.
- B. Inspect and service bait stations from time of their application until Substantial Completion, according to the EPA-Registered Label for product and manufacturer's written instructions for termite management system and bait products.

END OF SECTION 31 31 16

DOWNTOWN NORCROSS COMPACTOR ENCLOSURE

BEHIND 7 JONES ST NW
WINGO STREET NW
DOWNTOWN NORCROSS
NORCROSS, GEORGIA 30071

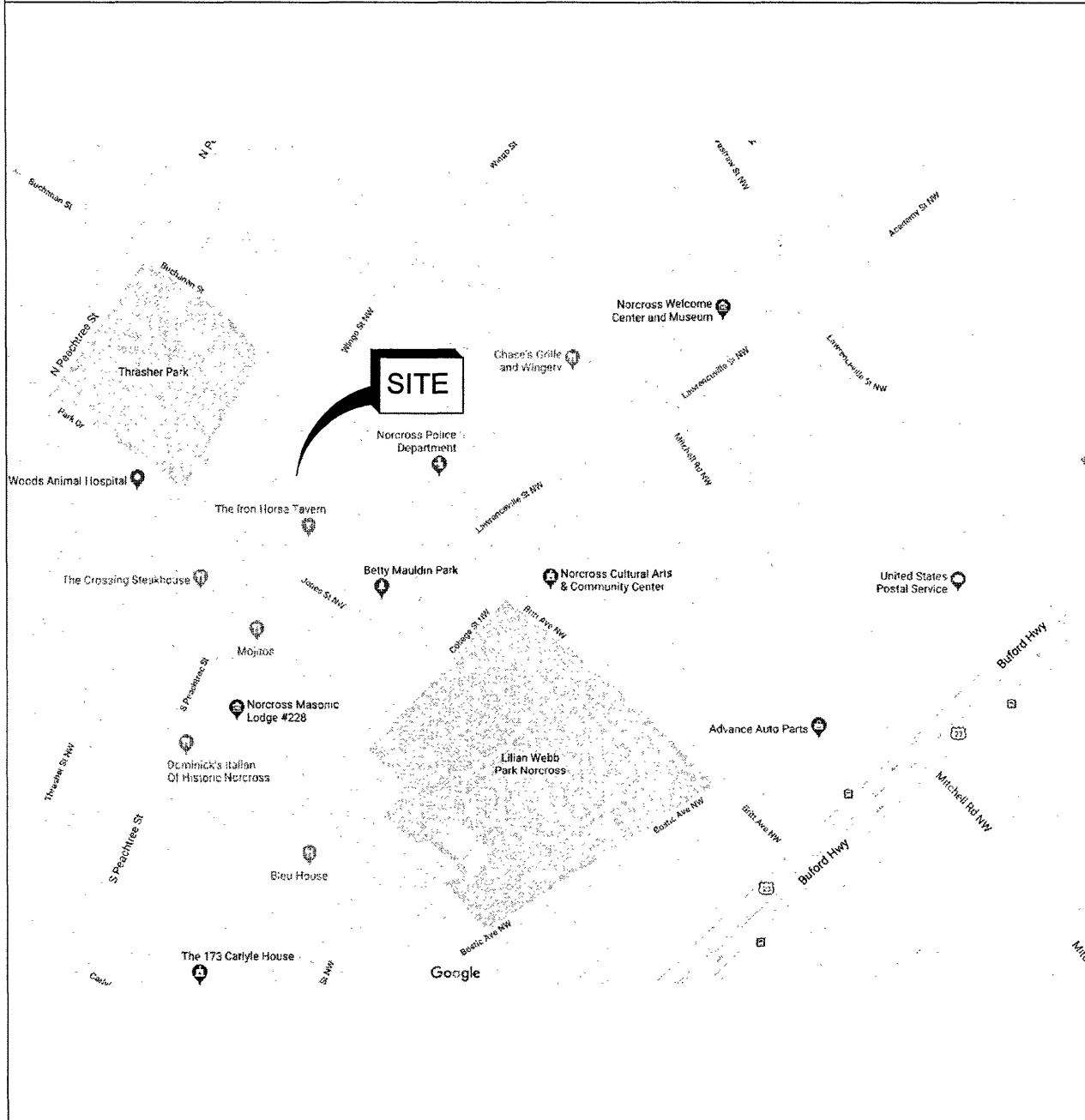


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CONSTRUCTION REVISIONS

No.	Sheets

VICINITY MAP



DRAWING INDEX

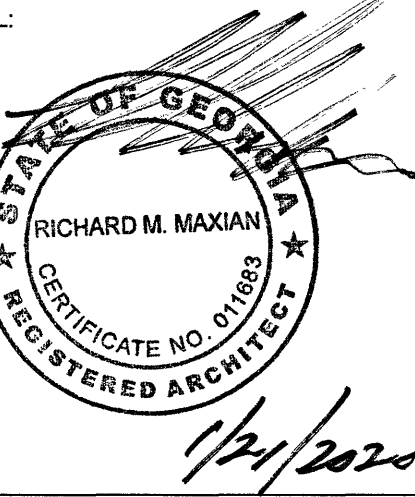
GENERAL	
SHEET NUMBER	SHEET NAME
G-001	COVER SHEET
G-002	GENERAL NOTES AND ABBREVIATIONS
ARCHITECTURAL	
SHEET NUMBER	SHEET NAME
A-100	ARCHITECTURAL SITE PLAN
A-101	FLOOR PLAN, RCP & ROOF PLAN
A-201	EXTERIOR ELEVATION & DOOR SCHEDULE
A-301	WALL SECTIONS
A-401	ENLARGED DETAILS
MECHANICAL / PLUMBING	
SHEET NUMBER	SHEET NAME
AE-101	ELECTRICAL PLAN



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PROFESSIONAL SEAL:



PROJECT TITLE:

DOWNTOWN
NORCROSS
COMPACTOR
ENCLOSURE

Norcross, Georgia

PROJECT INFO:

BEHIND 7 JONES ST NW
WINGO STREET NW
DOWNTOWN NORCROSS
NORCROSS, GEORGIA 30071

OWNER:

CITY OF
NORCROSS

65 LAWRENCEVILLE STREET
NORCROSS, GEORGIA 30071

PRINT RECORD

Description	Date
CITY SUBMITTAL	01/21/2020

REVISION

No.	Description	Date

COVER SHEET

Project number	D18-134
Date	01/21/2020
Drawn by	B.C.R.
Checked by	R.M.M.

G-001

Scale NONE

ISSUED FOR CONSTRUCTION

GENERAL NOTES.

FIREWALL & FIRE BARRIER LABELING
CONTRACTOR TO INSTALL LABELING OR STENCILING AT 12'-0" ON CENTER ABOVE SUSPENDED OR FIXED CEILING SYSTEMS STATING:
"1 HOUR RATED FIRE OR SMOKE BARRIER PROTECT ALL OPENINGS."
COORDINATE WITH LOCAL FIRE MARSHAL.

BEAMS AND COLUMNS THAT ARE PART OF A FIRE RATED WALL OR CEILING ASSEMBLY SHALL BE PROTECTED TO ACHIEVE THE FIRE RATING OF THE WALL OR CEILING ASSEMBLY PER NFPA 101 LIFE SAFETY CODE, CHAPTER 8.

OCCUPANCY SEPARATIONS SHALL BE PROVIDED PER THE INTERNATIONAL BUILDING CODE, THE LATEST EDITION.

SPRINKLER SYSTEM NOTES:
THIS BUILDING IS FULLY PROTECTED BY A HYDRAULICALLY CALCULATED WET PIPE FIRE SPRINKLER SYSTEM. APPROPRIATE SECTIONS OF CHAPTER 36 OF THE STANDARD FIRE PREVENTION CODE WILL BE ADDRESSED ACCORDINGLY. A PROPER HOLDER OF A GEORGIA CERTIFICATE OF COMPETENCY SHALL BE RESPONSIBLE FOR THE DESIGN INSTALLATION OF THE UNDERGROUND SUPPLY PIPING, STARTING AT THE POINT WHERE THE PIPING IS SOLELY DEDICATED TO FIRE PROTECTION. SPRINKLER SYSTEM DESIGN MUST BE SUBMITTED TO THE ARCHITECT AND LOCAL FIRE MARSHAL FOR APPROVAL.

AN UNDERGROUND AND ABOVEGROUND MATERIALS & TESTING CERTIFICATE WILL BE REQUIRED FOR EACH FIRE SPRINKLER SYSTEM. CERTIFIED SIGNED BY A GEORGIA CERTIFICATE HOLDER FOR UNDERGROUND PORTIONS AND CERTIFICATES DULY SIGNED BY A LICENSED FIRE SPRINKLER SYSTEMS SERVING EACH PARTICULAR BUILDING OR TENANT. TENANT SHALL NOT ARRANGE OR POSITION FIXTURES, SHELVING, GONDOLAS, ETC. IN SUCH A MANNER TO PREVENT SAFE EXIT FROM THE BUILDING. FIXTURE AND SHELVING ARRANGEMENTS SHALL BE SO POSITIONED THAT MINIMUM REQUIRED AISLE AND EGRESS WIDTHS ARE MAINTAINED IN ACCORDANCE WITH NFPA 101.

FIRE SPRINKLER CONTRACTOR SHALL OBTAIN A FIRE SPRINKLER SYSTEM PERMIT FROM THE FIRE MARSHAL'S OFFICE PRIOR TO INSTALLATION. ANY FIRE SPRINKLER PLANS INCLUDED IN THIS SET OF PLANS ARE FOR REFERENCE ONLY. NOT FOR PERMIT. SPRINKLER PLANS SHALL BE SUBMITTED BY SPRINKLER CONTRACTOR FOR ALL NEW OR RENOVATED SYSTEMS WITH THE FOLLOWING EXCEPTIONS: (1) ALL RENOVATED SYSTEMS RELOCATION 10 SPRINKLER HEADS OR LESS, (2) ALL RENOVATED SYSTEMS ADDING 6 SPRINKLER HEADS OR LESS.

FIRE EXTINGUISHERS REQUIRED
PORTABLE FIRE EXTINGUISHERS SHALL BE PROVIDED PER NFPA STANDARD NO. 10. ABC. LOCATION AND ARRANGEMENT OF THE FIRE EXTINGUISHERS WILL BE DETERMINED BY AN INSPECTOR OF THE FIRE MARSHAL'S OFFICE PRIOR TO FINAL INSPECTION.

FIRE EXTINGUISHERS IN BUSINESS & MERCANTILE OCCUPANCIES SHALL BE LOCATED PER REQUIREMENTS OF NFPA 10. THE SIZE SHALL BE A MINIMUM OF TWO (2) A 10 TWO (2) ARE REQUIRED AND SHALL BE INSTALLED AT A MAXIMUM OF 48" ABOVE THE FINISHED FLOOR TO THE TOP OF THE HANDLE.

EGRESS LIGHTING
EMERGENCY EGRESS LIGHTING MUST PROVIDE A MINIMUM 1-FOOT CANDLE UNINTERRUPTED LIGHT SOURCE ALONG THE PATH OF EGRESS.

IF LESS THAN 3 SEPARATE LIGHTING CIRCUITS ARE PROVIDED, DEDICATED CIRCUITS FOR EMERGENCY LIGHTING ARE NOT PERMITTED. THEY SHALL BE CONNECTED TO THE LIGHTING CIRCUIT BREAKER THE AREA THEY SERVE. NFPA 70, CHAPTER 7, SECTION 700-12(E). DEDICATED CIRCUITS FOR EXIT LIGHTING ARE NOT PERMITTED. THEY SHALL BE CONNECTED TO THE LIGHTING CIRCUIT BREAKER IN THE AREA THEY SERVE. NFPA 70, CHAPTER 7.

FIREWALL OUTLETS
ELECTRICAL OUTLETS ARE NOT PERMITTED ADJACENT TO EACH OTHER IN RATED FIREWALL ASSEMBLIES. BOXES MUST BE SPACED A MINIMUM TWO FEET (2') Laterally APART OR PROVIDED WITH PUTTY PADS EQUIVALENT TO THE FIREWALL RATING. VERIFY WITH LOCAL FIRE MARSHAL.

LABELING
ALL UTILITY METERS, DISCONNECT SWITCHES, FRONT & REAR DOORS MUST BE MARKED WITH CONTRASTING LETTERS & NUMBERS TO INDICATE THE TENANT SPACE THEY SERVE.

EXIT LIGHTING
ALL EXIT LIGHTS & EMERGENCY LIGHTS SHALL HAVE A MINIMUM 90 MINUTE BATTERY LIFE.

SMOKE DETECTORS
ANY HVAC EQUIPMENT PRODUCING MORE THAN 2000 CFM AIR VOLUME MUST BE EQUIPPED WITH AN AUTOMATIC SMOKE DETECTOR WITHIN THE DUCTWORK THAT IS CAPABLE OF SHUTTING DOWN THE UNIT IN THE EVENT OF FIRE. SMOKE DETECTORS MUST BE WIRED TO A VISUAL STROBE, AS WELL AS PRODUCE AN AUDIBLE ALARM SO AS TO ALERT THE BUILDING OCCUPANTS OF FIRE OR SMOKE DETECTED.

ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE CODES. COORDINATION OF ALL DISCIPLINES IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. IF THE CONTRACTOR FINDS ANY DISCREPANCIES

IN THE DOCUMENTS SUCH THAT MUST BE REPORTED IMMEDIATELY TO THE ARCHITECT. TYPICALLY DOCUMENTS INCLUDE A SPECIFICATION MANUAL. CONTRACTOR TO REVIEW THE SPECIFICATIONS FOR THE PROJECT.

CONTRACTOR MUST FIELD VERIFY ALL DIMENSIONS AT PROJECT. CONTRACTOR SHOULD NOT SCALE OFF OF DRAWINGS. CONTRACTOR NEEDS TO FIELD VERIFY EXISTING CONDITIONS TO CONFIRM DRAWINGS ARE ACCURATE. IF THE CONTRACTOR FINDS DISCREPANCIES BETWEEN FIELD CONDITIONS AND DOCUMENTS THE CONTRACTOR MUST IMMEDIATELY CONTACT THE ARCHITECT.

DOORS AND ACCESSIBILITY:
CONTRACTOR SHALL FOLLOW THE U.S. DEPARTMENT OF JUSTICE, 2010 AMERICANS WITH DISABILITIES ACT (A.D.A.) STANDARDS FOR ACCESSIBLE DESIGN. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, CLEAR AREAS AND ANY A.D.A. REQUIREMENTS BEFORE BEGINNING WORK. CONTRACTOR MUST IMMEDIATELY CONTACT THE ARCHITECT IF DISCREPANCIES ARE FOUND.

DOORS SHALL MEET THE REQUIREMENTS OF THE NFPA 101 LIFE SAFETY CODE, CHAPTER 7.

THE FLOOR LEVEL SHALL BE THE SAME ON BOTH SIDES OF THE DOOR. THE ELEVATION SHALL BE MAINTAINED FOR A DISTANCE AT LEAST EQUAL TO THE WIDTH OF THE WIDEST LEAF OF THE DOORS. NFPA 101 LIFE SAFETY CODE, CHAPTER 7.

EXIT DOORS SHALL NOT BE SUBJECT TO THE USE OF A KEY OR REQUIRE SPECIAL KNOWLEDGE TO OPERATE, NFPA 101 LIFE SAFETY CODE, CHAPTER 7, 2012 EDITION.

DOORS/HARDWARE, HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERATING DEVICES ON ACCESSIBLE DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING, OR TWISTING OF THE WRIST TO OPERATE. LEVER-OPERATED MECHANISMS, PUSH-TYPE MECHANISMS, AND U-SHAPED HANDLES ARE ACCEPTABLE DESIGNS. THESE TYPES SHALL BE SUPPLIED PER THE ADA STANDARDS FOR ACCESSIBLE DESIGN. TO THE BEST OF OUR KNOWLEDGE THIS INFORMATION ON THESE DRAWINGS COMPLY WITH ADA. CONTRACTOR MUST VERIFY BEFORE PURCHASE OF DEVICES.

TYPICAL MINIMUM MANEUVERING CLEARANCES ON THE PULL SIDE OF DOOR SHALL BE A MINIMUM OF 18". PER THE ADA STANDARDS FOR ACCESSIBLE DESIGN.

MINIMUM MANEUVERING CLEARANCES IN THE PUSH SIDE OF THE DOOR SHALL BE A MINIMUM OF 12" IF THE DOOR HAS A CLOSER AND A LATCH.

PER THE ADA STANDARDS FOR ACCESSIBLE DESIGN.
THE TOPS OF ACCESSIBLE TABLES AND COUNTERS SHALL BE FROM 28 INCHES TO 34 INCHES ABOVE THE FINISHED FLOOR OR GROUND PER ADA STANDARDS FOR ACCESSIBLE DESIGN.

DRINKING FOUNTAINS:
IF APPLICABLE, WHERE ONLY ONE DRINKING FOUNTAIN IS PROVIDED ON A FLOOR, THERE SHALL BE A DRINKING FOUNTAIN WHICH IS ACCESSIBLE TO INDIVIDUALS WHO USE WHEEL CHAIRS IN ACCORDANCE WITH 2010 ADA, AND ONE ACCESSIBLE TO THOSE WHO HAVE DIFFICULTY BENDING OR STOOPING. THIS CAN BE ACCOMMODATED BY USE OF A "HI-LO" FOUNTAIN. ADVISORY 602.6 WATER FLOW. THE PURPOSE OF REQUIRING THE DRINKING FOUNTAIN SPOUT TO PRODUCE A FLOW OF WATER 4 INCHES (100 MM) HIGH MINIMUM IS SO THAT A CUP CAN BE INSERTED UNDER THE FLOW OF WATER TO PROVIDE A DRINK OF WATER FOR AN INDIVIDUAL WHO, BECAUSE OF A DISABILITY, WOULD OTHERWISE BE INCAPABLE OF USING THE DRINKING FOUNTAIN.

STORAGE RACKING, IF REQUIRED:
PROVIDE A STORAGE RACKING PLAN FOR ANY STORAGE AREA WHERE RACKING IS INSTALLED AND COMBUSTIBLE MATERIALS ARE TO BE STORED OVER 12 FEET. THE STORAGE RACKING PLAN SHALL BE SUBMITTED AND APPROVED BEFORE RACKS ARE INSTALLED. PER THE INTERNATIONAL FIRE CODE, 2012 EDITION. ADDITIONAL EXIT AND EMERGENCY LIGHTING MY BE REQUIRED UPON THE INSTALLATION OF STORAGE RACKS. THE FOLLOWING INFORMATION IS REQUIRED TO OBTAIN A RACKING PERMIT (A) A COMMODITY AFFIDAVIT ON COMPANY LETTERHEAD DESCRIBING THE COMMODITY THAT IS BEING STORED. PROVIDE INFORMATION ON PLASTICS AND HAZARDOUS MATERIALS (SEE ATTACHED SHEET TO DETERMINE THE COMMODITY CLASS) (B) SCALED FLOOR PLANS OF THE BUILDING HIGHLIGHTING THE DESIGNATED STORAGE AREA AND LABEL ALL AREAS AS TO THEIR USE (C) ELEVATIONS OF THE RACKS WITH THE STORAGE HEIGHT DIMENSIONS. NOTE: FOUR FEET WILL AUTOMATICALLY BE ADDED TO THE TOP SHELF TO DETERMINE STORAGE HEIGHT (D) INFORMATION ON HOW PRODUCT IS STORED (I.E. WOOD CARTONS, PLASTIC PALLETS, SHELVES, WIRE MESH) (E) INFORMATION ON HOW PRODUCT IS PACKED (I.E. BOXES, CARTONS, CONTAINERS). ARE PALLET LOADS SHRINK WRAPPED? (F) IF THE BUILDING HAS A SPRINKLER SYSTEM, PROVIDE THE DENSITY.

STREET AND TENANT NUMBERS:
THE STREET NUMBERS MUST BE VISIBLE FROM THE STREET THAT PROVIDES DRIVEWAY ACCESS TO THE PROPERTY AND PLACES ON A CONTRASTING BACKGROUND THAT PROVIDES 24 HOUR VISIBILITY. THE STREET NUMBERS MUST ALSO MEET ONE OF THE FOLLOWING SIZE REQUIREMENTS (1) IF THE STREET NUMBER IS PLACED WITHIN 15 FEET OF THE CURB OR EDGE OF PAVEMENT OF THE STREET, THE STREET NUMBER SHALL BE POSTED IN FIGURES AT LEAST 4 INCHES IN HEIGHT. (2) IF THE STREET NUMBER IS PLACED MORE THAN 15 FEET FROM THE CURB OR

EDGE OF PAVEMENT OF THE STREET, THE STREET NUMBER SHALL BE POSTED IN FIGURES AT LEAST 6 INCHES IN HEIGHT. INTERNATIONAL FIRE CODE CHAPTER 5, 2012 EDITION.

A SIGN CLEARLY STATING THAT SMOKING IS PROHIBITED SHALL BE CONSPICUOUSLY POSTED BY THE BUILDING OWNER, AGENT, OPERATOR, PERSON IN CHARGE OR PROPRIETOR AT EACH ENTRANCE OR IN A POSITION CLEARLY VISIBLE UPON ENTRY INTO THE BUILDING IN ACCORDANCE WITH GEORGIA SMOKEFREE AIR ACT OF 2005. ACCEPTABLE SIGNS SHALL DISPLAY EITHER "NO SMOKING" OR THE INTERNATIONAL "NO SMOKING" SYMBOL (CONSISTING OF A PICTORIAL REPRESENTATION OF A BURNING CIGARETTE ENCLOSED IN A RED CIRCLE WITH A RED BAR ACROSS IT).

