Genesee County

Public Works Committee

Agenda

Wednesday, July 15, 2026 **5:30 PM** **324 S.Saginaw St., Bryant "BB" Nolden Auditorium**

I. CALL TO ORDER

II. ROLL CALL

III. APPROVAL OF MINUTES

RES-2026-0891 Approval of Meeting Minutes - June 10, 2026

IV. PUBLIC COMMENT TO COMMITTEE

V. COMMUNICATIONS

DIRECTOR OF ADMINISTRATION REPORT

VI. OLD BUSINESS

VII. NEW BUSINESS

1. RES-2026-0715 Approval of an agreement between Genesee County and Sentinel Technologies, Inc., in an amount not to exceed $26,760.96, to provide technical support services for Genesee County's core network for one-year; the cost of this agreement will be paid from account 1010-228.01-801.004

2. RES-2026-0732 Approval of a 5-year agreement between Genesee County and Logicalis in an amount not to exceed $131,000.00 to provide immutable storage; the cost of this agreement will be paid from accounts 1010-228.01-978.005, 1010-228.01-801.007 and 1010-000.00-123.000

3. **RES-2026-0781** Approval of a purchase order to Crayon Software Experts LLC for the fiscal year ending 2026, at a cost not to exceed $7,239.60, to provide for additional Microsoft licenses; the cost of this purchase order will be paid from the accounts listed

4. **RES-2026-0785** Approval of a request by Genesee County's IT Department to increase a purchase order, in an amount not to exceed $140,000.00 for a revised total of $250,000.00, to provide for the purchase of computer-related items; the cost of this increase will be paid from the accounts listed

5. **RES-2026-0798** Approval of an agreement between Genesee County and Meridian Land Surveying, Inc., in an amount not to exceed $39,790.00, to extend surveying services for the County for the 2026 Genesee County Remonumentation Grant, for the period commencing January 1, 2026 through December 31, 2026; to be paid from account 2970-245.00-801.004

6. **RES-2026-0803** Approval of a purchase order to Webuildfun, Inc., in an amount not to exceed $15,609.90, for the purchase of replacement playground equipment; the cost of this purchase order will be paid from account 2080-770.01-930.000

7. **RES-2026-0804** Approval of a grant award from the Ruth Mott Foundation, in the amount of $400,000.00, to provide for the North Flint Public Safety Strategy 2026 through Keep Genesee County Beautiful program services; the budget for this grant is attached

8. **RES-2026-0805** Approval of a purchase order to various vendors, in an amount not to exceed $200,000.00, to purchase Halloween supplies for the Crossroads Village Ghosts & Goodies Program; the cost of this purchase order will be paid from the accounts listed

9. **RES-2026-0807** Approval of an agreement between Genesee County and Site24x7, in an amount not to exceed $22,647.60, to provide subscriptions for IT monitoring services; the cost of this agreement will be paid from the accounts listed

10. **RES-2026-0811** Approval of a purchase order to SHI International for the fiscal year ending 2026, in an amount not to exceed $5,850.00, to provide for the purchase two (2) Verkada cameras and a 10-year license for the Legal Resource area and Court Room 2 cameras at the McCree building; the cost of this purchase order will be paid from accounts listed

11. **RES-2026-0844** Approval of a purchase order to Master Electric for the fiscal year ending 2026, in an amount not to exceed $794.00, to provide for wiring for an additional camera location; the cost of this purchase order will be paid from account 1010-265.00-930.000

12. RES-2026-0865 Approval of an agreement between Genesee County and Spartan Construction Group, INC., in an amount not to exceed $6,424,000.00, to provide masonry repairs to the Genesee County Jail and Circuit Courthouse; the cost of this agreement will be paid from capital improvement funds

VIII. OTHER BUSINESS

IX. ADJOURNMENT

Genesee County

Staff Report

Genesee County
Administration Building
324 S. Saginaw St.
Flint, MI 48502

File #: RES-2026-0891 **Agenda Date:** 7/15/2026 **Agenda #:**

Approval of Meeting Minutes - June 10, 2026

Genesee County
Public Works Committee
Meeting Minutes

Wednesday, June 10, 2026 **5:30 PM** **324 S.Saginaw St., Bryant "BB" Nolden Auditorium**

I. CALL TO ORDER

Commissioner Flewelling called the meeting to order at 7:50 PM.

II. ROLL CALL

Present: Brian K. Flewelling, James Avery, Delrico J. Loyd, Charles Winfrey, Beverly Brown, Shaun Shumaker and Martin L. Cousineau

Absent: Gary L. Goetzinger and Dale K. Weighill

III. APPROVAL OF MINUTES

RES-2026-0723 Approval of Meeting Minutes - May 6, 2026

IV. PUBLIC COMMENT TO COMMITTEE

V. COMMUNICATIONS

DIRECTOR OF ADMINISTRATION REPORT

26-333 Switching Costs - Mike Dawisha, CIO

VI. OLD BUSINESS

VII. NEW BUSINESS

1. RES-2026-0479 Approval of a purchase order to Flint New Holland Inc., in an amount not to exceed $76,718.93, to provide for the purchase of equipment for department operations; the cost of this purchase order will be paid from account 6665-00.00-148.000

RESULT: REFERRED
MOVER: Delrico J. Loyd
SECONDER: James Avery

Aye: Chairperson Flewelling, Vice Chair Avery, Commissioner Loyd, Commissioner Winfrey, Commissioner Brown, Commissioner Shumaker and Commissioner Cousineau

Absent: Commissioner Goetzinger and Commissioner Weighill

2. RES-2026-0569 Approval of an agreement between Genesee County and Revize LLC, in an amount not to exceed $41,636.00, to provide for website 3-year maintenance subscription and re-design; the cost of this agreement will be paid from accounts 1010-228.01-933.001 and 1010-000.00-123.000

RESULT: REFERRED
MOVER: Delrico J. Loyd
SECONDER: James Avery

Aye: Chairperson Flewelling, Vice Chair Avery, Commissioner Loyd, Commissioner Winfrey, Commissioner Brown, Commissioner Shumaker and Commissioner Cousineau

Absent: Commissioner Goetzinger and Commissioner Weighill

3. RES-2026-0585 Approval of an agreement between Genesee County and i3-Imagesoft, in an amount not to exceed $6,790.76, to provide for subscriptions to OnBase, TrueSign and Customer; the cost of this agreement will be paid from the accounts listed

RESULT: REFERRED
MOVER: Delrico J. Loyd
SECONDER: James Avery

Aye: Chairperson Flewelling, Vice Chair Avery, Commissioner Loyd, Commissioner Winfrey, Commissioner Brown, Commissioner Shumaker and Commissioner Cousineau

Absent: Commissioner Goetzinger and Commissioner Weighill

4. RES-2026-0648 Approval of an agreement between Genesee County and SHI International, in an amount not to exceed $14,261.74, to provide for annual subscription costs for Meraki which is used to manage the county's wireless network; the cost for this agreement will be paid from the accounts listed

RESULT: REFERRED
MOVER: Delrico J. Loyd
SECONDER: James Avery

Aye: Chairperson Flewelling, Vice Chair Avery, Commissioner Loyd, Commissioner Winfrey, Commissioner Brown, Commissioner Shumaker and Commissioner Cousineau

Absent: Commissioner Goetzinger and Commissioner Weighill

5. RES-2026-0653 Approval of a purchase order to Michigan CAT (MacAllister) for the fiscal year ending 2026, in an amount not to exceed $178,618.63, for the purchase of two (2) track loaders; the cost of this purchase will be paid from account 6665-000.00-148.000

RESULT: REFERRED
MOVER: Delrico J. Loyd
SECONDER: James Avery

Aye: Chairperson Flewelling, Vice Chair Avery, Commissioner Loyd, Commissioner Winfrey, Commissioner Brown, Commissioner Shumaker and Commissioner Cousineau

Absent: Commissioner Goetzinger and Commissioner Weighill

6. RES-2026-0661 Approval of a grant award from CS Mott Foundation, in the amount of $1,200,000.00, for work associated with the Grand Traverse Greenway Trail as part of the State Park in Flint

RESULT: REFERRED
MOVER: Shaun Shumaker
SECONDER: James Avery

Aye: Chairperson Flewelling, Vice Chair Avery, Commissioner Loyd, Commissioner Winfrey, Commissioner Brown, Commissioner Shumaker and Commissioner Cousineau

Absent: Commissioner Goetzinger and Commissioner Weighill

VIII. OTHER BUSINESS

IX. ADJOURNMENT

The meeting was adjourned at 8:00 PM.

Genesee County
Administration Building
324 S. Saginaw St.
Flint, MI 48502

File #: RES-2026-0715 **Agenda Date:** 7/15/2026 **Agenda #:** 1.

To: Brian K. Flewelling, Public Works Committee Chairperson

From: Michael Dawisha, CIO

RE: Approval of an agreement between Genesee County and Sentinel Technologies, Inc., in an amount not to exceed $26,760.96, to provide technical support services for Genesee County's core network for one-year; the cost of this agreement will be paid from account 1010-228.01-801.004

BOARD ACTION REQUESTED:

Approval of an agreement between Genesee County and Sentinel Technologies, Inc., in an amount not to exceed $26,760.96

BACKGROUND:

Sentinel provides engineering support to the IT network team for any issues they need assistance with as well as monitoring services to alert the department of any issues they discover. This agreement is for 1 year.

DISCUSSION:

As the results for RFP 26-483, Sentinel Technologies Inc., was the lowest bidder for the Annual Managed Network Services Agreement, to provide technical support services for Genesee County's core network in an amount not to exceed $26,760.96.

IMPACT ON HUMAN RESOURCES:

There is no impact on Human Resources.

IMPACT ON BUDGET:

This is a budgeted expense for the 12-month agreement to be paid out of the following account 1010-228.01-801.004, billed at $2,230.08 per month.

IMPACT ON FACILITIES:

There is no impact on Facilities.

IMPACT ON TECHNOLOGY:

Reviewed by IT.

CONFORMITY TO COUNTY PRIORITIES:

This renewal supports the County priority of Long-Term Financial Stability by providing a consistent managed network support model that helps control costs and reduce unexpected expenses.

Continued support helps avoid emergency fixes, extended downtime, and unplanned replacement costs while extending the useful life of existing network systems and engineering tools. This approach protects prior County investments and supports predictable budgeting for essential technology services.

TO THE HONORABLE CHAIRPERSON AND MEMBERS OF THE GENESEE COUNTY BOARD OF COMMISSIONERS, GENESEE COUNTY, MICHIGAN

LADIES AND GENTLEMEN:

BE IT RESOLVED, by this Board of County Commissioners of Genesee County, Michigan, that the request by the Chief Information Officer to authorize the one-year agreement between Genesee County and Sentinel Technologies, Inc., at a total cost not to exceed $26,760.96 to be paid from account 1010-228.01-801.004, is approved (a copy of the memorandum request and supporting documents being on file with the official records of the July 15, 2026 meeting of the Public Works Committee of this Board), and the Chairperson of this Board is authorized to execute any necessary contract documents on behalf of Genesee County.

A PROPOSAL TO

Genesee County

RFP #26-483 Annual Managed Network Services Agreement

APRIL 9, 2026

SENTINEL®

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General Contact Information

CUSTOMER CONTACT INFORMATION

Rita Schubert
Purchasing Manager
Genesee County
324 S. Saginaw Street, Suite 9A, Flint, MI 48502
Office: 810.257.3195
rschubert@geneseecountymi.gov

SENTINEL CONTACT INFORMATION

James Graff
Senior Sales Executive
10355 Citation Dr., Ste. 200, Brighton, MI 48116
734.794.5714 fax 630.769.1399
jgraff@sentinel.com

Josh Marcus
Solutions Architect Annuities
7400 E. Orchard, Ste. 4045N, Greenwood Village, CO 80111
616.384.5411 fax 630.769.1399
jmarcus@sentinel.com

Diane Jackson
Senior Product Manager
2550 Warrenville Rd., Downers Grove, IL 60515
630.786.8065 fax 630.769.1399
dijackson@sentinel.com

Environmental Policy Statement

At Sentinel, environmental protection is a management responsibility as well as the responsibility of every employee. Our environmental protection policy addresses all aspects of the corporation's operations which can potentially impact the environment. In creating this policy, we have taken into account the following factors:

- Compliance with applicable laws, regulations, and standards concerning environmental protection
- Establish corporate environmental objectives and targets
- Minimize the environmental risks to our employees and the communities in which we operate
- Promote employee awareness of environmental concerns, actions, and responsibilities
- The efficient use of energy and materials in our operations
- Reduce/ eliminate waste through recycling and responsible disposal
- Continuous improvement and monitoring of the current environmental policy

Further, Sentinel suppliers are encouraged to develop an Environmental Policy and Environmental Management System by following the Environmental Protection Agency guidelines.

SSAE 18 SOC 2, Type II Attestation

Standing at the apex of Sentinel's myriad awards, honors and certifications is its SSAE 18 Service Organization Control (SOC) 2, Type II Attestation which has been undertaken annually by the nationally-renowned auditing firm Plante Moran, PLLC for the past three years. The SOC 2, Type II attestation is the highest and most rigorous in the SSAE 18 portfolio of audits, evaluating Controls and Processes that encompass the Five Trust Service Principles of Security, Availability, Processing Integrity, Confidentiality and Privacy.

Why should this matter to you? The SSAE 18 attestation provides independent validation and assurance that Sentinel is in compliance with best practices regarding items of critical importance to you -- security, confidentiality, data protection, project management and IT strategic solutions, to name a few. If you are seeking consulting or services support for your IT environment, the SOC 2, Type II attestation should be one of the most important factors in your evaluation.