PROVIDE SUITE DESIGNATIONS ON ALL EXTERIOR DOORS: MINIMUM SIZE OF 4".

GENERAL:
ALL CONCEALED WOOD TO BE FIRE RETARDANT UNLESS IT MEETS WOOD BLOCKING EXCEPTION IN CODE.

CONTRACTOR SHALL INSTALL WOOD BLOCKING FOR ALL WALL HUNG DEVICES SUFFICIENT TO MEET LOCAL CODES.

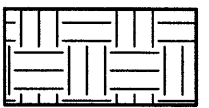
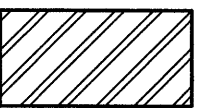
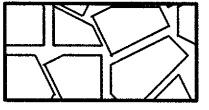
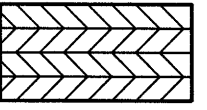
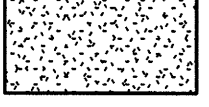
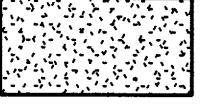
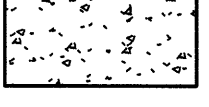
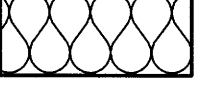
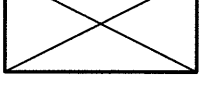
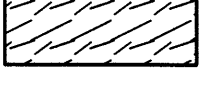
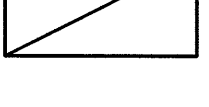
INSULATING MATERIALS INSTALLED IN BUILDING OF ANY TYPE OF CONSTRUCTION SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 450 AS DETERMINED IN ACCORDANCE WITH ASTM E84.

SIGNAGE IS NOT PERMITTED WITH THESE DOCUMENTS. A SEPARATE PERMIT FOR SIGNS MUST BE SUBMITTED.

ARCHITECTURAL ABBREVIATIONS

PLEASE REFER TO ENGINEERING DRAWINGS FOR ENGINEERING ABBREVIATIONS

A A.C.T. A.F.F. A.H.U ALT. ALUM. ANOD. APPROX. ARCH. ASTM AUX. B B/ B.F.F. BKBD BLDG. C C.I.P. C.J. C/L CLG. CLR. C.M. C.M.U. CNT. C.O. CONC. CONT. CPT. C.T. D DBL. DIA. DIV. DN. DR. D.S. DW. D.W. DWG. DWGS. E EA EF. ELEC. ELEV., EL E.M.S. E.P.D.M EQ. EQUIP. E.W. E.W.H. EX., EXIST. EXP. EXT.	A ACOUSTICAL CEILING TILE ABOVE FINISH FLOOR AIR HANDLING UNIT ALTERNATE ALUMINUM ANODIZED APPROXIMATELY ARCHITECTURAL AMERICAN SOCIETY FOR TESTING MATERIAL AUXILIARY B BOTTOM OF BOTTOM OF FINISH FLOOR BACKBOARD BUILDING C CAST IN PLACE CONTROL JOINT CENTERLINE CEILING CLEAR COFFEE MAKER CONCRETE MASONRY UNIT COUNTER CASED OPENING CONCRETE CONTINUOUS CARPET CERAMIC TILE D DOUBLE DIAMETER DIVISION DOWN DOOR DOWNSPOUT DISHWASHER DOMESTIC WATER DRAWING DRAWINGS E EACH EX-HAUST FAN ELECTRIC, ELECTRICAL ELEVATION ENERGY MANAGEMENT SYSTEM ETHYLENE PROPYLENE DIENE MONOMER EQUAL EQUIPMENT EACH WAY ELECTRIC WATER HEATER EXISTING EXPANSION EXTERIOR	F *F F.D. F.D.C. F.E. F.E.C. F.F. FT. G GA. GALV. GFCL. GL G.W.B, GYP. BD. H HC. HDWR. HM HORIZ. HR. I ID. I.M. IN. INCAND. INSUL. J JT. K K. KO. KW L LAM. LAV. LB. LF. L.S.D.
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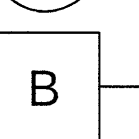
MATERIAL INDEX					GENERAL LEGEND				
 EARTH					 STEEL				
 GRAVEL					 PLYWOOD				
 GROUT OR SURFACE CONCRETE					 GYPSUM				
 CAST-IN-PLACE CONCRETE					 INSULATION - BATT OR LOOSE				
 CUT STONE					 RIGID INSULATION				
 WOOD - ROUGH					 EXTERIOR INSULATION FINISH SYSTEM				
 WOOD - FINISH					 BRICK				
 WOOD BLOCKING									
FINISH RATINGS		EXITS & PASSAGEWAYS	EXIT ACCESS CORRIDORS	ROOMS					
	MINIMUM WALL FINISH CLASS "M"	A or B	A or B	A or B					
	MINIMUM ROOF FINISH CLASS USE GROUP	A or B	A or B	A or B					



1 2

A

COLUMN LINE INDICATOR



B

FACE OF WALL INDICATOR



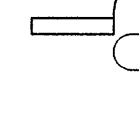
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A101

DETAIL INDICATOR

DETAIL NUMBER

SHEET NUMBER



1

DOOR NUMBER, REFER TO SCHEDULE

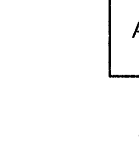


1'-0"

A

CEILING MATERIAL FINISH

CEILING HEIGHT



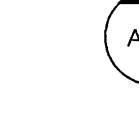
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A101

EXTERIOR ELEVATION INDICATOR

DETAIL NUMBER

SHEET NUMBER



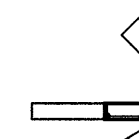
2A

A101

INTERIOR ELEVATION INDICATOR

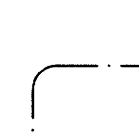
DETAIL NUMBER

SHEET NUMBER



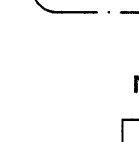
A

WALL/PARTITION TYPE



1

WINDOW TYPE, REFER TO SCHEDULE



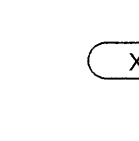
3

A101

ENLARGED PLAN/DETAIL INDICATOR

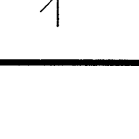
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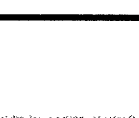
101

ROOM NAME AND NUMBER



X-1

EXTERIOR FINISH MATERIAL



1' - 10 1/2"

DIMENSION LINE

NOTE: DIMENSIONS ARE TAKEN FROM FINISHED FACE UNLESS OTHERWISE NOTED.

2.2.a

MaxDesignGroup

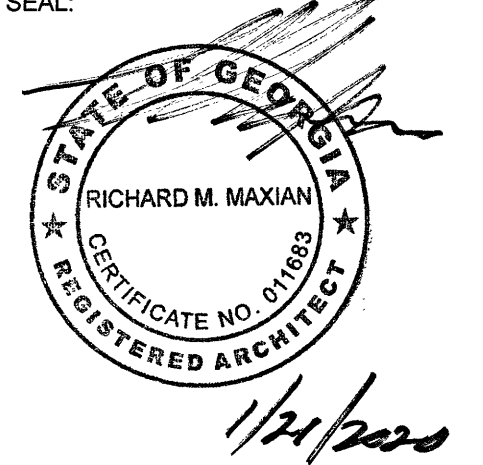
Architecture - Planning - Interiors

2882 Buford Highway
Suite 106
Duluth, Georgia 30096

Tel: 770-910-9740
Cell: 770-530-5245
Email: rmaxian@maxdesigngp.com

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PROFESSIONAL SEAL:



1/24/2020

PROJECT TITLE:

DOWNTOWN NORCROSS COMPACTOR ENCLOSURE

Norcross, Georgia

PROJECT INFO:

BEHIND 7 JONES ST NW
WINGO STREET NW
DOWNTOWN NORCROSS
NORCROSS, GEORGIA 30071

OWNER:

CITY OF NORCROSS

65 LAWRENCEVILLE STREET
NORCROSS, GEORGIA 30071

PRINT RECORD

Description	Date
CITY SUBMITTAL	01/21/2020

REVISION

No.	Description	Date

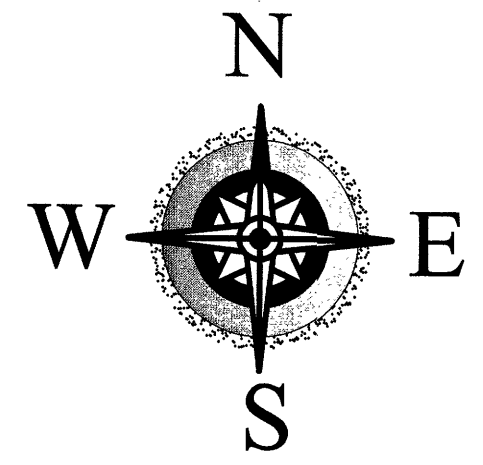
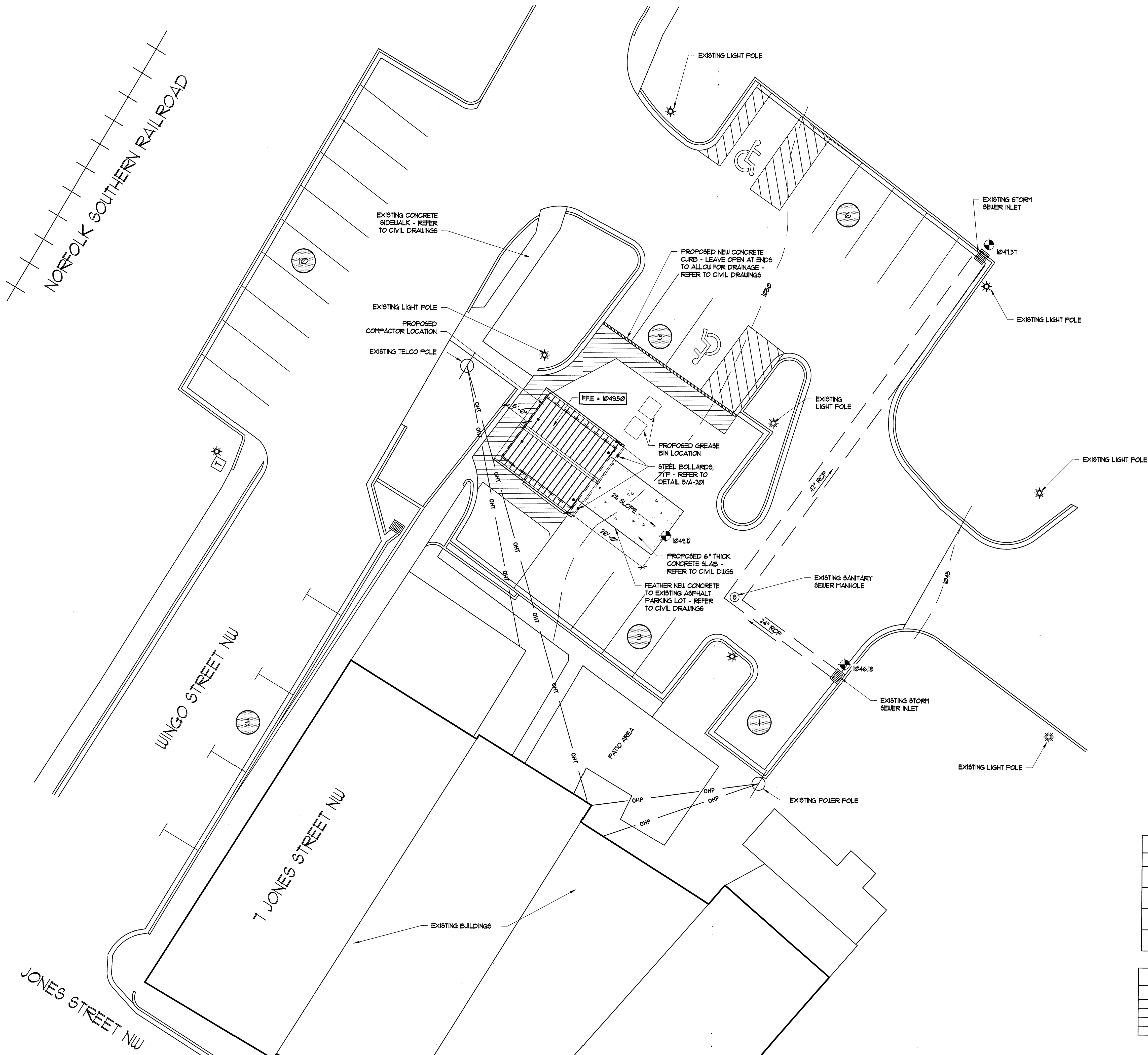
GENERAL NOTES AND ABBREVIATIONS

Project number	D18-134
Date	01/21/2020
Drawn by	B.C.R.
Checked by	R.M.M.
G-002	
Scale	NONE

ISSUED FOR CONSTRUCTION

Packet Pg. 151

Attachment: 2020-07 Compactor Enclosure Memo (20-5788 : PWUP 20-01 Downtown Norcross Compactor Enclosure)



SITE PLAN LEGEND	
SYMBOL	DESCRIPTION
	EXISTING POWER POLE
	EXISTING LIGHT POLE
	EXISTING OVERHEAD POWER LINE
	SPOT ELEVATION

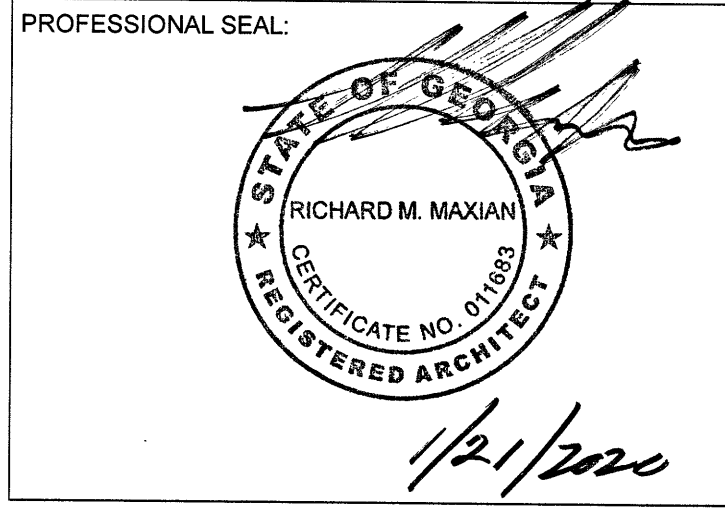
PROPOSED PARKING COUNT	
PARKING SPACE TYPE	COUNT
HANDICAP VAN ACCESS	2
REGULAR PARKING SPACE	21
TOTAL PARKING	23

NOTE:
G.C. SHALL HAVE A TOPOGRAPHY SURVEY PERFORMED FOR THIS SITE BEFORE BEGINNING WORK, AND NOTIFY ARCHITECT/CITY IF DIFFERENT THAN GRADES SHOWN ON THIS DRAWING.

1 DOWNTOWN NORCROSS COMPACTOR SITE PLAN
A-100 SCALE: 3/32" = 1'-0"
NOTE:
FOR ALL GRADES, REFER TO CIVIL DRAWINGS TO VERIFY. IF DIFFERENT, CONTACT CITY IMMEDIATELY.

MaxDesignGroup
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Email: maxdesigngroup@charter.net

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PROJECT TITLE:
DOWNTOWN NORCROSS COMPACTOR ENCLOSURE
NORCROSS, GEORGIA

PROJECT INFO:
BEHIND 7 JONES ST NW
WINGO STREET NW
DOWNTOWN NORCROSS
NORCROSS, GEORGIA 30071

OWNER:
CITY OF NORCORSS
65 LAWRENCEVILLE STREET
NORCROSS, GEORGIA 30071

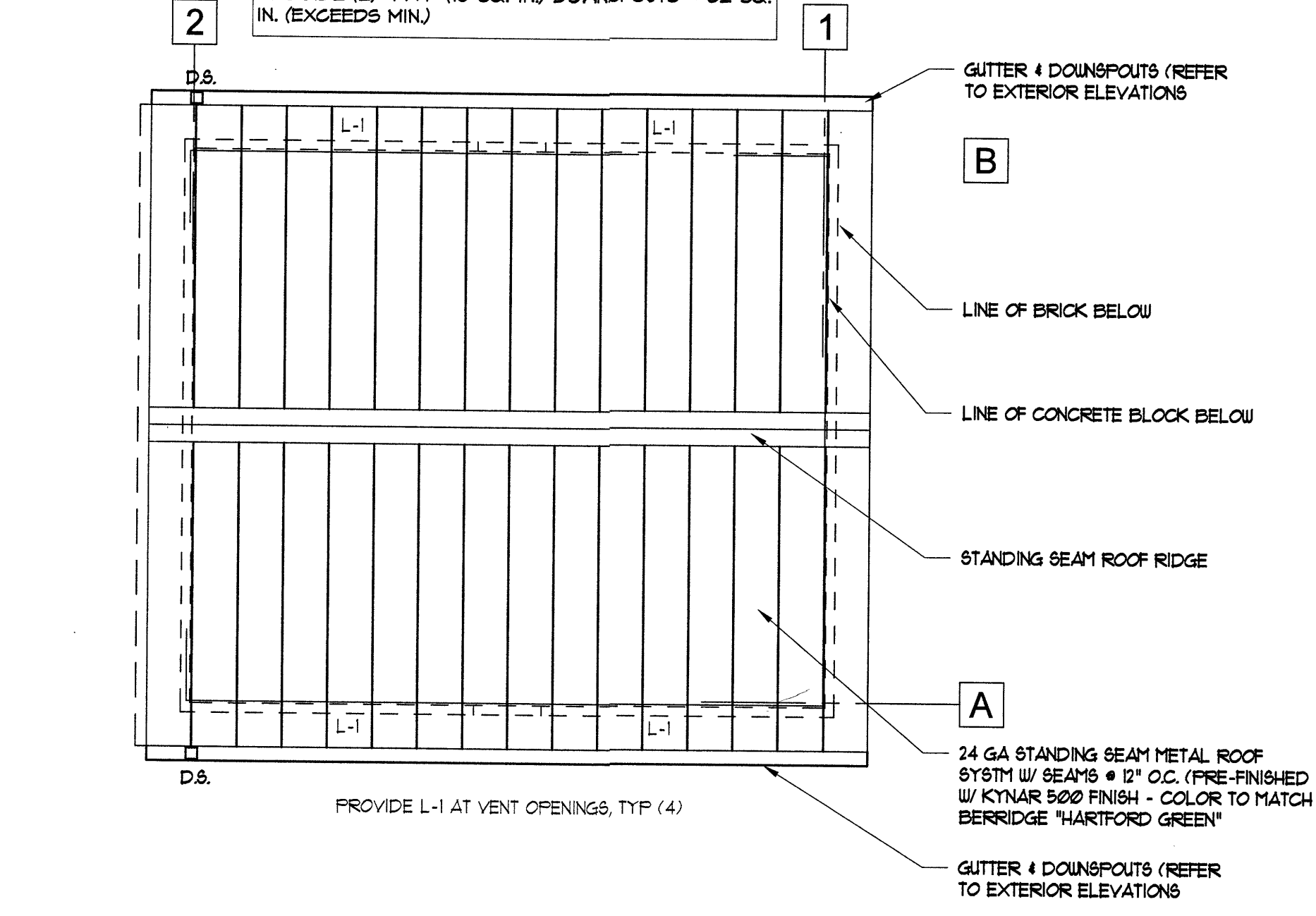
PRINT RECORD		
No.	Description	Date
1	CITY SUBMITTAL	01/21/2020

REVISION		
No.	Description	Date

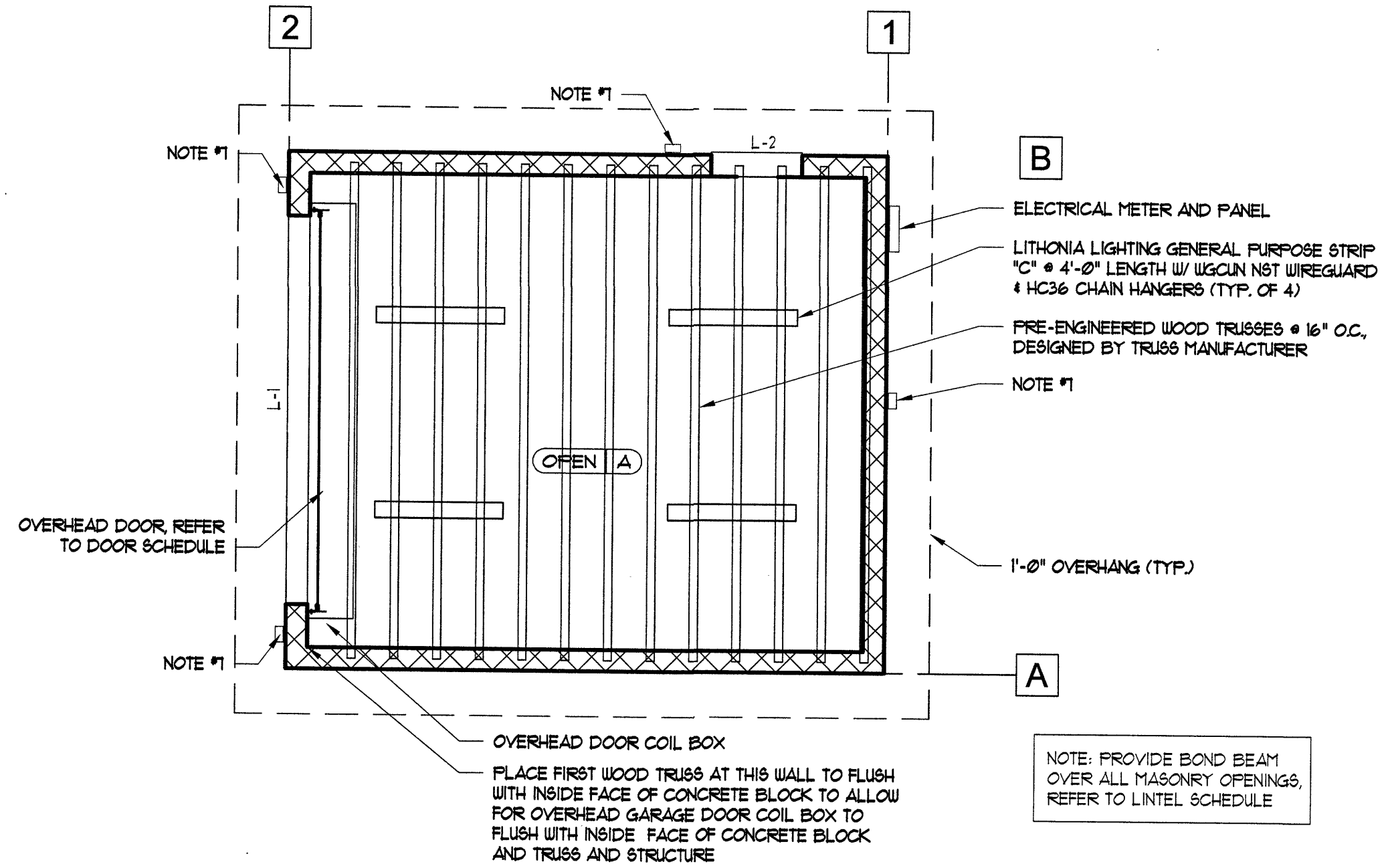
ARCHITECTURAL SITE PLAN
Project number D18-134
Date 11/25/2019
Drawn by B.C.R.
Checked by R.M.M.
A-100
Scale As indicated

ISSUED FOR CONSTRUCTION

BUILDING DRAINAGE ROOF CALCULATION:
BUILDING ROOF AREA 354 SQ. FT.
GEORGIA - 100 YEAR STORM - 120 SQ. FT. / SQ. IN.
OF DOWNSPOUT PER SHAGNA
354 SQ. FT. / 120 SQ. IN. = 3 SQ. IN. REQUIRED (MIN.)
PROVIDE (2) 4"x4" (16 SQ. IN.) DOWNSPOUTS = 32 SQ. IN. (EXCEEDS MIN.)