The SSAE 18 Attestation is a standard that was created by the American Institute of Certified Public Accountants (AICPA) in 2010 to replace the SAS 70 certification process, and expand reporting to the effectiveness of a service organization's controls relating to operations and compliance.

Signature Page

Please also refer to below Statement of Exceptions section.

SIGNATURE PAGE
GENESEE COUNTY RFP #26-483

Annual Managed Network Services Agreement

The undersigned represents that he or she:

1. is duly authorized to make binding offers on behalf of the company,
2. has read and understands all information, terms, and conditions in the RFP,
3. has not engaged in any collusive actions with any other potential bidders for this RFP,
4. hereby offers to enter into a binding contract with Genesee County for the products and services herein offered, if selected by Genesee County within 120 days from bid due date,
5. certify that it, its principals, and its key employees are not "Iran linked businesses," as that term is described in the Iran Economic Sanctions Act, P.A. 2012, No. 517, codified as MCL 129.311, et seq.
6. acknowledges the following addenda ADDENDUM #1 RECEIVED issued as part of the RFP:

Conflict of Interest:

☑ To the best of our knowledge, the undersigned firm has no potential conflict of interest due to any other County contracts, or property interest for this bid.

OR

☐ The undersigned firm by attachment to this form submits information which may be a potential conflict of interest due to other County contracts, or property interest for this Bid.

Exceptions to Solicitation and/or Standard Contract: NO ☐ YES ☑ (include attached statement)

Name (typed): Edward Truesdale

Signature: _____ Title: EVP Operations

Date: 04/09/2026

Company: Sentinel Technologies, Inc.

Federal Employee Identification Number (FEIN): 36-3199182

DUNS Number: 14-490-9553

Contact Person of company representative for matters regarding this RFP

James Graff		Senior Sales Executive	
CONTACT NAME		POSITION	
10355 Citation Drive, Suite 200	Brighton	MI	48116
MAILING ADDRESS	CITY	STATE	ZIP CODE
734-794-5714	630-769-1399	jgraff@sentinel.com	
PHONE	FAX	E-MAIL	

Signed Genesee County Insurance Checklist

GENESEE COUNTY INSURANCE CHECKLIST

PROFESSIONAL SERVICES CONTRACT FOR: **RFP: 26-483 – Annual Managed Network Services Agreement**

	Coverage Required	Limits (Figures denote minimums)
X	1. Workers Compensation	Statutory limits of Michigan
X	2. Employers' Liability	$1,000,000 accidental/disease $1,000,000 policy limit, disease Including Premises/Operations
X	3. General Liability	$1,000,000 per occurrence with $2,000,000 aggregate Including Products/Completed Operations and Contractual Liability
X	4. Professional Liability	$1,000,000 per occurrence with $2,000,000 aggregate Including errors and omissions
	5. Medical Malpractice	$200,000 per occurrence $800,000 in aggregate
X	6. Automobile liability	$1,000,000 combined single limit each accident – Owned, Hired, Non-owned
X	7. Umbrella liability/Excess Coverage	$10,000,000 BI & PD and PI
X	8. Genesee County named as an additional insured on other than worker' compensation via endorsement. A copy of the endorsement or evidence of blanket Additional Insured language in the policy must be included with the certificate.	
X	9. Other Insurance Required: **Cyber Liability, Third Party Theft**	
X	10. Best's rating: A VIII or better, or its equivalent (Retention Group Financial Statements)	
X	11. The Certificate must state bid number and title **RFP 26-483 – Annual Managed Network Services Agreement**	

Insurance Agent's Statement

I have reviewed the requirements with the bidder named below. In addition:

X The above required policies carry the following deductibles:

Property: $5,000 / Cyber: $100,000

X Liability policies are *occurrence* X *claims made* X

Kelly Vole / Alliant Insurance Services — Kelly Vole

Insurance Agent — Signature

Prospective Contractor's Statement

I understand the insurance requirements and will comply in full if awarded the contract.

Sentinel Technologies, Inc. — [signature]

Contractor — Signature

Required general insurance provisions are provided in the checklist above. These are based on the contract and exposures of the work to be completed under the contract. Modifications to this checklist may occur at any time prior to signing of the contract. Any changes will require approval by the vendor/contractor, the department, and County Risk Manager. To the degree possible, all changes will be made as soon as feasible.

Sample COI

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 11/21/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Alliant Insurance Services, Inc. 32 Old Slip 29th Fl New York NY 10005	CONTACT NAME: Jake Guttentag PHONE (A/C, No, Ext): FAX (A/C, No): E-MAIL ADDRESS: Jake.Guttentag@alliant.com
INSURED SENTTEC-03 Sentinel Technologies, Inc. 2550 Warrenville Road Downers Grove IL 60515	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A : Hanover American Insurance Com — 36064 INSURER B : Allmerica Financial Benefit In — 41840 INSURER C : Hanover Insurance Company — 22292 INSURER D : INSURER E : INSURER F :

COVERAGES **CERTIFICATE NUMBER: 724307571** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT X LOC OTHER:			ZBY-M143516-00	10/31/2025	10/31/2026	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG $	$ 1,000,000 $ 100,000 $ 10,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
B	AUTOMOBILE LIABILITY X ANY AUTO X OWNED AUTOS ONLY X HIRED AUTOS ONLY SCHEDULED AUTOS X NON-OWNED AUTOS ONLY			AWY-M143739-00	10/31/2025	10/31/2026	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) $	$ 1,000,000 $ $ $ $
C	X UMBRELLA LIAB X OCCUR EXCESS LIAB CLAIMS-MADE DED X RETENTION $ 0			UHY-M201452-00	10/31/2025	10/31/2026	EACH OCCURRENCE AGGREGATE $	$ 15,000,000 $ 15,000,000 $
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? N/A (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below			W2Y-M146408-00	10/31/2025	10/31/2026	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

For Information Purpose Only

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

SAMPLE

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Statement of the Project

State in precise terms your understanding of the project as presented by this RFP. Include in this section a detailed summary of the Vendor's approach to providing services required by this RFP.

Sentinel Response:

Sentinel Technologies understands that Genesee County is seeking a qualified partner to deliver a one year Annual Managed Network Services Agreement that provides proactive, secure, and reliable support for the County's core network infrastructure across four facilities, including 24x7 monitoring, incident response, configuration and change management, firewall administration, and hardware and software lifecycle support for Palo Alto and Cisco devices. Sentinel acknowledges its role as an escalation resource to the County's internal network team, with responsibility for meeting defined SLAs, ensuring compliance with CJIS, NIST, and HIPAA requirements, U.S.-based engineers capable of rapid remote response and timely onsite support, while maintaining clear documentation, reporting, and coordination to ensure continuous network availability and performance.

Reference Form

Prior experience with similar requests is essential for any firm to provide the services required in this solicitation. This section shall consist of a minimum of three (3) references with project descriptions. The contacts for each reference must be knowledgeable of the offeror's performance on the referenced project and the scope of services performed by the bidder.

Sentinel Response:

REFERENCES

List 3 references of similar projects Submitted by: Sentinel Technologies, Inc.

Company/Client:	Contacts:
Genesee County	Name: Don Stockley
	Title: Deputy CIO
	Phone: 810-237-6102
Dates of Service: 2022-2025	Email: dstockley@geneseecountymi.gov
	Address: 324 S. Saginaw St, Suite. 926
	City, State: Flint, MI 48502

Company/Client:	Contacts:
Ottawa County	Name: Michael Morrow
	Title: Technical Infrastructure/Security Manager
	Phone: 616-738-4839
Dates of Service: 2018-Present	Email: mmorrow@miottawa.org
	Address: 12220 Fillmore Street
	City, State: West Olive, MI

Company/Client:	Contacts:
	Name:
	Title:
	Phone:
Dates of Service:	Email:
	Address:
	City, State:

Company Background

- Overview of the vendor's experience and qualifications, including relevant projects in similar government or public sector environments.
- Experience supporting similar multi-site environments.
- Relevant certifications (Palo Alto, Cisco)

Sentinel Response: Please see following Sentinel Overview and Resumes sections.

Sentinel Overview

SENTINEL TECHNOLOGIES

A PREMIER BUSINESS SOLUTIONS PROVIDER

2550 WARRENVILLE RD, DOWNERS GROVE, IL 60515
WWW.SENTINEL.COM

COMPANY OVERVIEW

OUR VISION

To create a more secure, efficient, accessible, and comprehensive IT environment posture for businesses across all verticals.

OUR MISSION

Providing thought leadership and best-in-class business technology, engendering fanatical customer loyalty through uncompromising customer service, and creating a work environment that encourages creativity, fosters growth, and rewards success.

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WELCOME STATEMENT

"Welcome to Sentinel! From the Office of the President, we first want to thank you for considering a partnership with Sentinel. We take all of our obligations and commitments very seriously as we have since our inception in 1982. We can assure you that no matter what assignment Sentinel might be selected for, we will deliver our very best. Our ultimate objective is to always deliver a solution that provides true value to your business.

We truly look forward to engaging and providing an outstanding customer experience!"

- Office of the President

Tim Hill Co-President Chief Financial Officer	Robert Lenartowicz Co-President Chief Operations Officer	Brian Osborne Co-President Chief Sales and Marketing Officer

ALWAYS LEADING

Sentinel excels at providing customers with world-class IT solutions, consulting, customer service, and support. Our Always Leading approach includes the relentless pursuit of innovative solutions, the development of strong partnerships, as well as the acquisition of top certifications from global technology leaders. These factors have enabled Sentinel to become a single source capable of addressing IT needs for organizations of all sizes and industries. Sentinel's comprehensive portfolio includes solutions focused on advisory, cloud, security, communications, lifecycle, and managed services. Our goal is to ensure your organization has the right technologies and capabilities to achieve unprecedented levels of growth and success.

ALWAYS DELIVERING

Creating and maintaining growth is difficult for any organization, especially when you're stuck handling the day-to-day tasks associated with the management of an IT environment. Sentinel's Managed Services significantly ease the burden on your IT team and operations, allowing them to focus on value-adding projects and delivering quality business outcomes. Our three-step process ensures the enhancement of any IT environment: We develop a custom strategy based on your organization's needs, proactively monitor your IT environment 24x7x365 to maximize uptime, and provide full remediation when needed. This approach guarantees the chosen solutions and their management contribute to the growth of your organization.

ALWAYS INVOLVED

Sentinel remains Always Involved by providing our customers with innovative and comprehensive IT solutions that contribute to the growth of their organization for years to come. Technology is constantly evolving, and we make every effort to evolve alongside it with our continuous pursuit of world-class solutions. Once the latest technology has been acquired, we then customize it to serve the unique needs of each customer. Customization is done using Sentinel's unique seven-point approach: vision, design, product, implementation, documentation, training, and support. Each represents a critical element in the development process, ultimately resulting in a solution able to meet customer demand and build upon an already strong foundation for success.

ALWAYS CAPABLE

Sentinel provides IT solutions to organizations of all sizes and industries, including education, finance, healthcare, manufacturing, legal, and government. Our goal is to ensure customers have a comprehensive understanding of each solution and how it will impact their organization. That means detailing the vision and design of the solution along with the products used during development to create a sense of familiarity prior to deployment. The Sentinel team then handles training on the solution and 24x7x365 support services. We are deeply devoted to thought leadership and customer satisfaction, ensuring our customers receive the maximum value and impact of their investments. When you choose Sentinel, you gain a trusted, experienced partner who wants to contribute to the positive developments of your organization.

ALWAYS CONNECTED

The scalability, reliability, enhanced security, and "as a service" architecture of Sentinel's CloudSelect® makes it easier than ever to remain Always Connected with co-workers, business partners, and customers from anywhere at any time on any device. Our extensive CloudSelect® portfolio is built on a high availability platform with customizable service options, so organizations can benefit no matter their size, industry, or budget. We tailor your CloudSelect® experience to align with the specific needs and goals of your organization and help optimize operations to ensure you get the most from your investments. Customers are also safer on CloudSelect® with Sentinel's Native Secure Architecture, which combines innovative strategies with industry-best solutions to deliver multiple layers of defense against all types of threats.

CORE SOLUTIONS

- Sentinel CloudSelect®
- Sentinel High Availability Network Support (HANS™)
- Cloud Advisory
- Cloud Migration
- Managed Cloud
- Hybrid and Multi-Cloud Services
- Desktop as a Service
- Collaboration as a Service

Sentinel CloudSelect®

ALWAYS ENGAGED

Evolving technology trends and business demands can make it difficult for organizations to achieve their goals and remain competitive. The most successful businesses understand that regular assessments, a detailed IT strategy, streamlined processes, strong solution design and deployment, as well as continued support are necessary to adapt and maintain consistent progress. Sentinel's Advisory Services team helps your organization navigate the challenges tied to aligning your IT investments with critical business priorities. Our highly experienced consultants use industry-best practices to stay Always Engaged with expert guidance so you can discover the building blocks for long-term growth and get the most from your people, processes, and technology.

CORE SOLUTIONS

- Assessments and Workshops
- Process Consulting
- Strategic Vision
- Strategic Technology Plans
- Ongoing Services

ALWAYS EFFICIENT

Sentinel's objective is simple: to provide our customers with world-class IT solutions and services through our Always Efficient and highly proven methodology. This process utilizes professional project management as the cornerstone of each endeavor to ensure the deployment and integration of new solutions into your environment isn't an unnecessary strain on the time, money, and resources of your organization. The Sentinel project management team adds simplicity and transparency to every aspect of a project through a unique blend of formal planning techniques and sophisticated virtualized workflows. They keep a close eye on everything from contracts, scopes of work, and bill of materials to keep everything on track and within the carefully defined parameters. The guidance, clear communication, and detailed work assignments help all participants fully understand their roles, monitor progress, avoid unnecessary confusion, and minimize risk.