3 COMPACTOR ENCLOSURE - ROOF PLAN
SCALE: 1/4" = 1'-0"



2 COMPACTOR ENCLOSURE - RCP
SCALE: 1/4" = 1'-0"

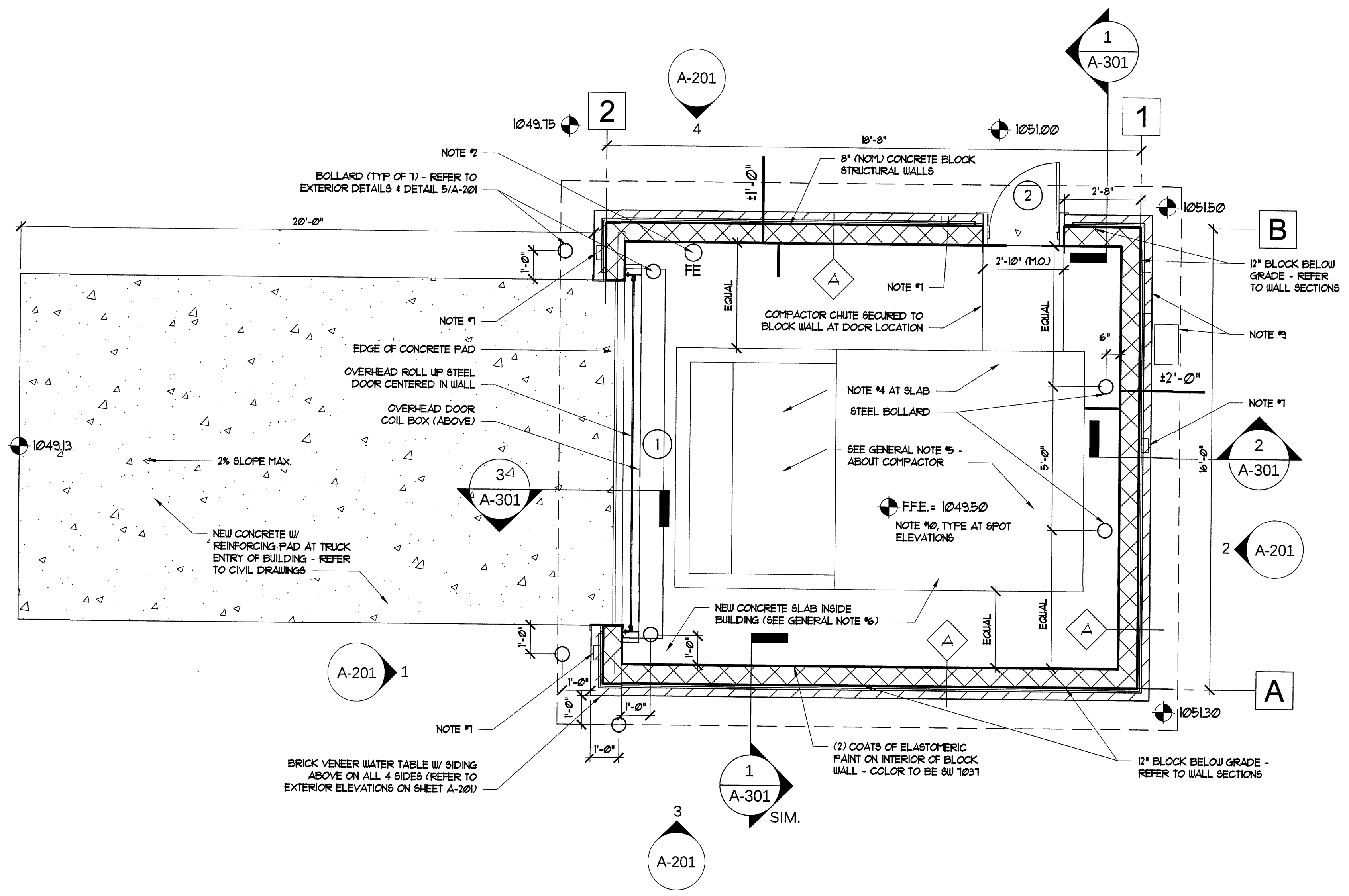
REFLECTED CEILING PLAN NOTES

1. REFER TO GENERAL NOTES AND SPECIFICATIONS FOR MORE INFORMATION
2. LIGHT FIXTURES SHOWN ON REFLECTED CEILING PLAN FOR LOCATION ONLY, COORDINATE EXACT LOCATION WITH CITY.

CEILING SCHEDULE

MARK	DESCRIPTION	AFF.	COMMENTS
OPEN A	NO CEILING	N/A	OPEN TO ROOF DECK - (2) COATS PAINT AT WOOD TRUSS STRUCTURE. COLOR: SW6011 'EVERYDAY WHITE'

LINTEL SCHEDULE		
MARK	SIZE	COMMENTS
L-1	8" x 16" CMU LINTEL REINFORCED W/ (2) #5	BEAR LINTEL 16" ONTO MASONRY EACH END
L-2	8" x 24" CMU LINTEL REINFORCED W/ (2) #5	BEAR LINTEL 16" ONTO MASONRY EACH END



1 COMPACTOR ENCLOSURE - FLOOR PLAN
SCALE: 3/8" = 1'-0"

GENERAL NOTES:

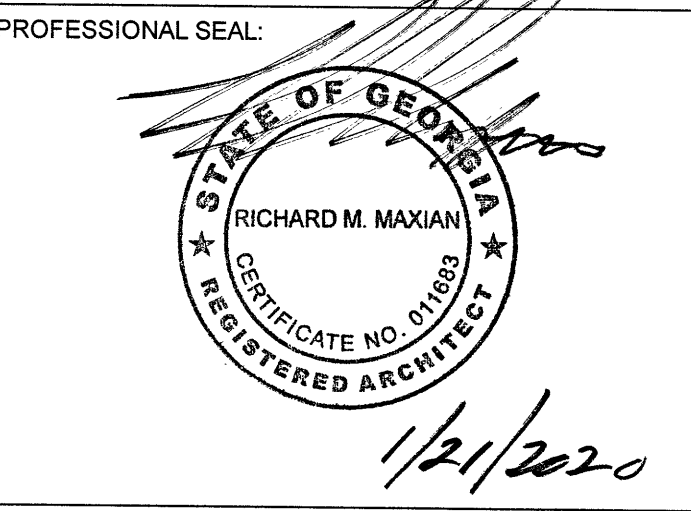
1. REFER TO SHEET A-201 FOR EXTERIOR FINISH MATERIALS.
2. FIRE EXTINGUISHERS TO BE RATED 2A 10BC. COORDINATE WITH LOCAL FIRE MARSHALL FOR FINAL LOCATION.
3. DO NOT SCALE DRAWINGS. DIMENSIONS GOVERN. VERIFY ALL DIMENSIONS IN THE FIELD.
4. PROVIDE CONTROL JOINTS IN CONCRETE.
5. CONTRACTOR TO COORDINATE THIS TYPE OF COMPACTOR BEFORE BUILDING CONSTRUCTION BEGINS.
6. FINISH FLOOR ELEVATION IS ESTIMATED AT: 1049.50'. CONTRACTOR TO VERIFY WITH CITY AND INCLUDE SURVEY FOR FINAL GRADE LOCATION AND RETAINING WALL HEIGHTS. CONCRETE PAD TO BE 6" THICK, 4000 PSI PORTLAND CEMENT CONCRETE SLAB ON GRADE REINFORCED W/ 6x6-W/4XW/4 W/ CENTER OF SLAB OVER 6" CRUSHER RUN BASE, COMPACTED TO 95% STANDARD PROCTOR.
7. G.C. TO SUPPLY J-BOX, CONDUIT AND WIRING FOR EXTERIOR LIGHT FIXTURES, EXTERIOR LIGHT FIXTURES WILL BE SUPPLIED BY AND INSTALLED BY THE CITY OF NORCROSS. REFER TO ELECTRICAL DRAWINGS.
8. ALL SPOT ELEVATIONS ARE DIAGNOSTIC AND SHOULD BE VERIFIED AND COORDINATED WITH CIVIL DRAWINGS, CITY OF NORCROSS.
9. ELECTRICAL METER AND PANEL. LOCATE COMPACTOR MOTOR PER MANUFACTURER'S REQUIREMENTS AND COORDINATE WITH CITY.
10. SPOT ELEVATIONS ARE TO BE VERIFIED BY G.C. WITH CITY ENGINEER. IF DIFFERENT, THEN NOTIFY CITY AND ARCHITECT IMMEDIATELY.

WALL SCHEDULE

MARK	DESCRIPTION	COMMENTS
A	8" (NOM) CMU BLOCK W/ REINFORCING AND GROUT. FOAM INSULATION FILLED CELLS TO TOP OF BLOCK IF NOT GROUTED. BLOCK SEALER AT INTERIOR OF BUILDING - REFER TO WALL SECTIONS	REFER TO EXTERIOR ELEVATIONS FOR EXTERIOR FINISHES

MaxDesignGroup
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PROJECT TITLE:
DOWNTOWN NORCROSS COMPACTOR ENCLOSURE

Norcross, Georgia

PROJECT INFO:
BEHIND 7 JONES ST NW
WINGO STREET NW
DOWNTOWN NORCROSS
NORCROSS, GEORGIA 30071

OWNER:
CITY OF NORCROSS
65 LAWRENCEVILLE STREET
NORCROSS, GEORGIA 30071

PRINT RECORD	
Description	Date
CITY SUBMITTAL	01/21/2020

REVISION	
No.	Description

FLOOR PLAN, RCP, & ROOF PLAN

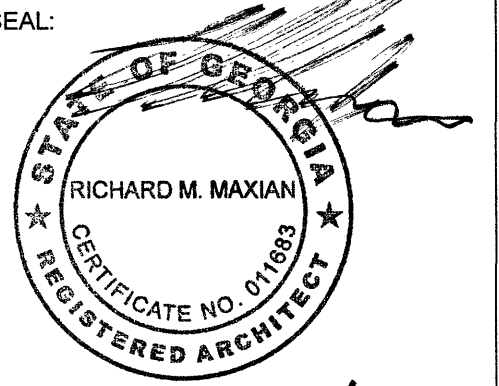
Project number: D18-134
Date: 01/21/2020
Drawn by: DKA
Checked by: RMM

A-101

ISSUED FOR CONSTRUCTION

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REVISION

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EXTERIOR ELEVATIONS & DOOR SCHEDULE

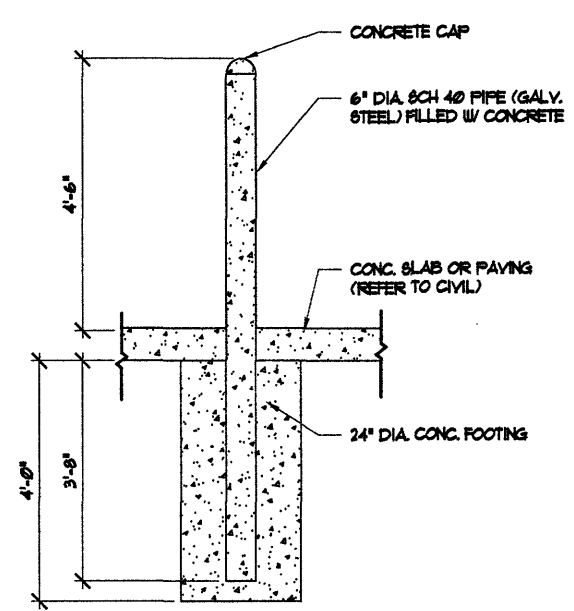
Project number D18-134
Date 01/21/2020
Drawn by DKA
Checked by RMM

A-201

Scale

ISSUED FOR CONSTRUCTION

NOTE: PAINT ALL BOLLARDS "CAUTION YELLOW"

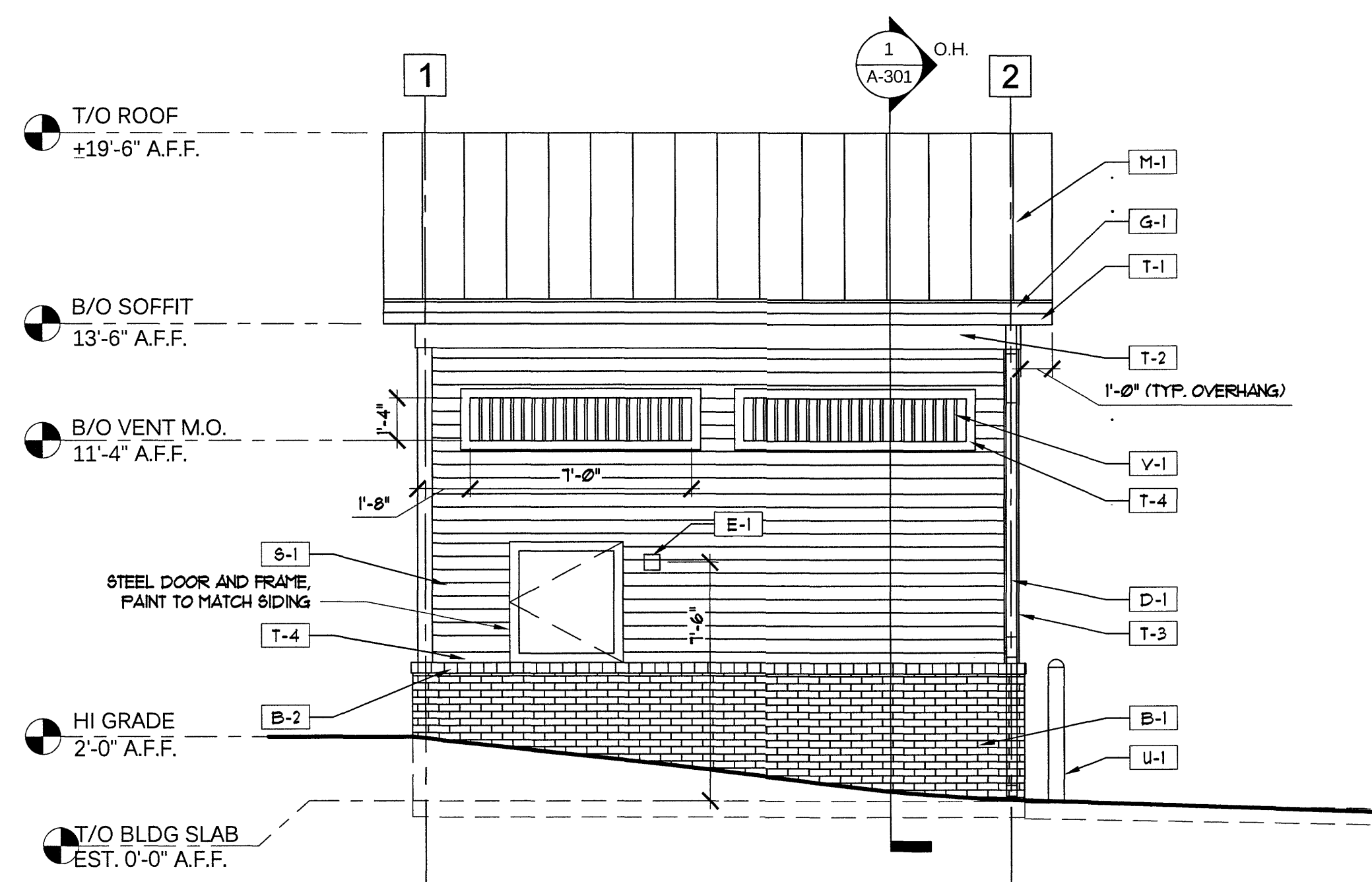


5 TYPICAL BOLLARD DETAIL

A-201 SCALE: 1/2" = 1'-0"