CORE SOLUTIONS

- Risk Plan Development
- Communication Plan Development
- Resource Scheduling
- Task Scheduling
- Process Monitoring and Updates
- Administrative Document Management (Contracts, Scope of Work, Bill of Materials)

OUR METHODOLOGY

Sentinel offers our customers project management services to ensure their projects are completed on time and on budget. Sentinel Project Management includes detailed planning, monitoring, and management of all project activities in accordance with a defined scope of work established for each customer. Project Managers take time to understand the customer's needs and desired outcomes, then function as a liaison between the customer and the Sentinel team to meet all milestones and deadlines.

Sentinel's Project Managers utilize industry-best practices, tools, and proven methodologies to ensure projects are run efficiently and achieve high quality results that satisfy or exceed expectations. Customers are given access to our "My Sentinel" online portal to leverage Sentinel's ecosystem of expanding features that allows teams to share project information, documents, and reports.

When project management is required, Sentinel adheres to the following key initiation guidelines:

1

Introduction Call

Within two business days of PMO notification, a Sentinel Project Manager will contact you to make an introduction and to answer any questions you might have.

2

Schedule Customer Kick-Off

Within three business days of the Introduction Call, the Project Manager will call again to arrange a time and date to set up an initial "Customer Kick-Off" meeting with you and your team.

3

Customer Kick-Off Meeting

Within ten business days of the Introduction Call, the Customer Kick-Off will be held either virtually or at the customer's location.

The purpose of this meeting is to:
- Hold a formal kick-off with project stakeholders, risk review, and key milestone planning
- Conduct a site walkthrough (if required for the project)
- Schedule initial analysis and blueprint meeting(s)

ALWAYS SECURE

Sentinel Technologies proudly presents Fortis: a comprehensive portfolio of security services and solutions designed to proactively protect every aspect of your digital and physical environment.

People, process, and technology are the primary factors that make Fortis by Sentinel unique. Our team is comprised of 350+ highly experienced and skilled security professionals with certifications from many industry-leading vendors. They take time to learn about the specific needs of each customer in order to deliver streamlined, best-of-breed solutions in conjunction with a battalion of our innovative security partners. That includes high-touch SOC monitoring and managed detection & response (MDR) services, which proactively patrol your network armed with the latest threat intelligence to help stop attacks before they can even start. We also understand security is a living organism that needs to adapt with an ever-changing technology landscape. Fortis offers a comprehensive suite of ActiveDefense Monitoring solutions designed to provide 24x7x365 threat protection and enhance your security posture. This multi-layered approach enables us to maintain a close eye on nearly every portion of your environment, making it easier to detect suspicious activity, issue alerts, mitigate significant threats, and achieve compliance.

FORTIS
Advancing Your Protection

SECURITY EXCELLENCE

Fortis by Sentinel has been recognized as one of the nation's top cybersecurity providers at the 2023 Cybersecurity Excellence Awards, receiving Gold designation in the following categories:

CYBERSECURITY COMPANY
- Best Cybersecurity Company
- Cybersecurity Service Provider of the Year

CYBERSECURITY TEAM
- Cybersecurity Team of the Year
- SOC Team of the Year

CYBERSECURITY PRODUCT AND SERVICE
- Cybersecurity as a Service (SECaaS)
- Cybersecurity Assessments
- Incident Response (IR)
- Security Monitoring (SOC)
- Managed Security
- Managed Detection and Response (MDR)
- Penetration Testing as a Service (Pen Test)

OUR AWARDS

Along with our security awards, Sentinel has numerous technology partner awards.

VISIT OUR WEBSITE TO LEARN MORE TODAY!

KEY PARTNERS

Sentinel recognizes the quality of our solution partners directly affects the quality of the solutions we deliver. Our strategy is to establish strong partnerships with the best IT providers in the industry and obtain the highest possible levels of certification. This ensures we have the technical and business expertise to deliver on our promise.

Sentinel is proud to call the following organizations our key strategic business partners:

VALUED PARTNERS

In addition to our key partners, Sentinel maintains a large number of valued partnerships that enable us to efficiently provide customers with world-class solutions.

OUR SPECIALIZATIONS

The following Manufacturing Technology Certifications recognize Sentinel's expertise within each of our manufacturer partner's technologies:

Cisco Specialist Designations:

- Gold Level Partner
- Master Unified Communications
- Master Security
- Cisco Cloud & Managed Services Master
- Master Cloud Builder
- Cisco Powered Cloud Services
- Cisco Powered Managed Services
- Cisco Powered XDR
- Cisco Powered Meraki
- Cisco Powered SASE
- Master Collaboration
- Extended Detection and Response Solution Specialization
- Gold Integrator

and Many More

OUR QUALIFICATIONS

Microsoft Solution Designations:

- Azure Data and AI
- Security
- Modern Work SMB & Enterprise
- Azure Infrastructure
- Azure Digital & App Innovation

Dell Technologies Authorizations:

- Platinum Partner Level
- Authorized Service Partner
- Data Protection Services Specialty
- Storage Services Specialty

VMware Authorizations:

- Solution Provider Enterprise Partner
- Infrastructure Virtualization
- Business Continuity
- Desktop Virtualization

NetApp Authorizations:

- Gold Level Partner
- Virtualization Specialized
- FlexPod Specialized
- NetApp Support Services Certified

COMPANY CERTIFICATIONS

GSA Advantage

PCI Compliance

SSAE 16 Attestation (SOC 2)

INDIVIDUAL CERTIFICATIONS

Sentinel makes substantial investments in keeping the training of our technical, sales and design team members up to date. This ensures we have the technical and business expertise to deliver on our promise.

Microsoft Certifications: 980+

Cisco Certifications: 700+

Dell Technologies Certifications: 290+

NetApp Certifications: 115+

AWS Certifications: 70+

PureStorage Certifications: 35+

EMPLOYEE SATISFACTION
QUALIFICATIONS

Since the inception of Sentinel in 1982, the company has abided by a simple philosophy – "happy and motivated employees equal happy customers". To that end, Sentinel has been vigilant in creating a work environment that encourages creativity, fosters growth, and rewards success. Sentinel has received independent recognition for their ability to create an outstanding work environment and has been recognized as a "Best Place to Work" by the Chicago Tribune, Crain's Chicago Business, and AZCentral.com. Sentinel has also received hundreds of letters of recommendation from national and international customers for the outstanding support delivered by the Sentinel team.

Sentinel is proud to have been recognized as a "Best Place to Work" in the U.S. Midwest and Southwest regions. In the Midwest, Sentinel has been named a Top 100 Workplace by the Chicago Tribune every year since 2012 and also recently received recognition as a "Top 100 Workplace" for Arizona. In both cases, Sentinel was selected based on employee feedback compared to other companies in the region. Sentinel has also been recognized as a "Best Place to Work" by Crain's Chicago Business. Sentinel has also gained recognition from the Detroit Free Press as a top workplace for multiple years.