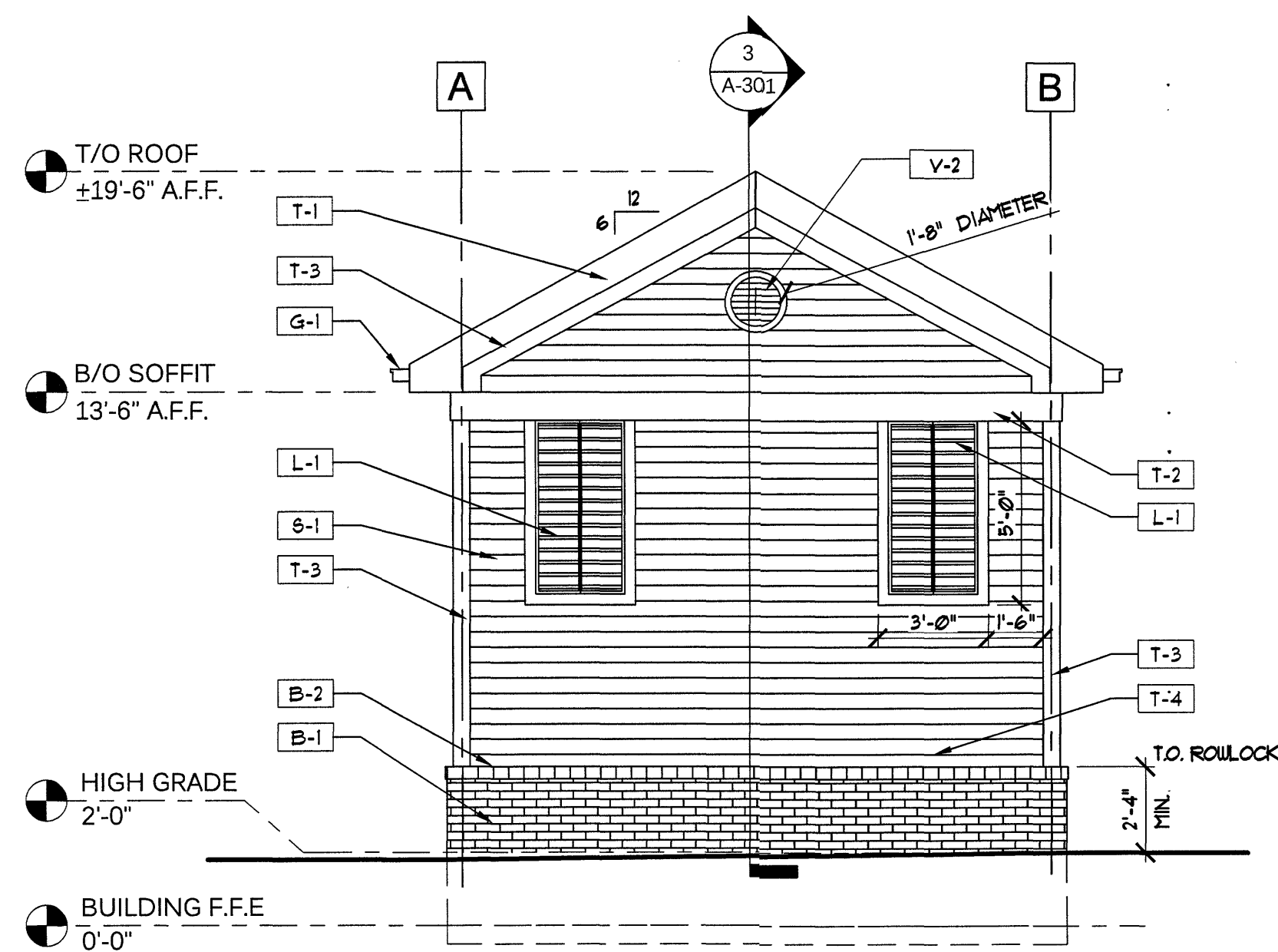
ELEVATION - KEY NOTE LEGEND

MARK	DESCRIPTION
B-1	BRICK - BORAL "REGIMENT" MODULAR SIZE W/ COOSA "GRAY" MORTAR
B-2	BRICK ROULOCK COURSE - BORAL "REGIMENT" MODULAR SIZE W/ COOSA "GRAY" MORTAR
C-1	CONCRETE PAD OR SIDEWALK (REFER TO FLOOR PLAN A-101 & CIVIL DRAWINGS)
D-1	4"x4" DOWNSPOUT (PRE-FINISHED TO MATCH ROOF COLOR)
DR-1	OVERHEAD ROLL-UP DOOR W/ FIBER CEMENT TRIM (T-4), CENTER IN WALL - REFER TO DOOR SCHEDULE SHEET A-201
E-1	CITY SUPPLIED AND INSTALLED LIGHT FIXTURE, REFER TO ELEVATIONS FOR MOUNTING HEIGHTS - G.C. TO SUPPLY J-BOXES, VERIFY FINAL LOCATIONS W/ CITY, AND COORDINATE WITH OVERHEAD DOOR HOIST.
G-1	4"x5" GUTTER (PRE-FINISHED TO MATCH ROOF COLOR)
L-1	DECORATIVE SHUTTERS OVER BLOCK WALL - COLOR TO MATCH BERRIDGE "HARTFORD GREEN"
M-1	24 GA STANDING SEAM METAL ROOF W/ SEAMS @ 12" O.C. (PRE-FINISHED COLOR TO MATCH BERRIDGE "HARTFORD GREEN")
S-1	FIBER CEMENT LAP SIDING W/ 5" EXPOSURES (COLOR TO MATCH SW-1031 "BALANCED BEIGE")
T-1	1" x 10" FIBER CEMENT FASCIA (PAINTED TO MATCH SW-1005 "PURE WHITE")
T-2	1" x 10" FIBER CEMENT TRIM (PAINTED TO MATCH SW-1005 "PURE WHITE")
T-3	1" x 6" FIBER CEMENT TRIM (PAINTED TO MATCH SW-1005 "PURE WHITE")
T-4	1" x 4" FIBER CEMENT TRIM (PAINTED TO MATCH SW-1005 "PURE WHITE")
U-1	BOLLARD (REFER TO DETAIL 5/A-201)
V-1	METAL VENT SYSTEM WITH VERTICAL BARS - COLOR TO MATCH BERRIDGE "HARTFORD GREEN"
V-2	METAL VENT SYSTEM WITH HORIZONTAL SLATS - COLOR TO MATCH BERRIDGE "HARTFORD GREEN"



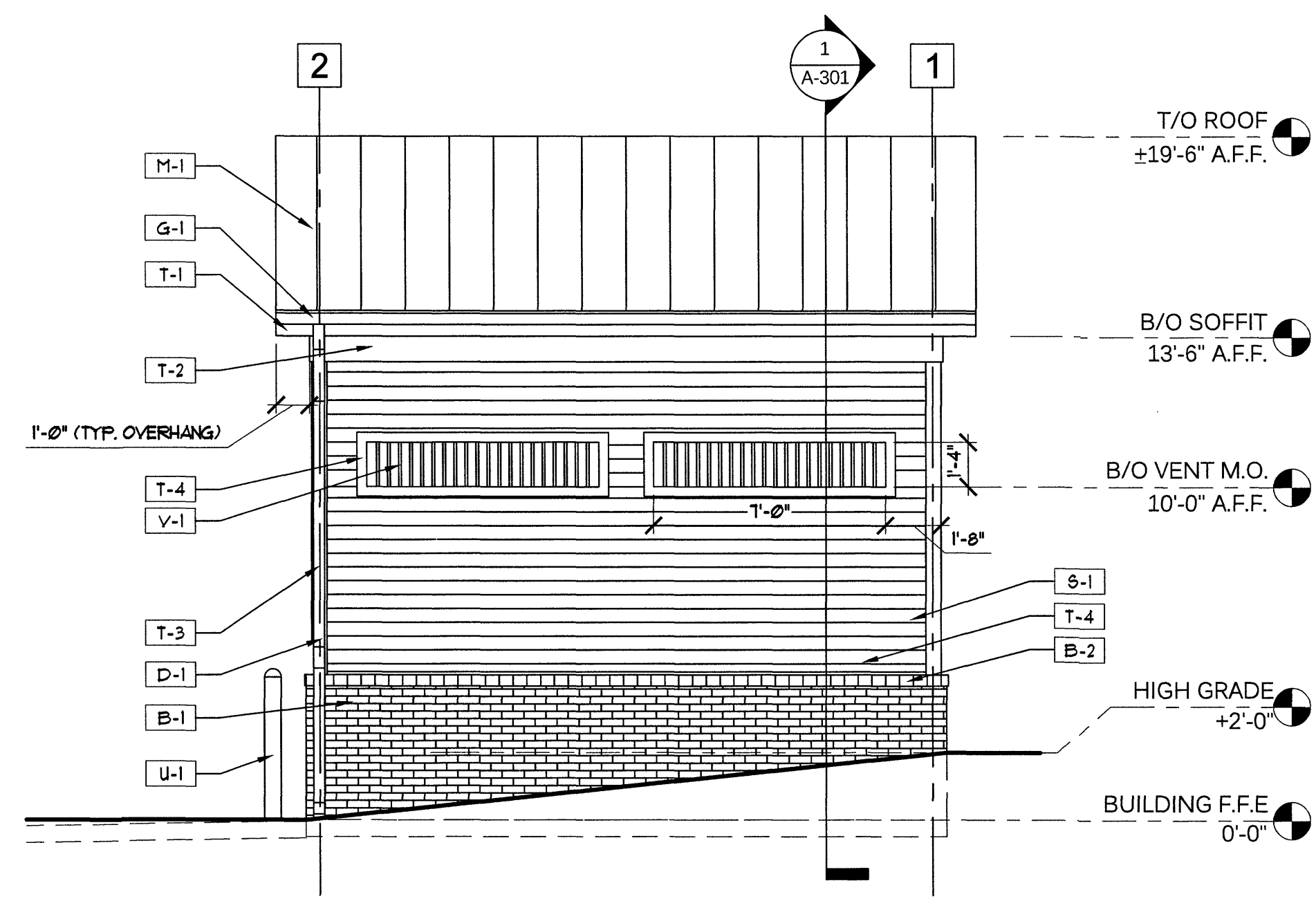
4 RIGHT SIDE ELEVATION

A-201 SCALE: 1/4" = 1'-0"



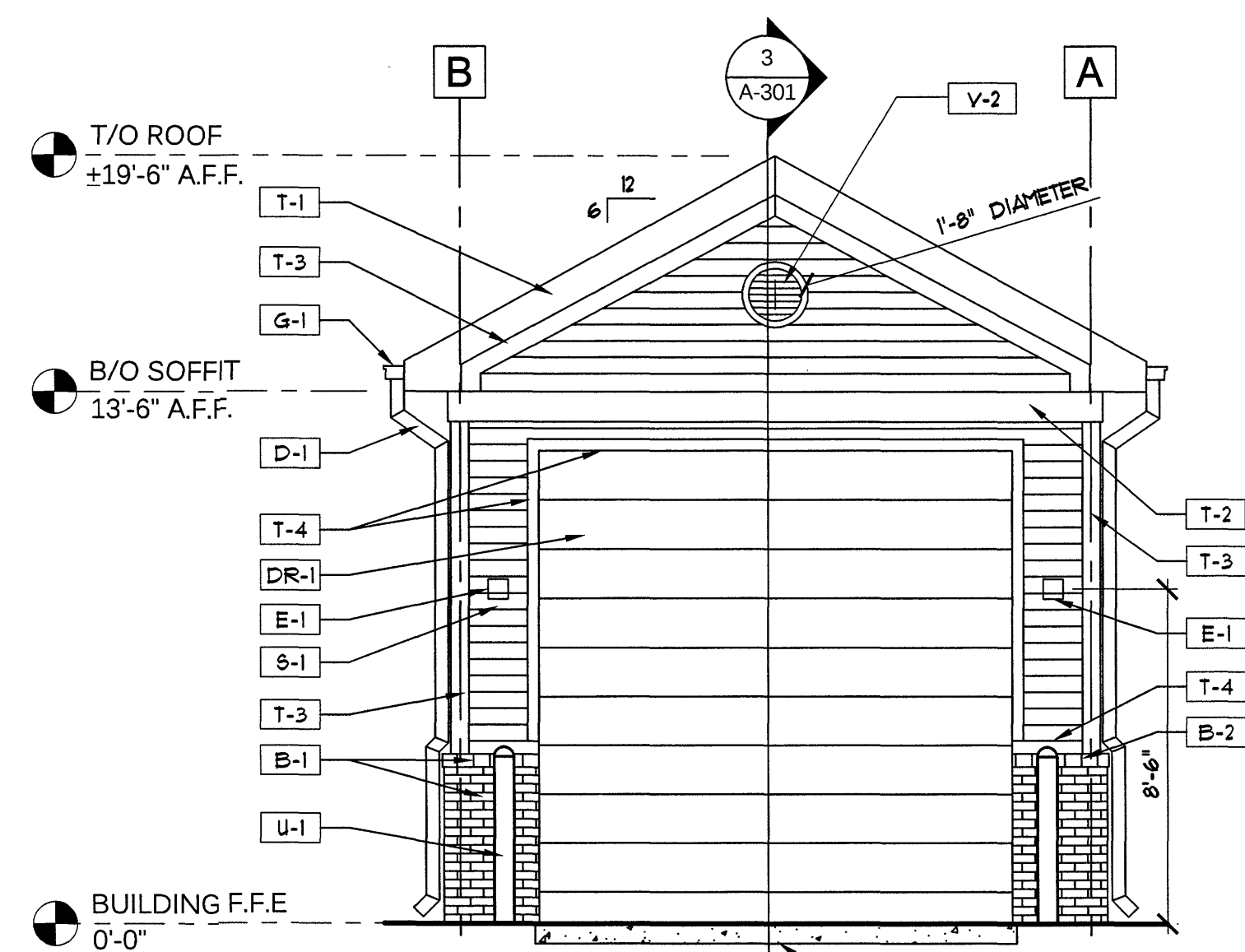
2 REAR ELEVATION

A-201 SCALE: 1/4" = 1'-0"



3 LEFT SIDE ELEVATION

A-201 SCALE: 1/4" = 1'-0"



1 FRONT ELEVATION

A-201 SCALE: 1/4" = 1'-0"

DOOR SCHEDULE										
MARK	SIZE W. X H. X THK.	LOCATION	CONSTRUCTION DOOR - FRAME	FINISH	GLASS	FIRE RATING	HDWR	FRAME FINISH	REMARKS	HEAD AND/OR JAMB DETAIL
1	12'-0" X 12'-0" X MANUF.	FRONT WALL	24 GA STEEL	--	MANUF. "TAN" COLOR	--	N/A	MANUF. (2) COATS PAINT COLOR: SW 1005	SEE NOTE #1	MANUFACTURER
2	3'-0" X 3'-0" X 1 3/4"	SIDE WALL	STEEL	H.M.	(2) COATS OF PAINT	--	N/A	MANUF. (2) COATS OF PAINT	SEE NOTES #2, #3	MANUFACTURER

DOOR SCHEDULE NOTES:

- OVERHEAD DOOR TO BE "OVERHEAD DOOR" BRAND "ROLLING STEEL SERVICE DOOR 620" OR EQUAL.
- STEEL HATCH SECURED TO CONCRETE BLOCK WALL PER MANUFACTURERS REQUIREMENTS.
- REFER TO PLAN FOR HORIZONTAL LOCATION, B.O. FRAME TO ALIGN WITH T.O. ROLLOCK COURSE.

NOTE:
G.C. TO VERIFY OVERALL HEIGHTS ONCE SURVEY HAS BEEN PROVIDED.
CONTACT CITY AND ARCHITECT IF THERE ARE ANY DISCREPANCIES.

MaxDesignGroup

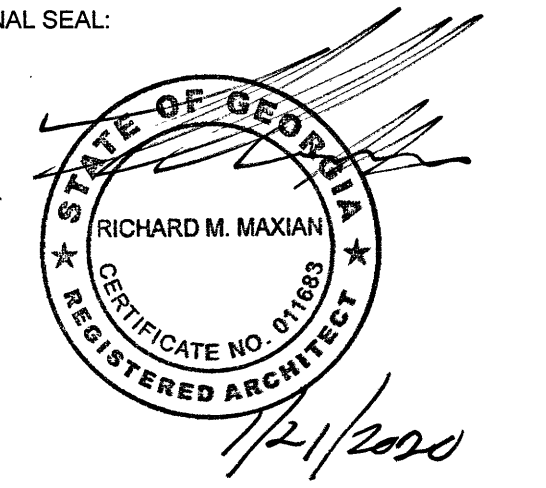
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PROFESSIONAL SEAL:



PROJECT TITLE:

DOWNTOWN NORCROSS COMPACTOR ENCLOSURE

Norcross, Georgia

PROJECT INFO:

 BEHIND 7 JONES ST NW
 WINGO STREET NW
 DOWNTOWN NORCROSS
 NORCROSS, GEORGIA 30071

OWNER:

CITY OF NORCROSS

 65 LAWRENCEVILLE STREET
 NORCROSS, GEORGIA 30071

PRINT RECORD

Description	Date
CITY SUBMITTAL	01/21/2020

REVISION

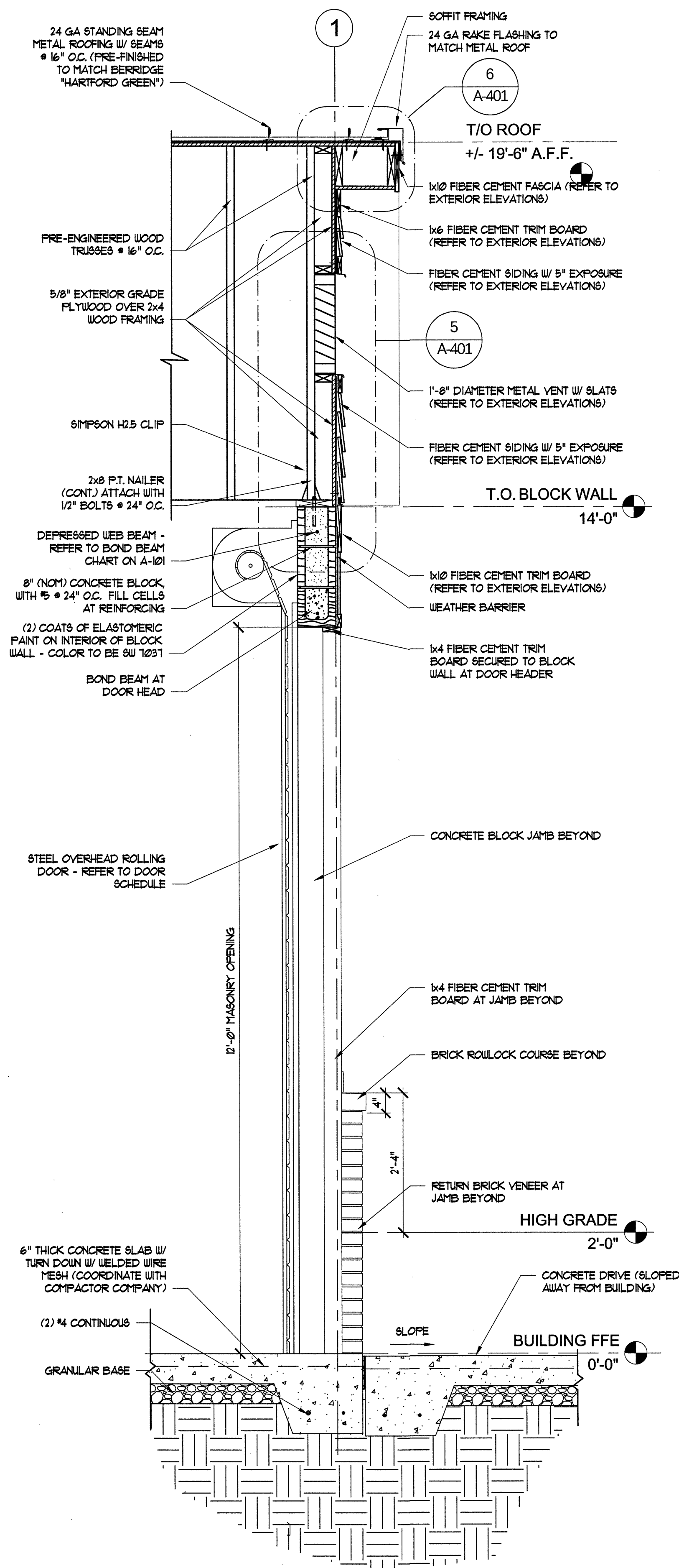
No.	Description	Date

WALL SECTIONS

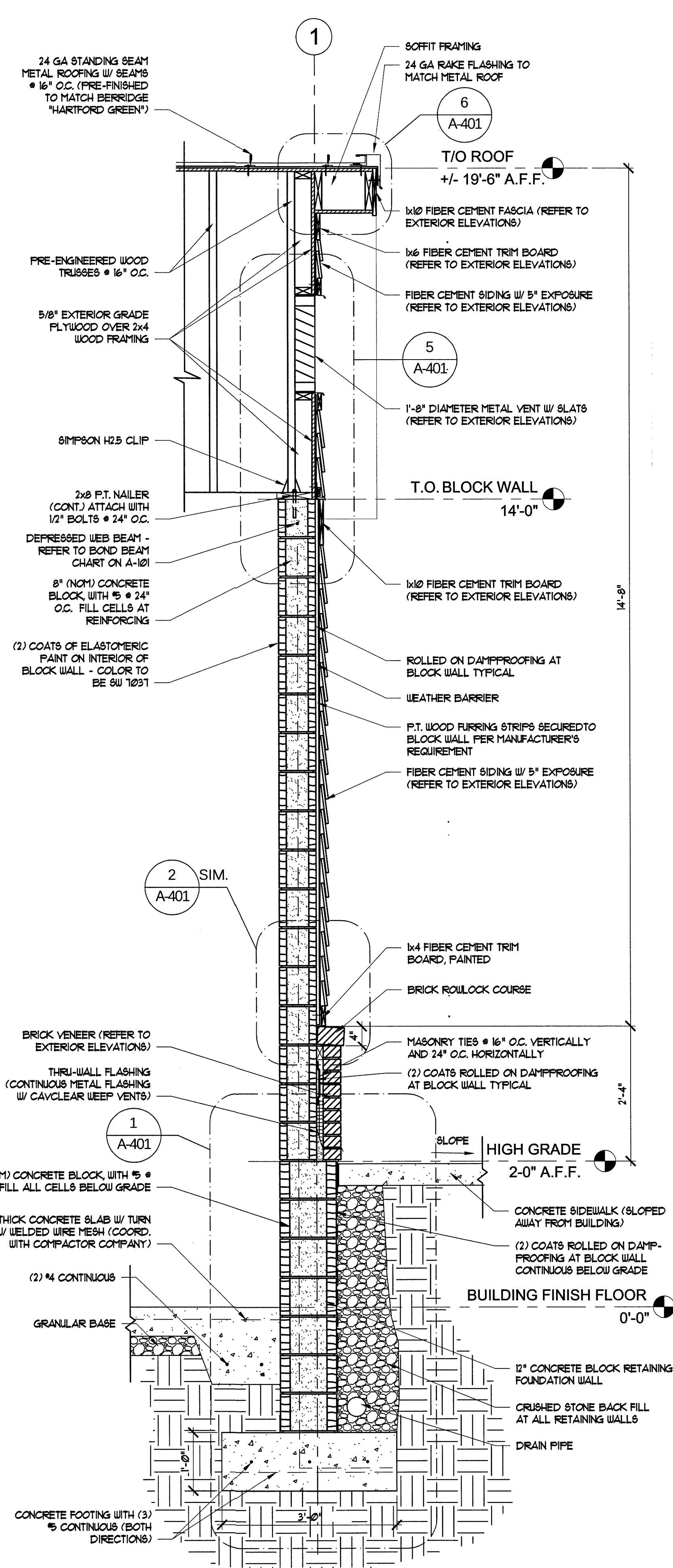
Project number	D18-134
Date	01/21/2020
Drawn by	DKA
Checked by	RMM

A-301

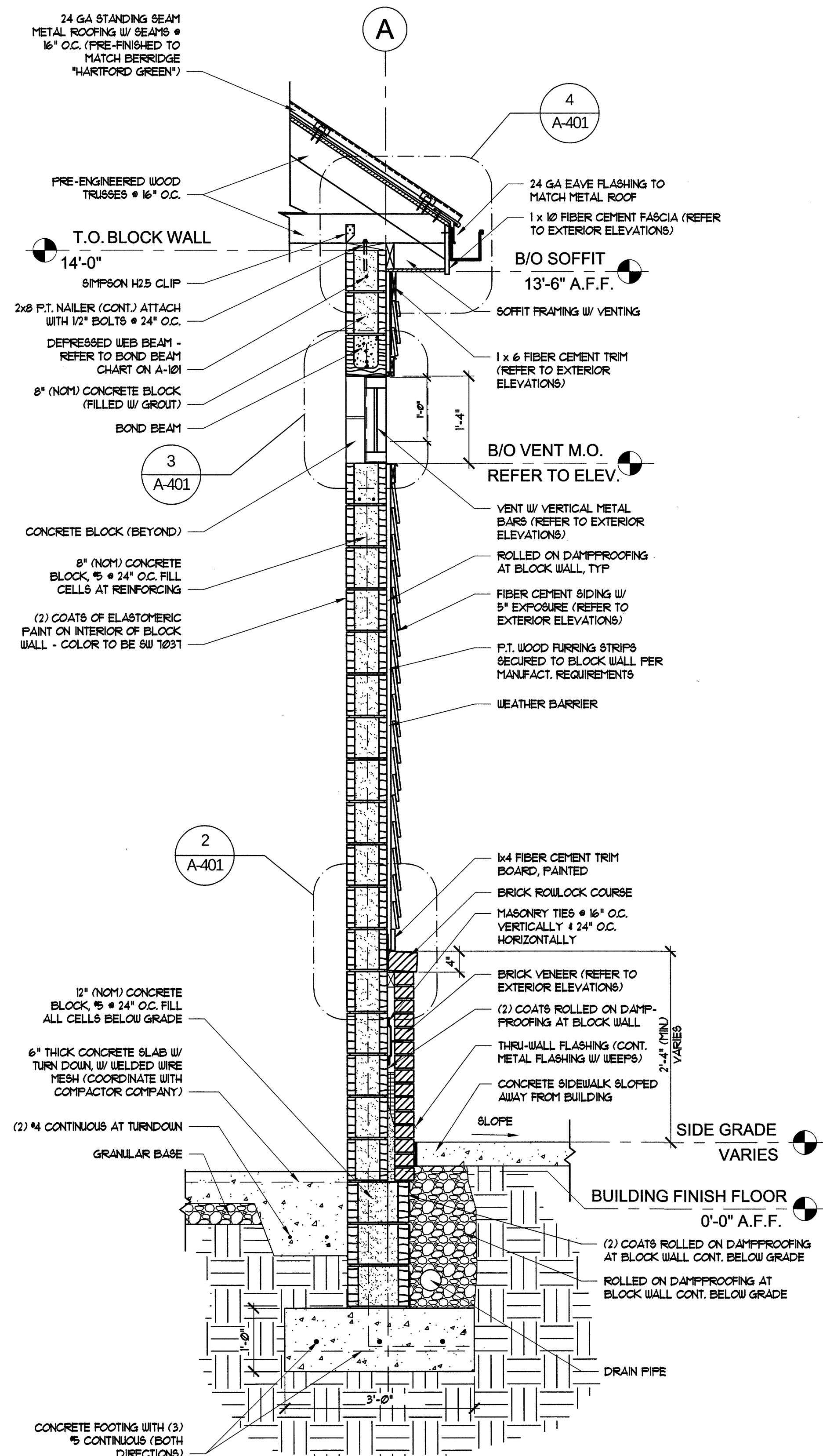
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3 SECTION AT ROLLING DOOR

SCALE: 3/4" = 1'-0"

 NOTES:
 1. MINIMUM 3" COVERAGE FOR ALL REINFORCING

2 SECTION AT REAR WALL

SCALE: 3/4" = 1'-0"

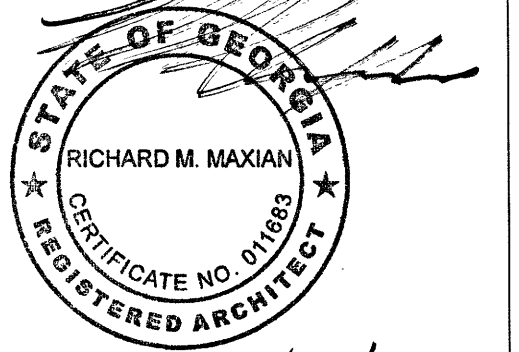
 NOTES:
 1. MINIMUM 3" COVERAGE FOR ALL REINFORCING
 2. AT SIM LOCATION USE 12" BLOCK BELOW GRADE SIMILAR TO 2/A-301

1 SECTION AT SIDE WALL

SCALE: 3/4" = 1'-0"

 NOTES:
 1. MINIMUM 3" COVERAGE FOR ALL REINFORCING
 2. AT SIM LOCATION USE 12" BLOCK BELOW GRADE SIMILAR TO 2/A-301

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Norcross, Georgia

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WINGO STREET NW
DOWNTOWN NORCROSS
NORCROSS, GEORGIA 30071

OWNER:

CITY OF NORCROSS

 65 LAWRENCEVILLE STREET
NORCROSS, GEORGIA 30071

PRINT RECORD

Description	Date
CITY SUBMITTAL	01/21/2020

REVISION

No.	Description	Date

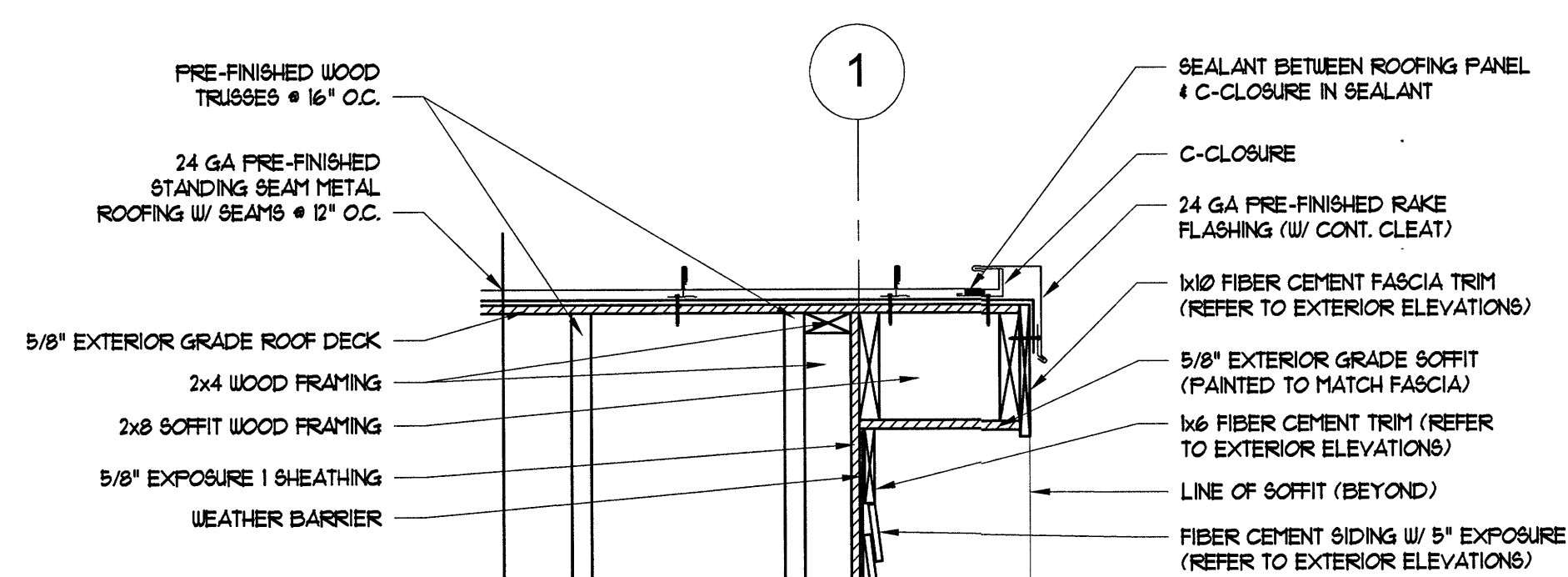
ENLARGED DETAILS

 Project number: D18-134
Date: 01/21/2020
Drawn by: DKA
Checked by: RMM

A-401

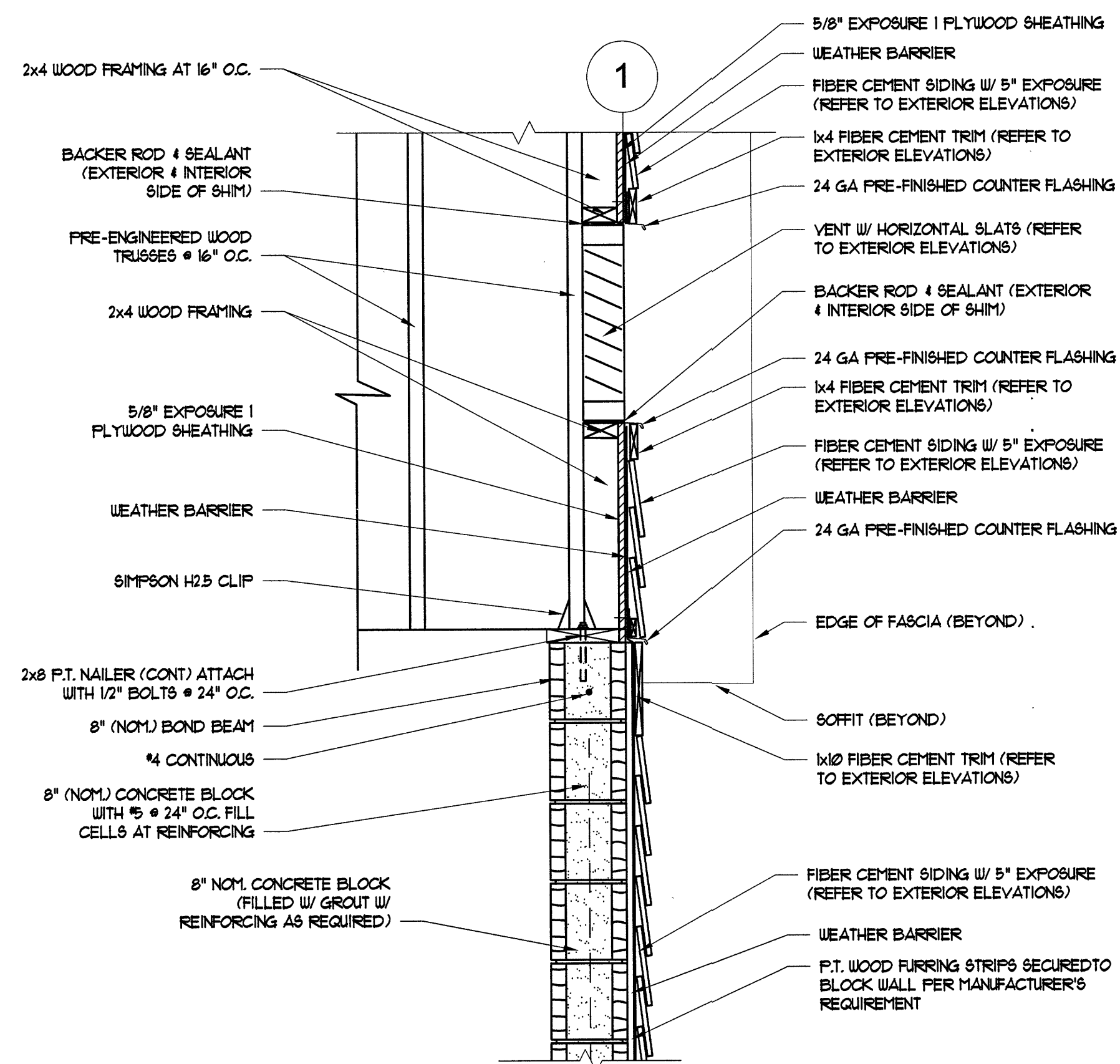
Scale

ISSUED FOR CONSTRUCTION



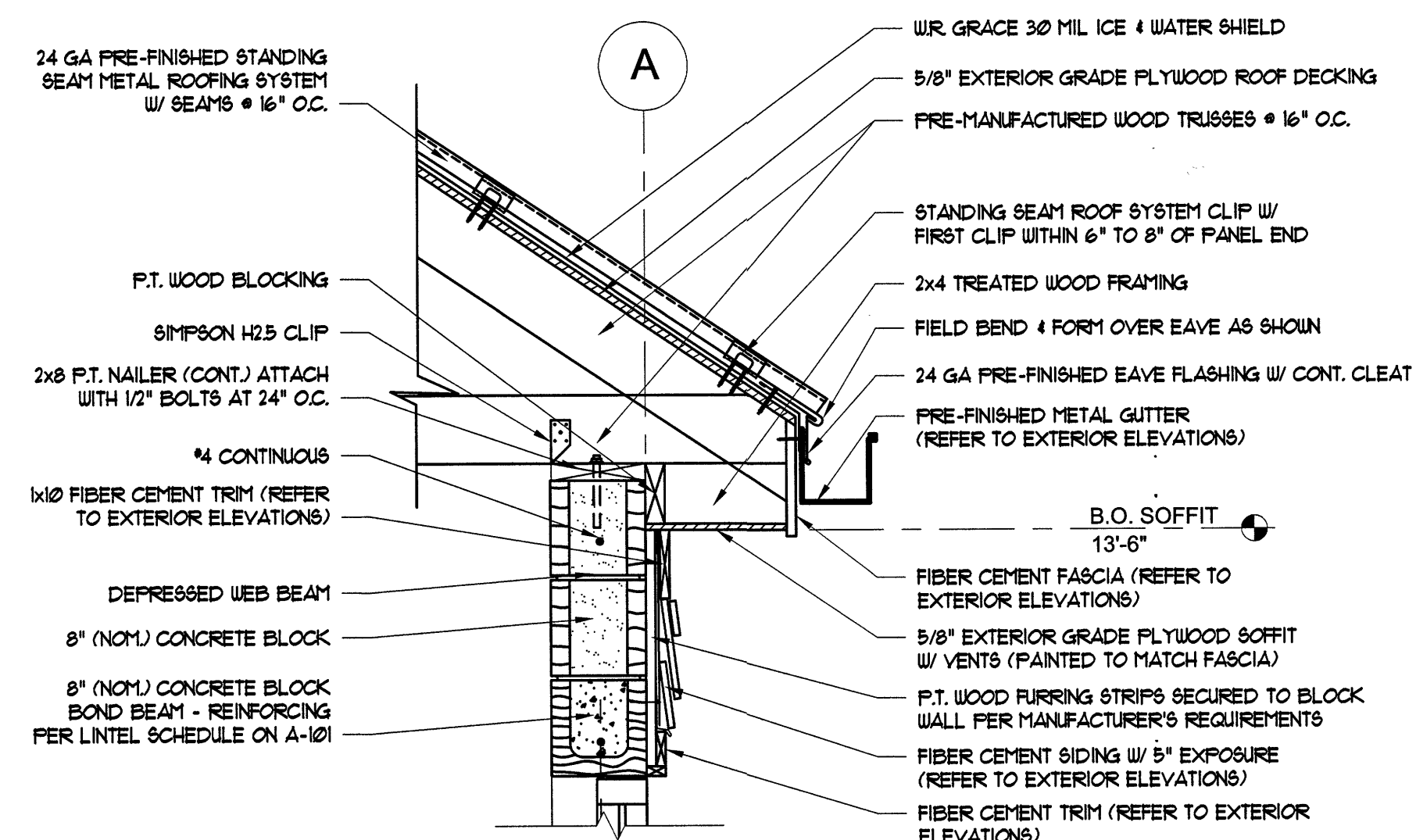
6 ROOF RAKE DETAIL

SCALE: 1" = 1'-0"



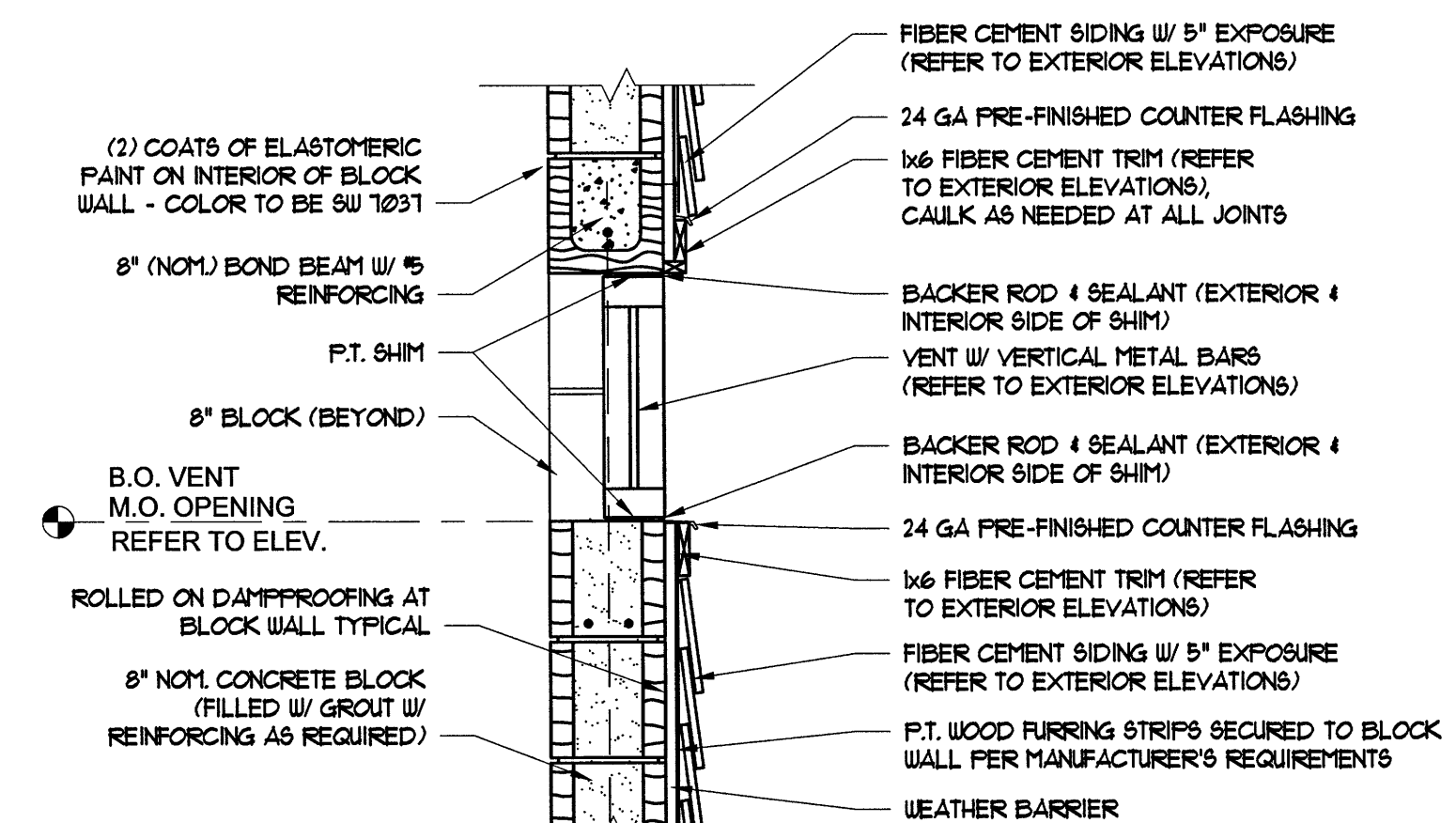
5 SOFFIT / EAVE DETAIL

SCALE: 1" = 1'-0"



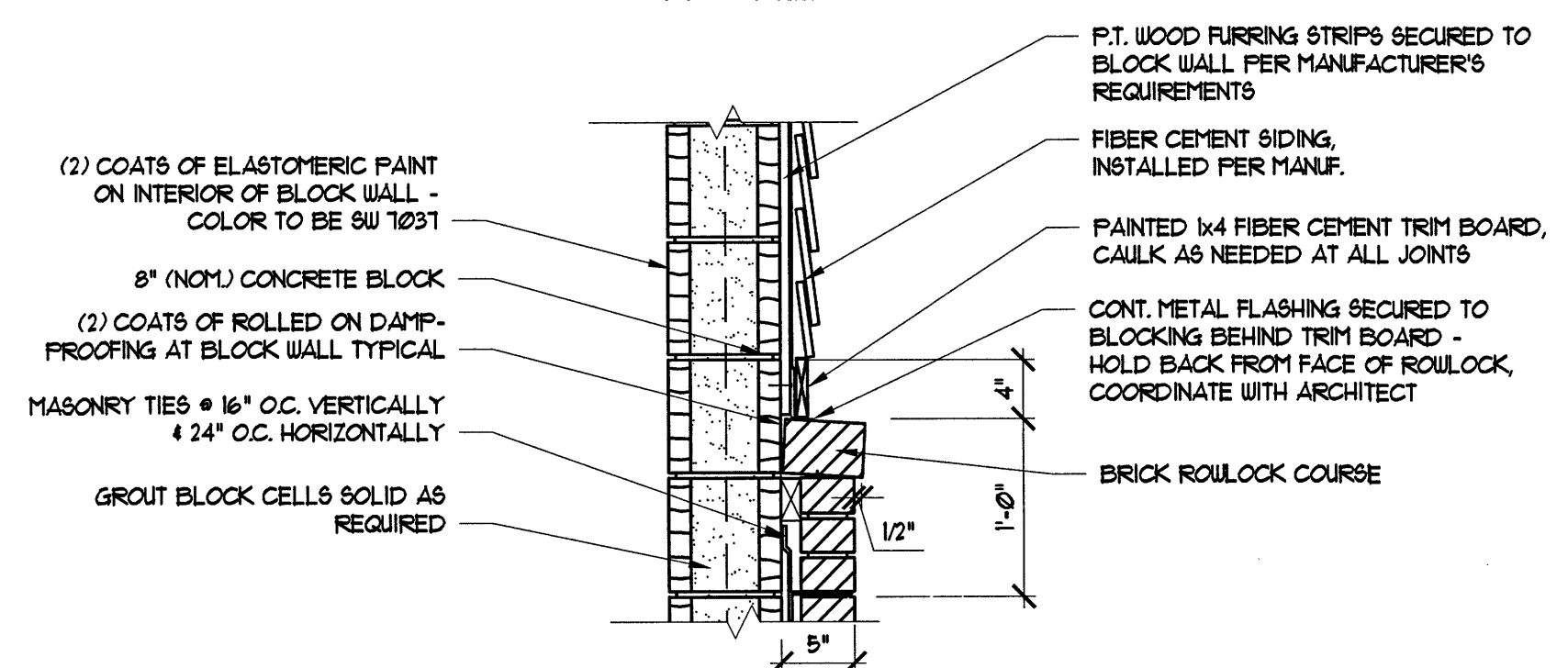
4 SOFFIT / EAVE DETAIL

SCALE: 1" = 1'-0"