OUR LOCATIONS

Headquartered in Downers Grove IL, Sentinel Technologies has independently managed offices in seven locations:

- Brighton, MI
- Chicago, IL
- Denver, CO
- Grand Rapids, MI
- Milwaukee, WI
- Phoenix, AZ
- Springfield, IL

CONTACT US

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WWW.SENTINEL.COM
PHONE: 800.769.4343
FAX: 630.769.1399

Resumes

SENTINEL

TECHNICAL RESUME

Shawn – CTRSS040158

Support Analyst

Technical Skills

Certifications

- Cisco – CCNP Enterprise – Cisco Certified Network Professional Enterprise
- Cisco – CCNA – Cisco Certified Network Associate
- CompTIA – Network+ – CompTIA Network+
- CompTIA – A+ – CompTIA A+

Skills

- ACI
- Zscaler
- Fortinet
- Palo Alto Panorama
- Palo Alto Next Gen Firewalls
- Cisco FTD/FMC FirewallsZerto
- Cisco UCS Servers
- Aruba Wireless
- VPN
- TCP/IP
- DNS
- VLANS
- OSPF
- VRRP
- HSRP
- DHCP
- NAT
- Spanning-Tree
- Cisco IOS

Professional Experience

Sentinel Technologies, Inc. **Jan. 2023 – Present**

Support Analyst

Jan. 2023 – Present

- Part of our Enterprise Network team helping support Managed Services customers.
- Cisco networking technologies: In-depth knowledge of Cisco networking hardware and software, including routers, switches, firewalls, vpn, and wireless access points.
- Network security: The ability to design and implement secure networks, using firewalls, intrusion detection systems, intrusion prevention systems, and other security measures, such as Umbrella, Identity Services Engine, Cloud Analytics, & Secure Client.
- Troubleshooting: The ability to quickly and effectively troubleshoot network problems.
- Problem solving: The ability to identify and solve complex networking problems, including WAN capacity planning and optimization.

SENTINEL

Previous Work Experience **Jan. 2017 – Jan. 2023**

Network Technician **May 2020 – Jan. 2023**

- Key Accomplishments:
  - Promoted to Technical Trainer for all incoming Field Service Technician in the state of Texas
  - Highest successful Key Performance Indicator rate in the entire company for 2020 at 82%
- Responsibilities:
  - Install, configure and test network assets (i.e. Cisco Catalyst 2900 and 3000 series switches, Cisco ISR 1900, 2900, and 4300 series routers, P-Net Racks, CTM's, UPS's, etc.)
  - Perform analysis of and configuration changes on existing network infrastructure
  - Preparation of configuration files for New Routers at Access, Aggregation, and Core Locations
  - Conduct Commercial Wireless Site Surveys
  - Troubleshoot network issues remotely and onsite
  - Install and Configure Cambium Wireless Point to Multi-Point AP's
  - Statically configure SOHO Routers for residential clients
  - Configure and install Cisco ATA VOIP and Cisco Autonomous Wireless AP's
  - Check systems for correct functionality and optimal performance
  - Perform tower antenna and height mapping for tenant activity and regulatory compliance

IT/Office Manager **Jan. 2017 – March 2019**

- Install and configure software and hardware for servers and end hosts
- Setup accounts and workstations in proprietary Unix based QA program
- Troubleshoot issues and outages on office-based desktops and field tablets/cellphones
- Develop training material for new systems and account procedures
- Run reports in QA program to identify common problems

SENTINEL

TECHNICAL RESUME

Gary – CTRGE000659

Team Lead Support Services I

Technical Skills

Certifications

- Cisco – CCNA – Cisco Certified Network Associate
- Cisco – CCNA Security – Cisco Certified Network Associate: Security
- Cisco – CCNA Wireless – Cisco Certified Network Associate: Wireless
- Cisco – CCNP – Cisco Certified Network Professional
- Cisco – CCNP Security – Cisco Certified Network Professional Security
- Zscaler – ZPA Pro – Zscaler Private Access Professional
- Zscaler – ZDX Admin – Zscaler Digital Experience Admin
- Amazon Web Services – AWS DevOps Pro – AWS Certified DevOps Engineer - Professional

Education

College of DuPage **2014**
Associate of Applied Science Degree in Information Security

Navy and Marine Intelligence Training Center **2010**
Certificate of Completion

Skills

- F5
- Azure
- AWS
- Darktrace
- Zscaler
- Steathwatch
- FMC/FTD
- Palo Alto
- Fortigate
- Cisco ISR Routers
- Routing Protocols
- LAN Switching technologies
- Multilayer Switching
- Cisco StackWise Technology
- Adaptive Security Appliance (ASA)
- Virtual Private Networks (VPN)
- Dynamic Multipoint VPN (DMVPN)
- Nexus 2k, 5k, 7k, 9k
- Wireless Controller
- Wireless Access Point
- Adaptive Security Appliance (ASA
- Email Security Appliance (ESA)/IronPort
- Extreme networks
- DMVPN
- Viptela
- SD-WAN
- Meraki
- SASE
- Umbrella
- ISE
- Aruba
- Authentication, authorization and accounting (AAA)
- Physical Security
- Layer 2 security
- Layer 3 security
- Intrusion Detection System/Intrusion Prevention System (IDS/IPS)
- Adaptive Security Device Manager (ASDM)
- Simple Network Management Protocol (SNMP)
- Syslog
- Solar Winds
- NetFlow
- Network diagram

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sentinel.com

- VIZIO
- NetBrain
- Physical Installation of hardware
- Rack mounted routers/switches
- Cable Management
- Wall/Ceiling mounted Access Points
- Completely new builds
- Cloud Connectivity

Professional Experience

Sentinel Technologies, Inc. **Aug. 2015 – Present**

Team Lead Support Services **Feb 2022 – Present**

- Empower the Enterprise Networking team as a technical escalation point
- Ensure new tools are adopted and understood
- Oversee high visibility and critical cases
- Act as a technical interviewer when candidates interview for the team
- Ensure the efficiency of case handling

Support Analyst **Jan. 2019 – Feb 2022**

- Respond to trouble tickets, primarily Route, Switch, Security and Wireless
- Monitor customer networks
- Create cloud tenant space
- Cloud connectivity
- Provide training for Level 1

Associate Support Analyst **Aug. 2015 – Jan. 2019**

- Respond to trouble tickets, primarily Route, Switch, Security and Wireless
- Monitor customer networks
- Add devices to monitoring
- Onsite service calls
- Building network diagrams
- Project Team Lead for assigned projects
- Oversee the installation and implementation of new network builds: Responsible for technical escalations, best practices, and training

Previous Work Experience **Aug. 2009 – Aug. 2015**

Intelligence Specialist **Aug. 2009 – Aug. 2015**

- Recognized for dependability and exemplary performance by being promoted to rank of Sergeant
- Conduct in-depth research and provide critical intelligence for mission accomplishment
- Extensive training in threat analysis, risk mitigation, and addressing vulnerabilities
- Placed in a position of national trust and given a TS/SCI security clearance
- Continually trained to use emerging hardware and software technologies
- Refined troubleshooting skills and adaptive processes for business continuity
- Hands-on experience wiring, configuring and troubleshooting network devices for SIPRNet and NIPRNet
- Support the configuring and upgrading of network devices on an operational network