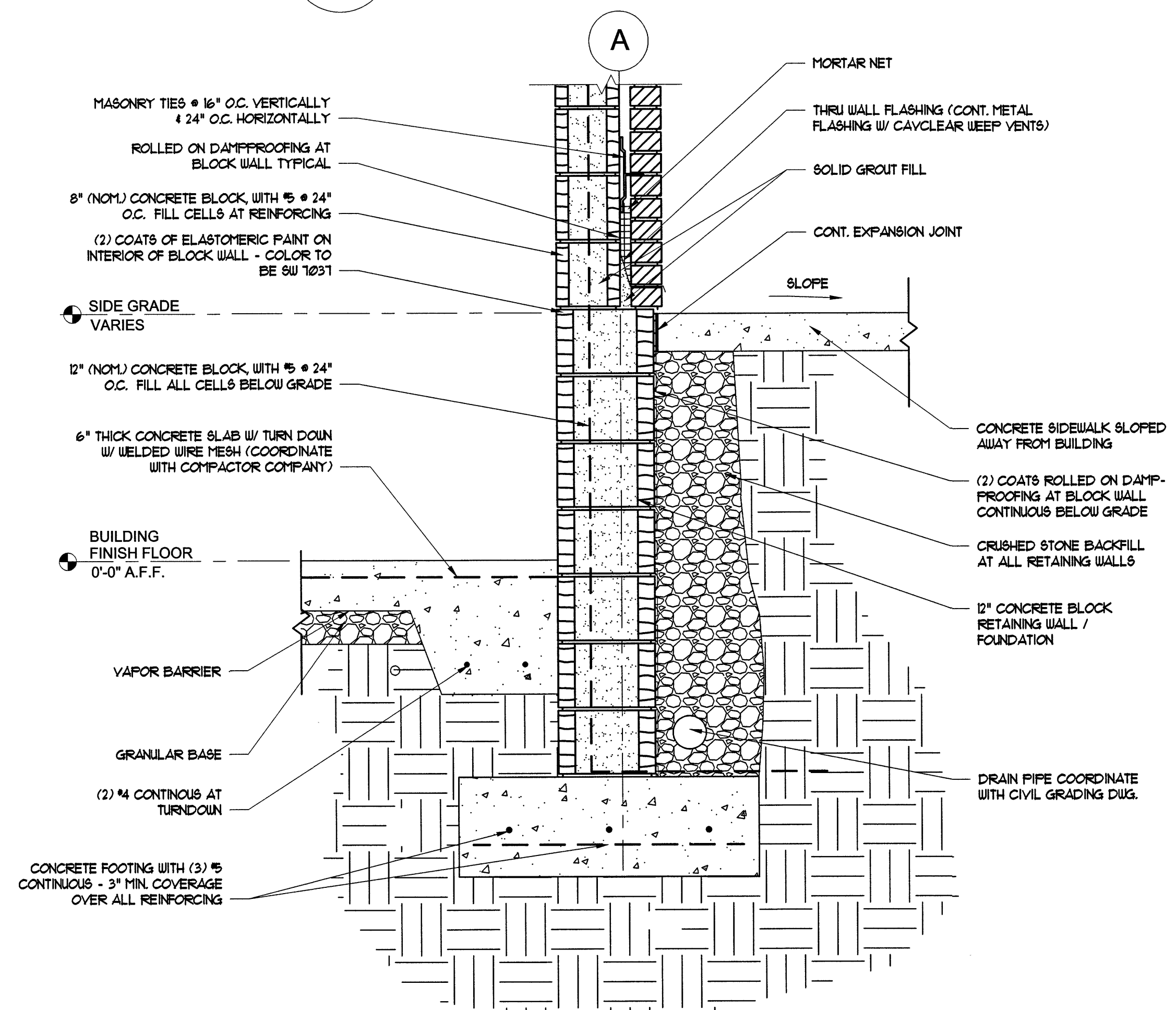
3 SIDE WALL VENT DETAIL

SCALE: 1" = 1'-0"



2 ROWLOCK DETAIL

SCALE: 1" = 1'-0"

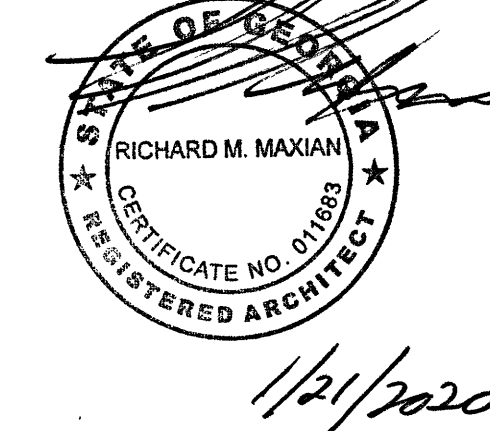


1 RETAINING WALL / FOUNDATION DETAIL

SCALE: 1" = 1'-0"

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PROFESSIONAL SEAL:



PROJECT TITLE:

DOWNTOWN NORCROSS COMPACTOR ENCLOSURE

Norcross, Georgia

PROJECT INFO:

 BEHIND 7 JONES ST NW
NORCROSS, GA 30071
TRUCK ACCESS THRU WINGO STREET

OWNER:

CITY OF NORCROSS

 65 LAWRENCEVILLE STREET
NORCROSS, GEORGIA 30071

PRINT RECORD

Description	Date
CITY SUBMITTAL	01/21/2020

REVISION

No.	Description	Date

ELECTRICAL PLAN

Project number	D18-134
Date	12/19/2018
Drawn by	B.C.R.
Checked by	R.M.M.

AE-101

Scale As indicated

ISSUED FOR CONSTRUCTION

Branch Panel: PANEL A

 Location: BACK OF ENCLOSURE
Supply From:
Mounting: Surface
Enclosure: 3R

 Volts: 120/208 Wye
Phases: 3
Wires: 4

 A.I.C. Rating:
Mains Type:
Mains Rating: 100A
MCB Rating:

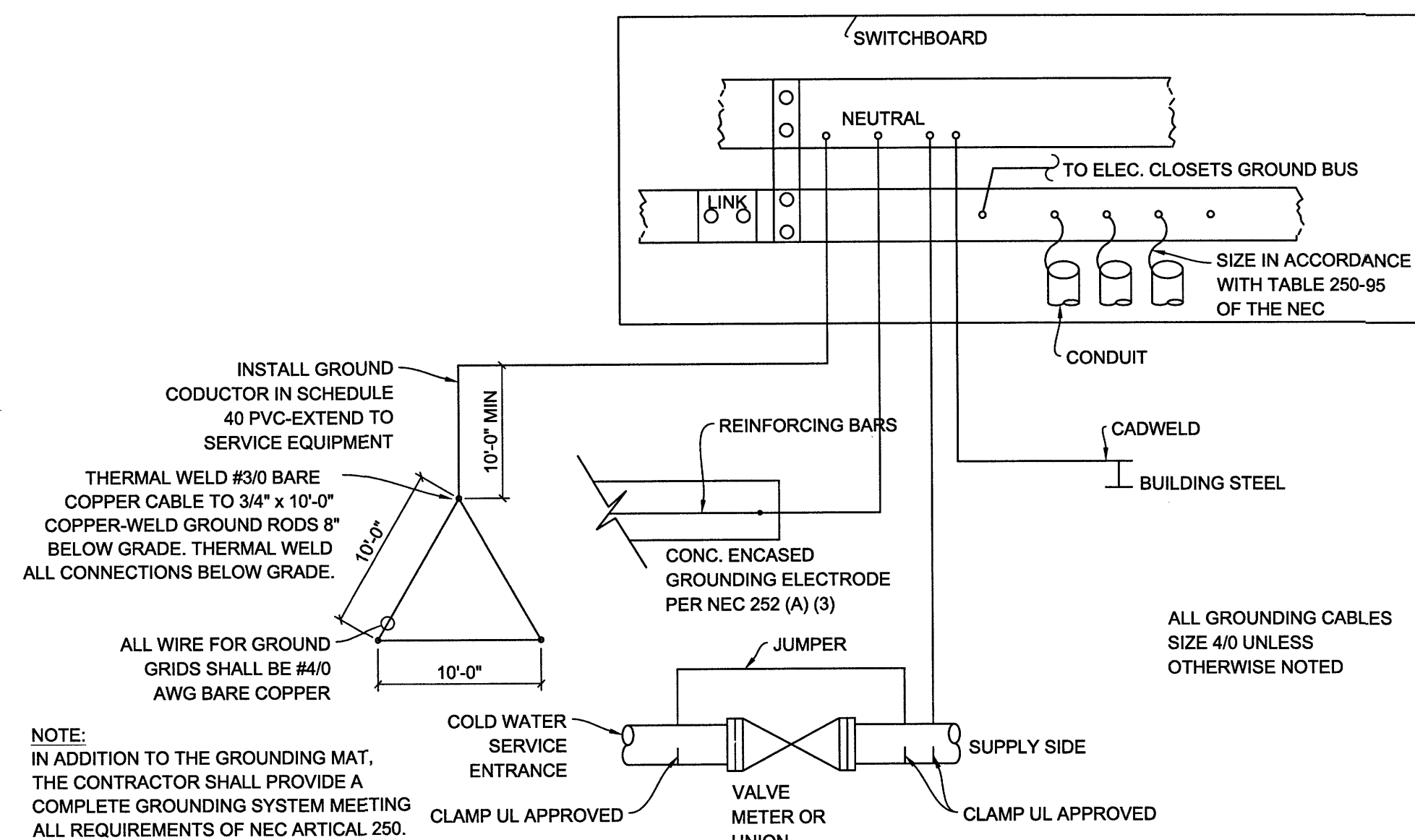
 Notes:
PRIOR TO FINAL ORDERING OF PANELBOARDS, CIRCUIT BREAKERS, AND ALL ASSOCIATED EQUIPMENT, THE ELECTRICAL CONTRACTOR SHALL ARRANGE FOR A LETTER FROM THE LOCAL POWER COMPANY ON THEIR LETTERHEAD STATING THE SHORT CIRCUIT FAULT CURRENT AVAILABLE AT THE SECONDARY OF THE UTILITY COMPANY TRANSFORMER. INFORMATION SHALL BE USED TO DETERMINE THE FINAL A.I.C. RATINGS OF THE PANELBOARDS, METER CENTERS, MAIN DISCONNECT SWITCHES AND CIRCUIT BREAKERS.

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
A-1	LIGHTS	20 A	1	417 VA	667 VA		3	20 A	COMPACT UNIT HEATER	A-2
A-3	RECEPTACLE GFCI NEAR PANEL	20 A	1		180 VA	667 VA				A-4
A-5	COMPACTOR	30 A	3			2500 VA	667 VA			A-6
A-7				2500 VA	180 VA			1	20 A	COMPACTOR CONTROLLER
A-9					2500 VA	1920 VA				A-10
*A-11	EXTERIOR LIGHT FIXTURES	20 A	1			1920 VA	0 VA	1	20 A	SPARE
A-13	SPARE	20 A	1	0 VA	0 VA			1	20 A	SPARE
A-15	SPARE	20 A	1		0 VA	0 VA		1	20 A	SPARE
A-17	SPARE	20 A	1			0 VA	0 VA	1	20 A	SPARE
A-19	SPARE	20 A	1	0 VA	0 VA			1	20 A	SPARE
Total Load:				3764 VA	5267 VA	5087 VA				
Total Amps:				10 A	15 A	14 A				

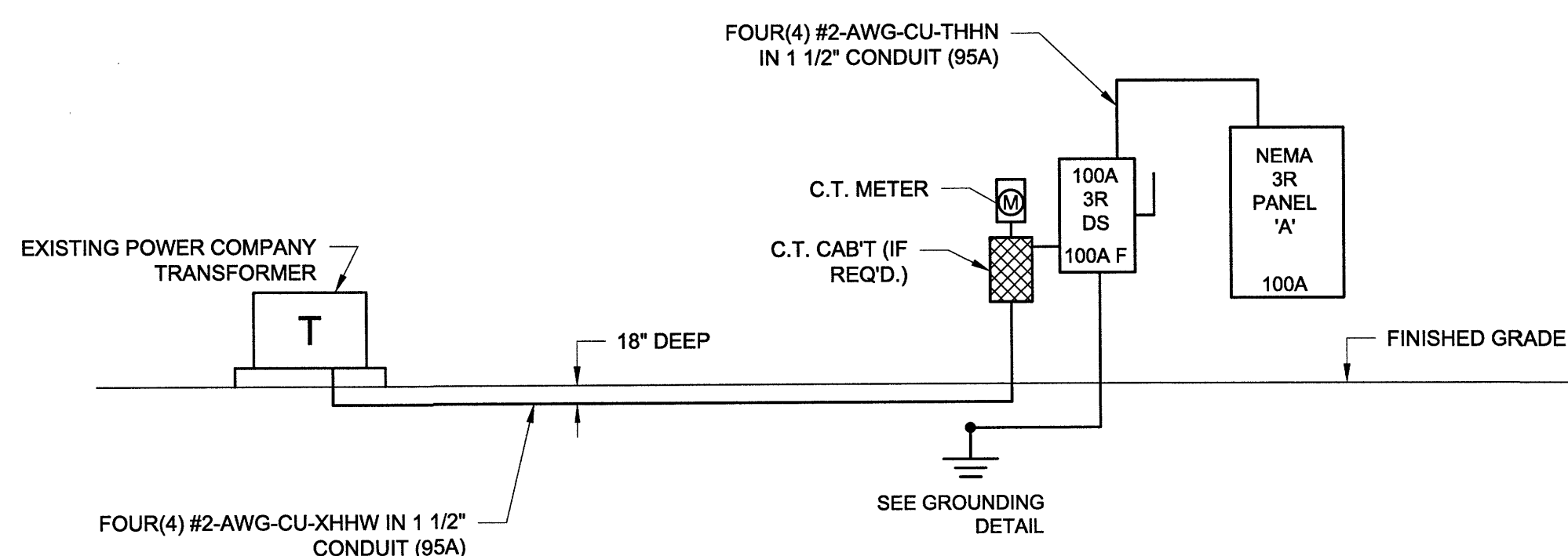
Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
HVAC	2001 VA	100.00%	2001 VA	Total Conn. Load: 14118 VA
Lighting	4257 VA	125.00%	5321 VA	Total Est. Demand: 15182 VA
Other	0 VA	100.00%	0 VA	Total Conn.: 39 A
Power	7680 VA	100.00%	7680 VA	Total Est. Demand: 42 A
Receptacle	180 VA	100.00%	180 VA	

Notes:

 * CIRCUIT SHALL BE CONTROLLED BY TIME CLOCK (TORK OR EQUAL) AND P.E. CELL
** GFCI BREAKER


3 GROUNDING DETAIL
AE-101 SCALE: NONE



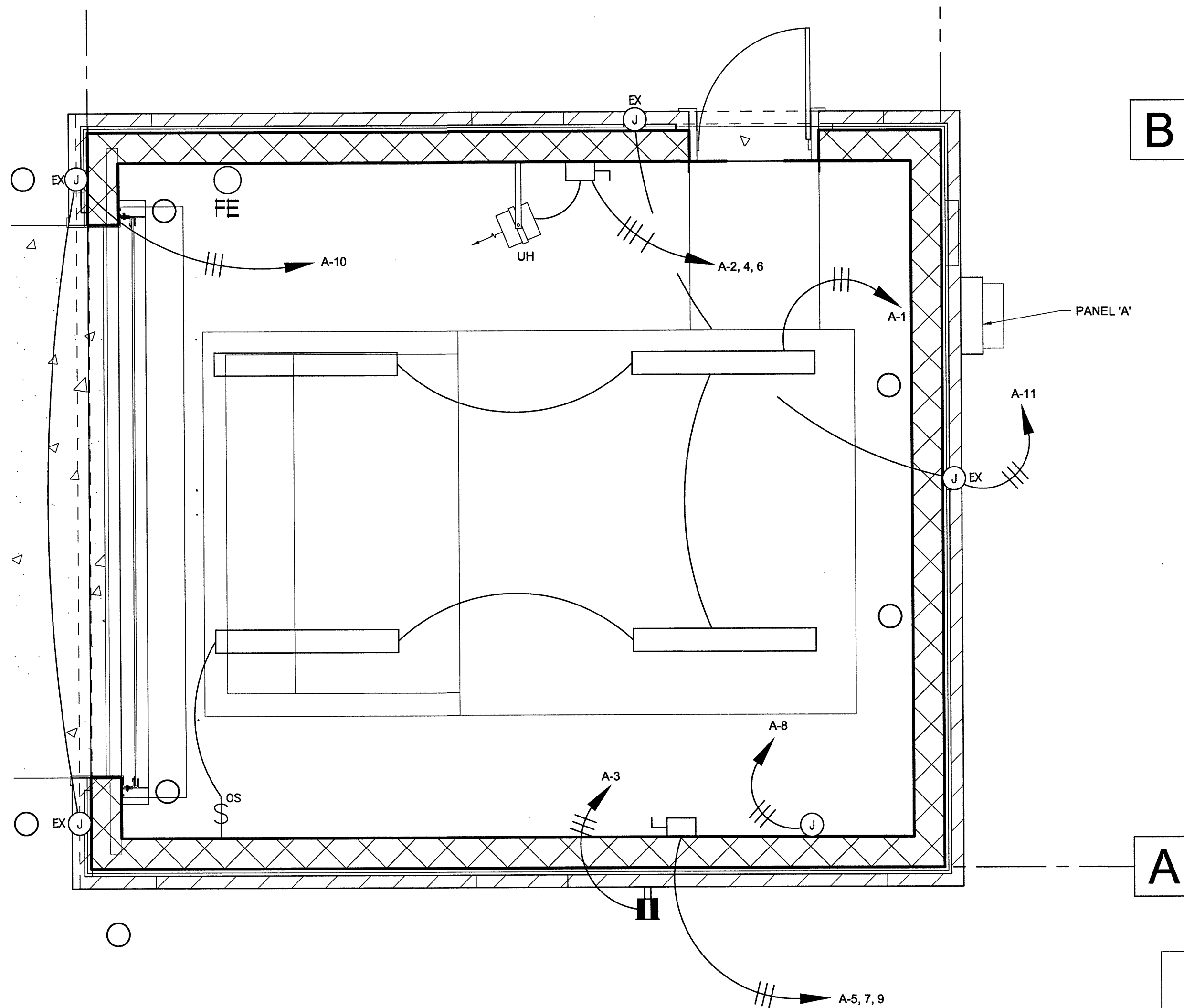
2 RISER DIAGRAM
AE-101 SCALE: NONE

ELECTRICAL GENERAL NOTES

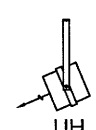
- ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR CONNECTING NEW EQUIPMENT TO AN EXISTING ELECTRICAL DISTRIBUTION SYSTEM SHOWN ON THIS SET OF THE DOCUMENTS. CONTRACTOR TO VERIFY ALL EXISTING POWER EQUIPMENT AND ENSURE EXISTING POWER WILL WORK NEW EQUIPMENT. ALL WORKS SHALL BE IN ACCORDANCE WITH THE 2014 NEC, 2012 STANDARD BUILDING CODE, AND 2014 NFPA 101.
- ALL INTERIOR ELECTRICAL RACEWAY SYSTEM IN EXPOSED STRUCTURE SHALL BE PVC. ALL INTERIOR ELECTRICAL WIRING SYSTEM IN CONCEALED WALL AND ABOVE CEILING SPACE MAY BE TYPE "MC" IN ACCORDANCE WITH NEC. EXTERIOR ELECTRICAL RACEWAY SYSTEM EXPOSED TO WEATHER SHALL BE PVC.
- ELECTRICAL SYSTEM SHALL BE GROUNDED IN ACCORDANCE WITH NEC ARTICLE 250. GROUNDING SHALL BE EXTENDED FROM BUILDING MAIN COLD WATER PIPE AND GROUNDING ELECTRODES.
- ALL OUTDOOR HVAC AND SPECIALTY EQUIPMENT SHALL BE TERMINATED WITH LIQUID-TIGHT FLEXIBLE CONDUITS.
- ALL DISCONNECT SWITCHES SHALL BE 3R WEATHER PROOF ON ROOF OR EXPOSED TO WEATHER.
- ALL ABOVE GROUND WIRES UNLESS OTHERWISE NOTED TO BE COPPER, MIN. #12 THHN. ALL BELOW GROUND WIRES UNLESS OTHERWISE NOTED TO BE COPPER, MIN. #12 XHHW.
- SIGN ELECTRICAL JUNCTION BOX SHALL BE MOUNTED ON THE INSIDE WALL OF CANOPY. CONTRACTOR TO VERIFY WITH OWNER FOR HEIGHT AND EXACT LOCATION. EXTENSION FROM JUNCTION BOX AND ELECTRICAL TERMINATIONS SHALL BE BY SIGN CONTRACTOR.
- RECEPTACLE SHALL BE NEMA 5-20R UNLESS OTHERWISE NOTED.
- CONTRACTOR TO VERIFY ALL POWER, TELEPHONE, DATA RECEPTACLES AND LIGHT SWITCH LOCATIONS WITH OWNER BEFORE BEGINNING WORK.
- EXIT SIGNS SHALL BE CONNECTED AHEAD OF LIGHTING SWITCHES. DO NOT SWITCH EXIT LIGHTS.
- EMERGENCY BATTERY FIXTURES SHALL BE SWITCHED WITH THE NORMAL FIXTURES IN EACH AREA. A HOT LEG CONNECTED AHEAD OF LIGHTING SWITCHES WILL BE CARRIED TO EACH FIXTURE.
- NEW PANEL CIRCUIT SCHEDULES TO BE TYPED, NOT HANDWRITTEN, ON PANEL MANUFACTURERS SUPPLIED TEMPLATE.
- PROVIDE 24" X 24" X 3/4" TELEPHONE TERMINAL BOARD. SECURELY MOUNT TO WALL AND PAINT TO MATCH ADJACENT FINISH.
- ALL PANELS TO BE IDENTIFIED WITH ENGRAVED PHENOLIC RESIN PLACARDS. (1/2" HIGH LETTERS & NUMBERS)
- PROVIDE 1/2" CONDUIT TO ABOVE CEILING FOR THERMOSTAT WIRING. VERIFY LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN

ELECTRICAL LEGEND

- NOTE: DEVICE AND COVER PLATE FINISHES SHALL BE SELECTED BY OWNER
- NEMA 3R PANELBOARD 120/208 VOLTS, 3P, 4 WIRE, SURFACE MOUNTED, CLEARANCE FOR WORK SPACE IS IDENTIFIED
- 24" x 24" TELEPHONE PANELBOARD
- DISCONNECT SWITCH HORSEPOWER RATED, FUSED OR NON-FUSED, AS INDICATED ON DRAWING. 3R WEATHERPROOF RATED IF LOCATED OUT DOORS
- JUNCTION BOX, IN WALLS OR ABOVE CEILING
- JUNCTION BOX, IN WALLS. CONTRACTOR SHALL WIRE UP FOR CITY SUPPLIED AND INSTALLED 120 VOLT EXTERIOR LIGHT FIXTURE. REFER TO ELEVATIONS FOR HEIGHTS.
- GROUND FAULT CURRENT INTERRUPTER RECEPTACLE WITH WEATHERPROOF COVER, NEMA 5-20R MOUNTED NEAR PANEL.
- OCCUPANCY SENSOR - WATTSTOPPER #PW-100 (OR EQUAL), 48" A.F.F. OR AS NOTED
- EXIT SIGN/UNIT COMBO CEILING MOUNTED WITH EMERGENCY BATTERY, TEST SWITCH, LED LIGHT AND (2) LAMP HEADS, LITHONIA MODEL QUANTUM LHQMSWIR120/277 OR APPROVED EQUAL
- 4' SURFACE MOUNT STRIP LIGHT FIXTURE, LITHONIA MODEL C 2 3/2 MVOLT GEB101S OR APPROVED EQUAL
- COMPACT UNIT HEATER - DIMPLEX, MODEL CUH02B31T (OR APPROVED EQUAL), CONTRACTOR SHALL INSTALL PER MANUFACTURE'S INSTRUCTIONS AND AIM TOWARD OVERHEAD DOOR'S GENERAL DIRECTION.
- WIRING IN CONDUIT RUN CONCEALED IN CEILING AND/OR WALL
- WIRING IN CONDUIT RUN CONCEALED IN FLOOR AND/OR WALL
- WIRING IN CONDUIT HOMERUN TO PANEL



MECHANICAL LEGEND



COMPACT UNIT HEATER - DIMPLEX, MODEL CUH02B31T (OR APPROVED EQUAL). CONTRACTOR SHALL INSTALL PER MANUFACTURE'S INSTRUCTIONS AND AIM TOWARD HOSE BIBB'S GENERAL DIRECTION.

1
AE-101

ELECTRICAL PLAN

SCALE: 1/2" = 1'-0"



MAYOR **CRAIG NEWTON** · MAYOR PRO TEM **ANDREW HIXSON** · COUNCILMAN **JOSH BARE** · COUNCILMAN **CHUCK PAUL**
 COUNCILMAN **DAN WATCH** · COUNCILWOMAN **ELAINE PUCKETT** · CITY MANAGER **RUDOLPH SMITH** · CITY CLERK **MONIQUE LANG**

**PWUP20-01 Downtown Norcross Compactor Enclosure Construction
 Addendum #1 (1 page)**

In light of issues related to COVID-19 and the need to limit non-essential personal interaction at this time, the bid date for this project will be postponed until April 28th at 11am.

The deadline for questions will be extended until 5pm April 10th.

Attachment: 2020-07 Compactor Enclosure Memo (20-5788 : PWUP 20-01 Downtown Norcross Compactor Enclosure)



MAYOR **CRAIG NEWTON** · MAYOR PRO TEM **ANDREW HIXSON** · COUNCILMAN **JOSH BARE** · COUNCILMAN **CHUCK PAUL**
COUNCILMAN **DAN WATCH** · COUNCILWOMAN **ELAINE PUCKETT** · CITY MANAGER **RUDOLPH SMITH** · CITY CLERK **MONIQUE LANG**

PWUP20-01 Downtown Norcross Compactor Enclosure Construction
Addendum #2 (2 pages)

1. Do you anticipate extending the bid date.
 - a. Bid date has been extended per Addendum #1
2. What additional details are you willing to provide, if any, beyond what is stated in bid documents concerning how you will identify the winning bid?
 - a. The City of Norcross will evaluate the lowest bidder for completeness and satisfactory references.
3. Was this bid posted to the nationwide free bid notification website at www.mygovwatch.com?
 - a. No.
4. Other than your own website, where was this bid posted?
 - a. The invitation to bid was posted to the City website, Georgia Procurement Registry and the local legal organ, The Gwinnett Daily Post.
5. Can you please specify the process you want the GC to follow to have Advance Disposal provide a quote.
 - a. Please contact Norcross General Government Administration at 770-448-2122. Any representative should be able to answer the question, or request Mr. James Newton.
6. I recall us briefly mentioning at the pre-bid meeting that the City might be providing the details of the compactor Advanced Disposal is seeking to use. You mentioned that we cannot go directly to Advanced Disposal. Can you either verify that it will be made known to all GCs or will you provide the information I need in order to get product specifications from Advanced Disposal?
 - a. See question 5 above.
7. Please specify/confirm if City of Norcross will provide graded site for GC to begin SOG scope of work.
 - a. Yes, per the Invitation to Bid Project Description.
8. The BID PACKET CHECKLIST list the E-Verify Contractor & SAVE Affidavits as one of the required forms to be submitted, however the bid documents does not contain this form. Could you please provide the E-Verify Contractor & SAVE Affidavits form?

9. The project information on the cover sheet of the drawings list the construction type as "NON SPRINKLERED" , however, the general notes on page 2 of the drawings has a "SPRINKLER SYSTEM NOTES" section. Does this project involves a sprinkler system?
 - a. This is project is non-sprinklered. Sheet G-002 is just a general note sheet and it is not stating the project is sprinklered it is simply stating if the project is required to be sprinklered follow these notes. Building is not sprinklered.
10. The Fire Extinguisher section in the general notes on page 2 of the drawings calls for two Fire Extinguishers, while the floor plan on page A-101 shows only 1 Fire Extinguisher. How many Fire Extinguishers are required?
 - a. Follow sheet A-101, we only need (1) fire extinguisher for this building.
11. The general notes on page 2 of the drawings has the following sections: "SMOKE DETECTORS", "DRINKING FOUNTAINS", "STORAGE RACKING" and "STREET AND TENANT NUMBERS". However, neither the drawings nor the specifications shows details on the locations of these items or specific types of these items. Please clarify.
 - a. Sheet G-002 is general notes, so If the drawings don't show any of this information they are not required to supply those items.
12. Will we require a separate permit for signs for this project?
 - a. There are no signs proposed that require a separate permit.
13. The general notes state that this building is sprinklered. Please clarify.
 - a. See question 9 above.
14. Will the city be responsible for bringing power to the building? Will it come in underground as shown or overhead?
 - a. The City will bring power to the building underground.
15. Will the city provide the dumpsters since the city is in contract with Advanced Disposal or will the contractor be responsible for that cost?
 - a. The Contractor will be responsible for that cost and coordination
16. Has there been any addenda issued other than addendum 1?
 - a. No.
17. What is the truss heel height, the truss cantilevered overhang distance? Make sure the answers pertain to the truss only. The architect says 16" o.c. trusses but what does the Professional Engineer want?
 - a. Per the drawings top of block is at 14'-0" AFF and we have the truss sitting on wood blocking so bottom of truss is at 14'-1-1/2" AFF. The truss is overhanging the exterior face of block wall at each end by 1'-0". Per the drawings with 5/8" plywood sheathing the trusses need to be spaced at 16" o.c. If the contractor wants to use 3/4" T&G plywood sheathing the truss space can change to 24" o.c.
18. Are we providing a digital lock on the Chute door of the Compactor Enclosure? If so, can you provide specifications for this?
 - a. The City will provide the lock for installation by the contractor.



MAYOR **CRAIG NEWTON** · MAYOR PRO TEM **ANDREW HIXSON** · COUNCILMAN **JOSH BARE** · COUNCILMAN **CHUCK PAUL**
COUNCILMAN **DAN WATCH** · COUNCILWOMAN **ELAINE PUCKETT** · CITY MANAGER **RUDOLPH SMITH** · CITY CLERK **MONIQUE LANG**

PWUP20-01 Downtown Norcross Compactor Enclosure Construction
Addendum #3 (1 page)

1. With this being a concrete block structure, are we permitted to run exposed conduit for outlets and switches or would these need to be installed in the block wall?
 - a. No exposed conduit will be allowed on the exterior of the building. Inside the enclosure, we can accept exposed conduit.

NOTE ABOUT DELIVERING BID PACKAGES: A mailbox is located directly outside the front door of 345 Lively Avenue. Please drop submittal package in the mailbox. At 11am on April 28th, packages will be retrieved and opened. Due to COVID-19 social distancing requirements, bids will be read by a representative of Public Works with a witness, and a bid tabulation will be posted to the Norcross project web page.

BID PACKET CHECKLIST**PROJECT:** DOWNTOWN NORCROSS COMPACTOR ENCLOSER**BID DATE:** APRIL 28, 2020

Enclosed with this Bid Packet are the following Forms and instructions. Use this checklist to ensure you have properly completed all Forms. You must return the following pages to be eligible for consideration of this project.

- X Two Hard Copies & One Electronic Copy of Bid
- X Bid Form
- X Bid Bond or Certified Check, if bid is over \$30,000
- X Certificate of Liability Insurance
- X E-Verify Contractor & SAVE Affidavits
- X Reference Page
- X Ship Proposal to: City of Norcross
345 Lively Avenue
Norcross, GA 30071
Attn: Mary Beth Bender, Director of Public Works



City of Norcross - Department of Public Works, Utilities & Parks
PWUP20-01 BID FORM

This form is mandatory, and must be included in your bid, addressed to:

City of Norcross
 345 Lively Avenue
 Norcross, GA 30071

The Bidder has carefully examined and fully understands the Contract, Plans and Specifications and other Documents hereto attached, and has made a personal examination of the Site of the proposed Work, and has satisfied himself as to the actual conditions and requirements of the Work, and hereby proposes and agrees that if his bid is accepted, he will contract with the City of Norcross according to the bidding Documents entitled **Downtown Norcross Compactor Enclosure** and Addenda, as well as the existing conditions of the project, and conditions affecting the Work, the undersigned proposes to furnish all services, labor and materials required by them in accord with said documents, personal observations of the site conditions.

ONE HUNDRED FOURTEEN THOUSAND SIX HUNDRED EIGHTY ONE AND 54/100 _____ Dollars

(\$ 114,681.54 _____) which sum is hereinafter called "Base Bid".

The undersigned agrees to commence work within 10 days of the date of Notice to Proceed issued by City of Norcross and to commit adequate forces on-site to substantially complete all Work, including punch list items and clean-up, as determined by the City within **90 calendar days**.

Company Name: MALCO CONSTRUCTION, INC.

Company Mailing Address: 235 NEWTON RIDGE DR
COVINGTON, GA 30014

Company Website: malcocon.com

Company Phone Number: 404-569-8823

Authorized Representative: Kevin Malcolm Date: 04/28/2020
 (signature)

Authorized Representative: KEVIN MALCOLM
 (printed name)

345 LIVELY AVE, NORCROSS, GEORGIA 30071
 678-448-2122

<http://www.norcrossga.net>

Attachment: 2020-07 Compactor Enclosure Memo (20-5788 : PWUP 20-01 Downtown Norcross Compactor Enclosure)

References for MALCO CONSTRUCTION, INC.

The Contractor must provide at the time of bid opening a list of contact numbers, addresses and a contact person from three (3) jobs completed having similar size and scope within the metro Atlanta area.

1. Company Name: ASHLEY CAPITAL ,LLC
 Description of Project: STONECREST CITY HALL
 Completion Date: 06/30/2019
 Contact Person: GREG McKELVEY
 Telephone: 440-527-4776 Fax: _____
 Email address: gmckelvey@ashleycapital.com

2. Company Name: PHILIP A. JOHNSON PC
 Description of Project: MAJOR RENOVATION
 Completion Date: 10/28/2020
 Contact Person: PHIL JOHNSON
 Telephone: 404-379-4687 Fax: _____
 Email address: philajohnsonpc@gmail.com

3. Company Name: INNOVATIVE AIR TECHNOLOGIES
 Description of Project: MANUFACTURING WAREHOUSE FACILITY
 Completion Date: 08/08/2019
 Contact Person: KACY ORR
 Telephone: 770-788-6744 Fax: _____
 Email address: kacy@dehumidifiers.com

Sean Carragher

Insurance Broker

Piedmont Insurance Associates Inc.

10243 S. Dearing St.

Covington, GA 30014

scarragher@piedmontins.com

(770)355-2993 Cell

(770)788-9000 Office

(770)787-1779 Fax

Contractor Affidavit under O.C.G.A. § 13-10-91(b)(1)

The undersigned contractor ("Contractor") executes this Affidavit to comply with O.C.G.A. § 13-10-91 related to any contract to which Contractor is a party that is subject to O.C.G.A. § 13-10-91 and hereby verifies its compliance with O.C.G.A. § 13-10-91, attesting as follows:

- a) The Contractor has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program;
- b) The Contractor will continue to use the federal work authorization program throughout the contract period, including any renewal or extension thereof;
- c) The Contractor will notify the public employer in the event the Contractor ceases to utilize the federal work authorization program during the contract period, including renewals or extensions thereof;
- d) The Contractor understands that ceasing to utilize the federal work authorization program constitutes a material breach of Contract;
- e) The Contractor will contract for the performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the Contractor with the information required by O.C.G.A. § 13-10-91(a), (b), and (c);
- f) The Contractor acknowledges and agrees that this Affidavit shall be incorporated into any contract(s) subject to the provisions of O.C.G.A. § 13-10-91 for the project listed below to which Contractor is a party after the date hereof without further action or consent by Contractor; and
- g) Contractor acknowledges its responsibility to submit copies of any affidavits, drivers' licenses, and identification cards required pursuant to O.C.G.A. § 13-10-91 to the public employer within five business days of receipt.

876345

Federal Work Authorization User Identification Number

MALCO CONSTRUCTION, INC.

Name of Contractor

CITY OF NORCROSS

Name of Public Employer

5-13-2015

Date of Authorization

NORCROSS DUMPSTER ENCLOSURE

Name of Project

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on April, 28, 2020 in COVINGTON (city), GA (state).

Kevin Malcolm

Signature of Authorized Officer or Agent

KEVIN MALCOLM PRESIDENT

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME
ON THIS THE 28th DAY OF April, 2020

Dani L. McSwain

NOTARY PUBLIC

My Commission Expires: 12/08/22





SAVE Public Benefit Affidavit O.C.G.A. § 50-36-1

Instructions: As required by Georgia Security and Immigration Compliance Act of 2006, as amended, every agency administering or providing Public Benefits is responsible for requiring that applicants for public benefits execute a sworn affidavit verifying the applicant's lawful presence in the United States (Ga. Code 50-36-1(f)(2)). The applicant shall execute this affidavit in front of a Notary and return it to the city along with the associated application, renewal form, contract, bid packet, or other applicable document.

By executing this affidavit under oath, as an applicant for _____ (Occupational Tax license or Alcoholic Beverage license or any other Public benefit) as referenced in O.C.G.A. § 50-36-1, from the City of Norcross, the undersigned applicant verifies one of the following with respect to my application for public benefit. (Please check one)

- 1) ☒ I am a United States citizen. (REQUIRES VERIFICATION AT SUBMISSION)
- 2) ☐ I am a legal permanent resident of the United States.
- 3) ☐ I am a qualified alien or non-immigrant under the Federal Immigration and Nationality Act with an alien number issued by the Department of Homeland Security or other federal immigration agency.

My alien number issued by the Department of Homeland Security or other federal immigration agency is: _____.

The undersigned applicant has also hereby verifies that he or she is 18 years of age or older and has provided at least one secure and verifiable document, as required by Georgia Law O.C.G.A § 50-36-1(f) (1) A complete list of secure and verifiable documents on back of this form.

REQUIRES VERIFICATION AT SUBMISSION - Which type of secure and verifiable document was provided with this affidavit? BIRTH CERTIFICATE

In making the above representation under oath, I understand that any person who knowingly and willfully who makes a false, fictitious, or fraudulent statement or representation in this affidavit shall be guilty of a violation of O.C.G.A. § 16-10-20, and face criminal penalties as allowed by such criminal statute.

MUST BE COMPLETED BY NOTARY

I, KEVIN MALCOLM (representative for) MALCO CONSTRUCTION, INC.
(Printed NAME of individual and natural person) (Name of BUSINESS, corporation, partnership, etc.)

Kevin Malcolm 6-1-20
Signature of Applicant Date

SUBSCRIBED AND SWORN BEFORE ME ON THIS THE 1st DAY OF June, 2020

Executed in Covington (City), GA (State)

Dan L. McSwain 12/08/22
NOTARY PUBLIC Signature My Commission Expires



VITAL RECORDS SERVICE GEORGIA DEPARTMENT OF HUMAN RESOURCES CERTIFICATION OF BIRTH NOT VALID WITHOUT ORIGINAL SIGNATURE AND IMPRESSED SEAL		
ISSUED BY THE STATE OFFICE OF THE VITAL RECORDS SERVICE		
DATE ISSUED 12-15-00	FILE DATE 03-18-71	BIRTH FILE NUMBER 110- 15990
NAME AT BIRTH JOHN KEVIN MALCOLM		
BIRTH DATE 03-01-71	SEX M	BIRTH PLACE-COUNTY MUSCOGEE
This is a true certificate of name and birth facts recorded in this office, issued under the authority of Chapter 31-10, Vital Records, Georgia Health Code, as amended. STATE REGISTRAR OF VITAL RECORDS <i>Michael R. Larriv</i> ISSUED BY: <i>M. Mett</i>		
ANY ALTERATION OR ERASURE VOIDS THIS CERTIFICATE		

THIS CERTIFICATION OF BIRTH CARD IS AN OFFICIAL DOCUMENT
ISSUED BY THE VITAL RECORDS SERVICE, GEORGIA DEPARTMENT
OF HUMAN RESOURCES.