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SENTINEL

TECHNICAL RESUME

Tom – CTRTB2974

Engineering Lead

Technical Skills

Certifications

- Cisco – CCIE: Collaboration #49458
- Cisco – CCNP – Data Center
- Cisco – CCNP – Enterprise
- Cisco – CCNA – Cisco Certified Network Associate
- Cisco Certified Specialist – Datacenter Operations
- Cisco Certified Specialist – Data Center Core
- Cisco Certified Specialist – Collaboration Core
- Cisco Certified Specialist – Enterprise Core
- Cisco Certified Specialist – Enterprise Design
- Cisco Certified Specialist – Enterprise Advanced Infrastructure Implementation
- VMware VCP6-NV VMware Certified Professional 6 – Network Virtualization
- AWS Certified Solutions Architect - Professional
- Palo Alto Networks Certified Software Firewall Engineer
- Microsoft – MCP – Microsoft Certified Professional
- Microsoft – MCSA – Windows Server 2012

Education

Ferris State University 2008
Bachelor of Science
- Major in Electronics / Computer Networks and Systems [Computer Engineering]
- Minor in Information Security and Forensics

Westwood College of Technology 2002
Associate of Science in Computer Networks and Systems

Skills

- Collaboration Architecture
  - Cisco Unified Communications Manager (CUCM)
  - Unity Connection (UCxN/CUC)
  - Unified IM & Presence (IMP/CUPS)
  - Unified Contact Center Express (UCCX)
  - Cisco Emergency Responder (CER)
  - Cisco Unified Border Element (CUBE)
  - Expressway Core and Edge
  - Cisco Voice/Video Endpoints
  - TelePresence Server
  - Video Communications Server (VCS)
  - TelePresence Conductor (TCD)
  - TelePresence Content Server (TCS)
  - MultiPoint Control Units (MCU)
  - InformaCast (Singlewire)
  - Cisco Unified SIP Proxy (CUSP)
- Enterprise Network Architecture
  - All Cisco Switching Platforms
  - All Cisco Routing Platforms
  - Juniper Routing/Switching/Firewall Platforms
  - SDWAN – Multi Vendor
  - L2/L3 Switches

- Extreme 8000 Series Switches and Access Platforms
- Dynamic Routing Protocols
- Quality of Service (QoS)
- Adaptive Security Appliance (ASA)
- Virtual Private Networks (VPN)
- Dynamic Multipoint VPN (DMVPN)
- Wireless LAN Controllers (WLC)
- Autonomous Access Points
- Nexus Platform
- F5 Platforms (Cloud/On Prem)
- Cisco ACI
- Software Defined Networking (SDN)

- Security Architecture
  - Cisco – Adaptive Security Appliance (ASA)
  - Cisco – Prime Security Manager (CX Services)
  - Cisco – Firepower Services Manager
  - /Modules
  - Cisco – Intrusion Prevention System (IPS)
  - Cisco – Intrusion Detection System (IDS)
  - Palo Alto – Firewalls / IPS / Layer 7 Filtering
  - Fortinet – Firewalls / IPS / Layer 7 Filtering
  - SonicWALL – Firewalls / IPS / Layer 7 Filtering
  - Checkpoint – Firewalls / IPS
  - Linux – IPTables / 3rd Party Linux Firewalls
- Data Center Architecture
  - VMware – All Platform Options
  - Nutanix – All Platform Options
  - Networking / Network Virtualization
  - Hyper-V - Hypervisor / Storage
  - Networking
  - Cisco Integrated Management Controller (CIMC)
  - Unified Computing System (UCS) CSeries Rack mount Servers
  - Unified Computing System (UCS) BSeries
  - Chassis and Blade plaforms
  - VMware – VCenter / SRM
  - Backup – VEEAM / Symantec / Zerto / Cloud
  - Unified Computing System (UCS)
  - Active Directory / Novell
  - Microsoft Windows Server Products
  - Microsoft Exchange
  - Linux
  - Microsoft SQL Server
- Storage Architecture
  - SAN – Dell EqualLogic / Compellent
  - SAN – Hybrid Nimble / Tegile
  - SAN – EMC
  - SAN – Netapp
  - SAN – Hewlett Packard (HP)
  - SAN Technologies (iSCSI/FC/FCoE)
  - Storage networking (Cisco MDS)
  - Brocade Fibre Channel Switches
- Cloud Architecture
  - VDI – VMware – View (Virtual Desktop Infrastructure)
  - VDI - Citrix
  - VDI – Microsoft Desktop Virtualization
  - Open Stack / KVM desktop virtualization
  - Gsuite – Migration, Design, implementation
  - Office 365 – Migration, Design, Implementation
  - AWS/Azure – Hosted design, migration, implementation
  - Hosted Voice – OpenSIPS (SIP Express)
  - Router / Session Border Controller (SBC))
  - Hosted Voice – Cisco
- Support Services
  - Design and implementation of complex IT solutions
  - Incident response for network intrusion situations
  - Code security audits of applications (C++, C#, Java)
- Managed Services
  - Support of IT environments from small to enterprise in size

Professional Experience

Sentinel Technologies, Inc. **Feb. 2016 – Present**

Engineering Lead **Dec 2024 – Present**

- **Pre-Sales / Sales**
  - Provide team lead / management approval for BOM/SOWS before the customer receives the contract.
  - Assist with scoping, budgeting, solution accuracy, relevance, and labor forecasting with sales staff and solutions architects.
  - Be an escalation point for sales and SA staff when engineering expertise is required.

- **Engineer Development**
  - Work with engineers and technical leads to encourage them to learn and take on projects they may not be comfortable with to increase their skillset.
  - This may require having an engineer shadow on the project for planning and design but should result in the engineer doing the bulk of the work under guidance.
  - Encourage multidisciplinary learning for engineers and sales staff.
  - Peer review project documentation in the design and as built phases.