IF FOUND, MAIL TO: VITAL RECORDS SERVICES
2600 SKYLAND DRIVE NE
ATLANTA, GEORGIA 30319-3640

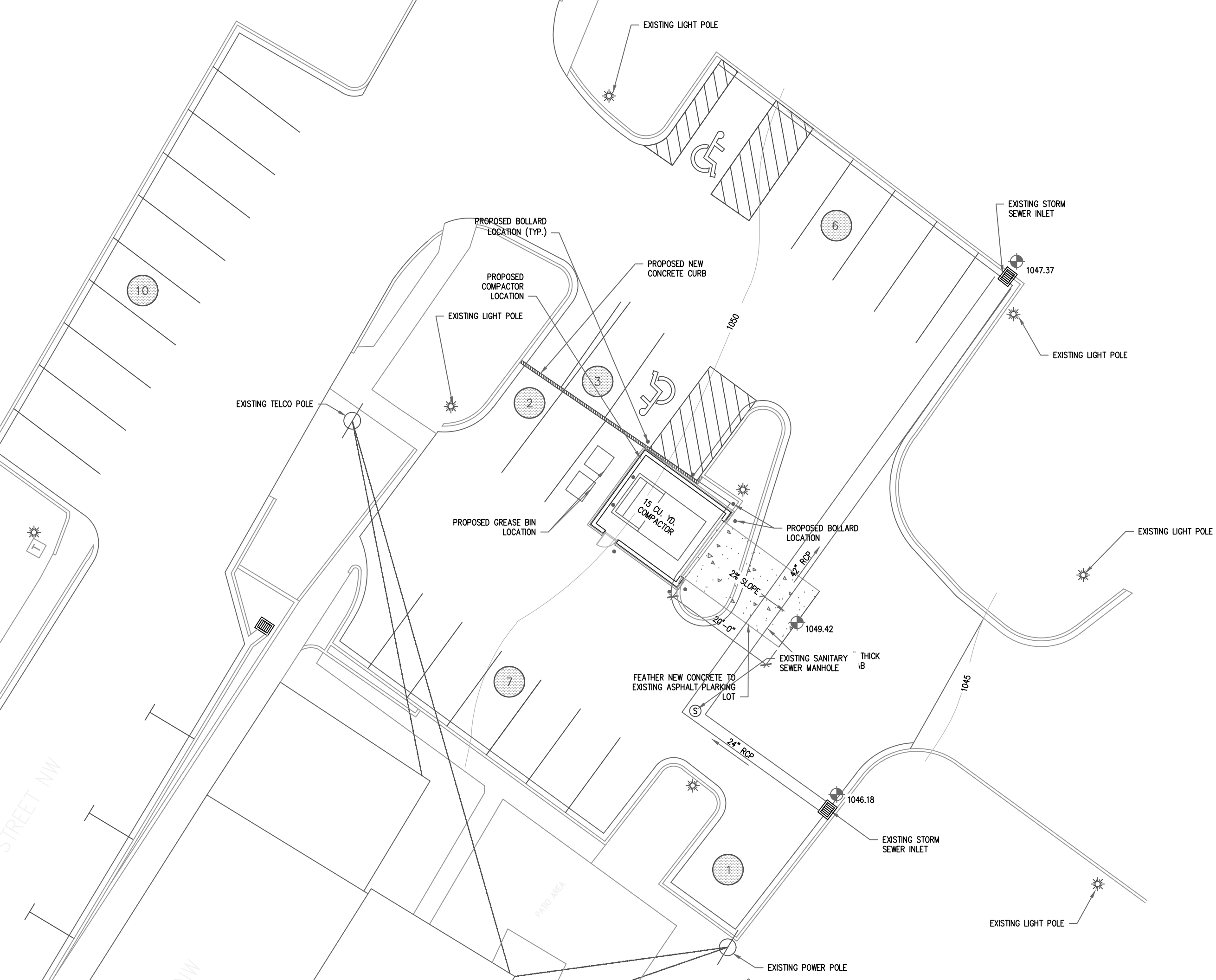
THIS CARD IS PRINTED ON SECURITY PAPER AND IS NOT VALID IF
REPRODUCED OR ALTERED.

FORM 3915 (Rev. 9-00)

CONTROL NO: **S0236544**

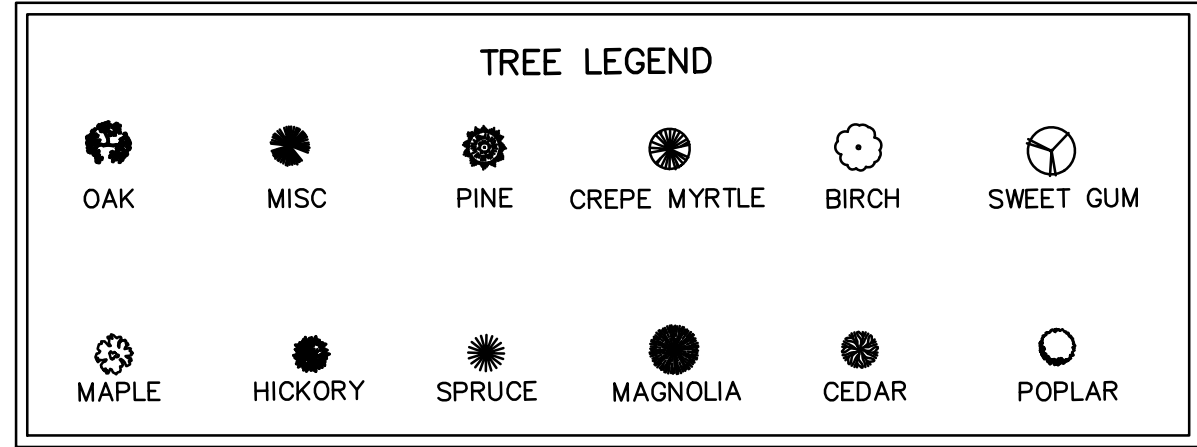
ATTACHMENT E - BONDS
(PLACEHOLDER)

	Proposed Alternates	Construction Cost	Parking Change	Cost to Restaurants	Aesthetics/Smell
					1-3, (1 worst smell/aesthetic, 3 best odor control/aesthetic)
#1	No Change, 2 metal dumpsters	\$0 Possibly owe bond premium back to contractor	2 spaces lost	\$382.06 \$189.06 (Paizanos) \$119.07 (Iron Horse) \$68.89 (Zapata)	1
#2	Dumpster or Compactor Access from Wingo	TBD Retaining Wall Utility Pole relocation (\$20K) Enclosure type (Fence, structure)	Lose at least 2 parks, pending solution	TBD pending container type	TBD pending Council direction
#3	Contracted Project PWUP 20-01 12 yd Compactor in masonry enclosure	\$114,681.54 \$5000 estimated PWUP time	6 spaces lost	\$1,857.83 roughly 5x current cost to businesses	3
#4	Revised Project Location 12 yd Compactor in masonry enclosure Shifted location in same lot	\$114,681.54 (estimated,as change order with existing contractor) \$5000 estimated PWUP time	3 spaces lost	\$1,857.83 roughly 5x current cost to businesses	3
#5	Other Option above with VIP Compactor 6 yd compactor	TBD pending enclosure type Masonry enclosure redesign, est. \$2500	TBD, pending location	\$706.20 Total roughly double current cost to businesses	TBD pending Council direction



GENERAL NOTES

1. THIS SURVEY IS A RETRACEMENT SURVEY OF AN EXISTING TRACT OR TRACTS OF LAND. THE FIELDWORK FOR THIS SURVEY WAS COMPLETED ON FEBRUARY 5, 2019. REFERENCE FOR THIS SURVEY SHOULD BE MADE TO A WARRANTY DEED FROM MICHAEL J. CICCO TO THE CITY OF NORCROSS, DATED MARCH 19, 1997, RECORDED IN DEED BOOK 13958, PAGE 67, GWINNETT COUNTY, GEORGIA RECORDS.
2. THE BEARING STRUCTURE FOR THIS SURVEY IS BASED ON GRID NORTH, GEORGIA WEST ZONE, STATE PLANE COORDINATE SYSTEM. THE GEODETIC REFERENCE SYSTEM IS NORTH AMERICAN DATUM OF 1983 (NAD 83). DISTANCES ARE IN U.S. FEET.
3. NO PORTION OF THIS PROPERTY LIES WITHIN A FLOOD PRONE AREA. THIS PROPERTY IS WITHIN FLOOD ZONE "X" (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE OF FLOOD AS PER F.I.R.M. COMMUNITY PANEL NO. 13135C00826, GWINNETT COUNTY, GEORGIA, EFFECTIVE DATE MARCH 4, 2013).
4. PURSUANT TO RULE 180-6.09 OF THE GEORGIA STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS, THE TERM "CERTIFY" OR "CERTIFICATION" RELATING TO LAND SURVEYING SERVICES SHALL MEAN A SIGNED STATEMENT BASED UPON FACTS AND KNOWLEDGE KNOWN TO THE REGISTRANT AND IS NOT A GUARANTEE OR WARRANTY, EITHER EXPRESSED OR IMPLIED.
5. THE FIRM OF HAYES, JAMES AND ASSOCIATES, INC. DOES NOT CERTIFY TO THE ACCURACY OR THE LOCATION OF ANY UNDERGROUND UTILITIES EITHER SHOWN OR NOT SHOWN HEREON. THE UTILITIES PROTECTION CENTER TYPICALLY WILL NOT LOCATE BURIED UTILITIES FOR SURVEY PURPOSES. A PRIVATE UTILITY LOCATION MAY BE EMPLOYED TO MARK UTILITIES AND THESE MARKINGS MAY BE SURVEYED AND PLOTTED ON THE FACE OF THE SURVEY PLAT IF REQUESTED AT ADDITIONAL COST TO THE CLIENT, HOWEVER LOCATIONS OF UTILITIES CANNOT BE VERIFIED OR CERTIFIED TO, WITHOUT EXCAVATION.
6. THIS PLAT WAS PREPARED AND CERTIFIED FOR THE INDIVIDUAL, INDIVIDUALS OR GROUP LISTED ON THIS DOCUMENT. THE CERTIFICATION DOES NOT EXTEND TO OTHER INDIVIDUALS OR GROUPS WITHOUT RECERTIFICATION BY THE SURVEYOR OF RECORD LISTING NEW OR ADDITIONAL INDIVIDUALS OR GROUPS.
7. CERTIFICATION DOES NOT EXTEND TO MATTERS OF TITLE, DEEDS AND PLATS REFERENCED HEREON WERE USED AS EVIDENCE OF PROPERTY LINE LOCATIONS. THESE REFERENCED INSTRUMENTS DO NOT CONSTITUTE A TITLE SEARCH OR TITLE OPINION.
8. THIS MAP OR PLAT HAS BEEN CALCULATED FOR CLOSURE AND IS FOUND TO BE ACCURATE WITHIN ONE FOOT IN 71,635 FEET.
9. THE FIELD DATA UPON WHICH THIS MAP OR PLAT IS BASED HAS AN UNADJUSTED CLOSURE OF ONE FOOT IN 15,642 FEET. THE UNADJUSTED ANGULAR ERROR OF TWO SECONDS. THIS SURVEY WAS ADJUSTED USING A LEAST SQUARES ADJUSTMENT.



Line Table		
Line No.	Direction	Length
L1	N45°52'17"W	12.31
L2	N58°03'10"W	14.24
L3	N31°17'20"E	5.64
L4	N48°51'39"E	19.52
L5	N54°53'42"W	90.46

CONTAINS 0.631 ACRE
BEING 27,495 SQUARE FEET

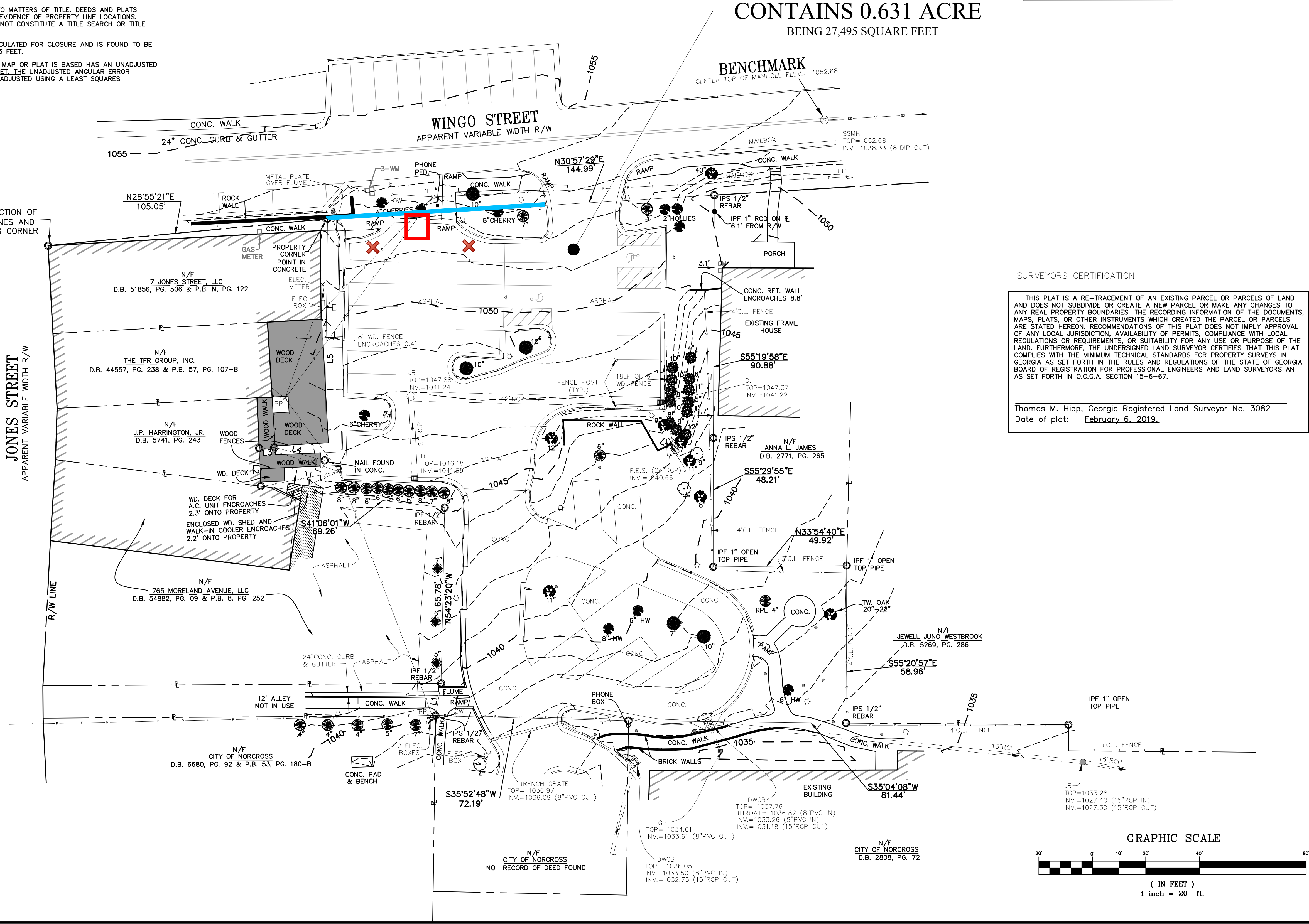
SURVEYORS CERTIFICATION

THIS PLAT IS A RE-TRACEMENT OF AN EXISTING PARCEL OR PARCELS OF LAND AND DOES NOT SUBDIVIDE OR CREATE A NEW PARCEL OR MAKE ANY CHANGES TO ANY REAL PROPERTY BOUNDARIES. THE RECORDING INFORMATION OF THE DOCUMENTS, MAPS, PLATS, OR OTHER INSTRUMENTS WHICH CREATED THE PARCEL OR PARCELS ARE STATED HEREON. RECOMMENDATIONS OF THIS PLAT DOES NOT IMPLY APPROVAL OF ANY LOCAL JURISDICTION, AVAILABILITY OF PERMITS, COMPLIANCE WITH LOCAL REGULATIONS OR REQUIREMENTS, OR SUITABILITY FOR ANY USE OR PURPOSE OF THE LAND. FURTHERMORE, THE UNDERSIGNED LAND SURVEYOR CERTIFIES THAT THIS PLAT COMPLIES WITH THE MINIMUM TECHNICAL STANDARDS FOR PROPERTY SURVEYS IN GEORGIA AS SET FORTH IN THE RULES AND REGULATIONS OF THE STATE OF GEORGIA BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS AS SET FORTH IN O.C.G.A. SECTION 15-6-67.

Thomas M. Hipp, Georgia Registered Land Surveyor No. 3082
Date of plat: February 6, 2019.

LEGEND

- IPF = IRON PIN FOUND
IPF = IRON PIN SET
R/W = RIGHT OF WAY
LLL = LAND LOT LINE
C = CENTERLINE
P = PROPERTY LINE
PC = PROPERTY CORNER
B/L = BUILDING LINE
R = RADIUS
G = GAS LINE
W = WATER LINE
T = TELEPHONE LINE
P = POWER LINE
S = SANITARY SEWER LINE
SS = STORM SEWER LINE
SSE = SANITARY SEWER EASEMENT
MH = MANHOLE
WV = WATER VALVE
F.H. = FIRE HYDRANT
GM = GAS METER
WM = WATER METER
GI = GRATE INLET
DI = DROP INLET
CB = CATCH BASIN
HW = HEADWALL
JB = JUNCTION BOX
DE = DRAINAGE EASEMENT
CO = CLEAN OUT
CMP = CORRUGATED METAL PIPE
RCP = REINFORCED CONCRETE PIPE
DIP = DUCTILE IRON PIPE
PVC = POLYVINYL CHLORIDE PIPE
CAAP = CORRUGATED ALUMINUM ALLOY PIPE
HC = HANDICAP
C & G = CURB AND GUTTER
F.I.R.M. = FEDERAL INSURANCE RATE MAP
P.O.B. = POINT OF BEGINNING
P.O.C. = POINT OF COMMENCEMENT
S/W = SIDEWALK
A.K.A. = ALSO KNOWN AS
LP = LIGHT POLE
ESMT = EASEMENT
GMD = GA. MILITIA DISTRICT
P.B. = PLAT BOOK
D.B. = DEED BOOK
PG. = PAGE
B & D = BEARING & DISTANCE
ETB = ELECTRIC TRANSFORMER BOX
N/F = NOW OR FORMERLY
G.P.S. = GLOBAL POSITIONING SYSTEM
[232] = ADDRESS
[] = LANDSCAPE LIGHT
[] = LIGHT POLE
[] = SIGN
[] = TELEPHONE BOX



BOUNDARY AND TOPOGRAPHIC SURVEY
FOR

THE CITY OF NORCROSS, GEORGIA

PROJECT LOCATION
Land Lot: 254
District: 6th
City: Norcross
County: Gwinnett
State: Georgia

Project No. 18-092-C
Drawn By: TH
Tax Parcels: 6254 248 & 6254 195
Scale: 1"= 20'
Date: February 6, 2019

NO.	REVISIONS	DATE	BY	APPROVED
1	REVISION E ON DROP INLET	3/10/19	SMH	

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This drawing and their reproductions are the property of the engineer and may not be reproduced, published, or used in whole or in part without the written permission of the engineer.
Sheet Number 1 of 1



MAYOR **CRAIG NEWTON** • MAYOR PRO TEM **JOSH BARE** • COUNCILMAN **ANDREW HIXSON** • COUNCILWOMAN • **ELAINE PUCKETT**
COUNCILMAN **MATT MYERS** • COUNCILMAN **BRUCE GAYNOR** • CITY MANAGER **RUDOLPH SMITH** • CITY CLERK • **MONIQUE LANG**

City of Norcross

Legislation Details (With Details)

File #:	20-5831	Version:	
Type #:	Agenda Item	Status:	
On Agenda:	8/20/2020 6:30 PM	In Control:	Mayor and Council Visioning Session
Title:	2020 Construction Highlights		
Sponsors:			
Code Sections:			
Title			
2020 Construction Highlights			



MAYOR **CRAIG NEWTON** • MAYOR PRO TEM **JOSH BARE** • COUNCILMAN **ANDREW HIXSON** • COUNCILWOMAN • **ELAINE PUCKETT**
 COUNCILMAN **MATT MYERS** • COUNCILMAN **BRUCE GAYNOR** • CITY MANAGER **RUDOLPH SMITH** • CITY CLERK • **MONIQUE LANG**

City of Norcross

Legislation Details (With Details)

File #:	20-5830	Version:	
Type #:	Agenda Item	Status:	Agenda Ready
On Agenda:	8/20/2020 6:30 PM	In Control:	Mayor and Council Visioning Session
Title:	Library Updates		
Sponsors:			
Code Sections:			
Title			
Library Updates			



MAYOR **CRAIG NEWTON** • MAYOR PRO TEM **JOSH BARE** • COUNCILMAN **ANDREW HIXSON** • COUNCILWOMAN • **ELAINE PUCKETT**
COUNCILMAN **MATT MYERS** • COUNCILMAN **BRUCE GAYNOR** • CITY MANAGER **RUDOLPH SMITH** • CITY CLERK • **MONIQUE LANG**

City of Norcross

Legislation Details (With Details)

File #:	20-5829	Version:	
Type #:	Agenda Item	Status:	Agenda Ready
On Agenda:	8/20/2020 6:30 PM	In Control:	Mayor and Council Visioning Session
Title:	COVID Mitigation Updates		
Sponsors:			
Code Sections:			
Title			
COVID Mitigation Updates			



MAYOR **CRAIG NEWTON** • MAYOR PRO TEM **JOSH BARE** • COUNCILMAN **ANDREW HIXSON** • COUNCILWOMAN • **ELAINE PUCKETT**
COUNCILMAN **MATT MYERS** • COUNCILMAN **BRUCE GAYNOR** • CITY MANAGER **RUDOLPH SMITH** • CITY CLERK • **MONIQUE LANG**

City of Norcross

Legislation Details (With Details)

File #:	20-5833	Version:	
Type #:	Agenda Item	Status:	Agenda Ready
On Agenda:	8/20/2020 6:30 PM	In Control:	Mayor and Council Visioning Session
Title:	Proposed Board Retreat		
Sponsors:			
Code Sections:			
Title			
Proposed Board Retreat			