- **Solution Planning/Delivery/Problem Resolution**
  - Plan, implement, and deliver high end solutions for customers.
  - Assist engineers with ongoing projects both in the design and implementation stage.
  - Work with PMO to develop effective project planning and realistic timelines based on engineering resources assigned to projects
  - Provide support for issue resolution where necessary for project and support issues.
  - Develop and maintain documentation that can be re-used by engineers for new and existing technologies
  - Provide insight to customers and Sentinel staff on how best to implement a solution.
  - Architect of cloud migration strategy and implementation
  - Lead engineer for assigned projects
  - Overseeing projects by engineers covering all technologies

Team Lead IT Sol Sr **Nov. 2019 –Dec. 2024**

- Currently responsible for design and implementation of various solutions ranging from small business to enterprise in size
- Design and Install of Collaboration, Data Center, Route-Switch, Wireless, and Server Solutions
- Escalation Engineer for support issues for customers and Sentinel
- Support of Sales Team in Architecting Solutions
- Design and migration of cloud architecture including, Gsuite, Office 365, AWS/Azure, and other hosted platforms
- Architect of cloud migration strategy and implementation
- Lead engineer for assigned projects
- Overseeing projects by engineers covering all technologies

Solutions Analyst **Feb. 2016 – Nov. 2019**

- Currently responsible for design and implementation of various solutions ranging from small business to enterprise in size
- Design and Install of Collaboration, Data Center, Route-Switch, Wireless, and Server Solutions
- Deployed and managed multiple versions of Extreme networking equipment for multiple projects
- Escalation Engineer for support issues for customers and Sentinel
- Support of Sales Team in Architecting Solutions
- Design and migration of cloud architecture including, Gsuite, Office 365, AWS/Azure, and other hosted platforms
- Architect of cloud migration strategy and implementation

Technical Proposal

- A detailed description of the managed services provided, and any specific exclusions.
- A timeline for implementation and projected support start date.
- Details of any additional functionality and services that set the proposed solution apart.

Sentinel Response:

Scope of Work

SENTINEL NOC REMOTE MONITORING AND MANAGED SERVICES

Sentinel offers full managed services and monitoring solutions for advanced visibility into performance and utilization of resources at great scale. Based on multiple proven platforms, advanced correlation services and multiple alerting options, Sentinel has built an industry leading Network Operations Center (NOC).

Sentinel NOC Remote Monitoring features include:

- NOC 24 x 7 Remote Monitoring via a secure VPN tunnel.
- Up/Down status monitoring via ICMP requests.
- Availability / Uptime.
- Syslog/Trap storage.
- Hardware Device Monitoring and Analysis.
- CPU, Memory, Disk space and Latency.
- WAN Circuit status.
- Traffic throughput, utilization, errors and discards of WAN circuits, Trunk ports or any critical interface.
- Wireless Monitoring – AP association status, SSID, Signal Strength, Wireless clients.
- Alerting (built with intelligence that eliminates false positives).
- Alert Routing to NOC and/or dedicated engineer for immediate remote resolution.
- Hardware Health Reporting (fan, power supplies, temperature, environmentals, and the like).
- Reporting (Inventory, Utilization, Performance, and much more).
- PRI circuits – monitors the status and capacity of your PRIs.
- Voice Gateways - monitors the status and utilization of your voice gateways.

Managed Services Feature Highlights

- **Sentinel Remote Diagnosis and Remote Repair Capability.**
  Sentinel leverages remote tools to ensure 24x7x365 support service is delivered quickly and efficiently. Sentinel understands that your IT environment is dynamic and demands visibility and expert engineers around the clock and will stay committed to providing continuous effort and support.

- **Carrier Incident Handling.**
  Sentinel will work with carriers on resolving circuit issues and outages. Sentinel has numerous levels of escalation points through multiple carriers due to the maturity and multiple years of experience providing carrier incident handling.

- **Configuration Management.**
  Sentinel will automatically back up system configurations on network devices and any device that has a CLI (Command Line Interface). Configurations are backed up nightly and stored in an encrypted database *only* if a change has occurred.

  Sentinel will automatically back up system configurations on the following devices. Configurations, Change Reports and on-demand download ability are available in the NOC web console. The following methods will be used to back up the environment:

Device Type	System Config Backups
Routers	NOC via CLI
Switches	NOC via CLI
Firewalls	NOC via CLI

- **Sentinel Complete Restore.**
  In the event of hardware failure, hardware replacement, catastrophic outage causing corrupt config, or any loss of system configuration, Sentinel maintains backed up configurations so systems can be restored promptly, providing minimal downtime in the event of an outage *(restoration only applies to backed up equipment listed above).*

- **Sentinel End-To-End Problem Management.**
  Sentinel will provide management and support services on any equipment covered under the agreement. It is understood that at times, manufacturers or third party providers might need to be engaged for further support. Sentinel will work with agents in attempting to resolve issues as long as maintenance and a LOA (letter of agency) is maintained.

- **Device Administration.**
  Sentinel will provide dedicated expert engineers to administer covered systems on a 24x7x365 basis. Unlimited Moves, Adds and Changes are included to assist with your day to day administration. A best practice guideline of 2 hours will be used on change tickets.

- **Preventative Maintenance and Patching.**
  Manufacturer releases are important for staying up to date with critical software and security patches. Sentinel will work with on a strategy for this preventative maintenance while taking into account your change control guidelines and approval process. A detailed report of system updates will be provided during the following intervals with recommendations and Scope of Work.

Firmware updates and minor release updates are included in the following schedule.

Device Type	Level	Review Frequency	Performed
Routers	Minor	6 Months	As Needed or Requested
Switches	Minor	6 Months	As Needed or Requested
Firewalls	Minor	3 Months	As Needed or Requested
Windows Servers	Minor	Monthly	Automated

- **Customer Experience Manager.**
  Sentinel wants to ensure our customers have an exceptional, long-term relationship with us, which is why we have a dedicated Customer Experience (CX) team devoted entirely to success and satisfaction. The CX team, which includes a designated Customer Experience Manager for each customer, schedules regular cadence meetings to review data and metrics, develop strategy, set goals, and solicit feedback on how we're doing.

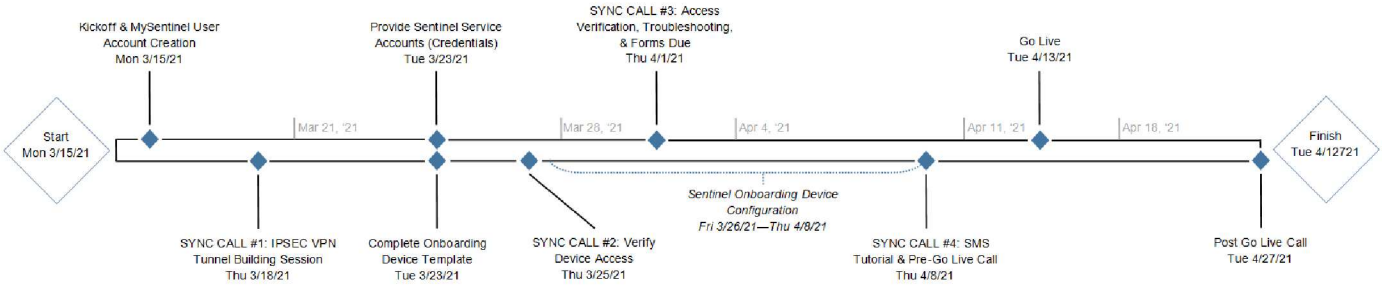
- **Immediate Leverage of ACTS™ (formerly HANS™) Maintenance Contracts.**
  With NOC Monitoring in place, Sentinel will be able to provide a prompt and efficient response and remediation when ACTS™ or SMARTnet maintenance contracts are in place.

NOC ONBOARDING

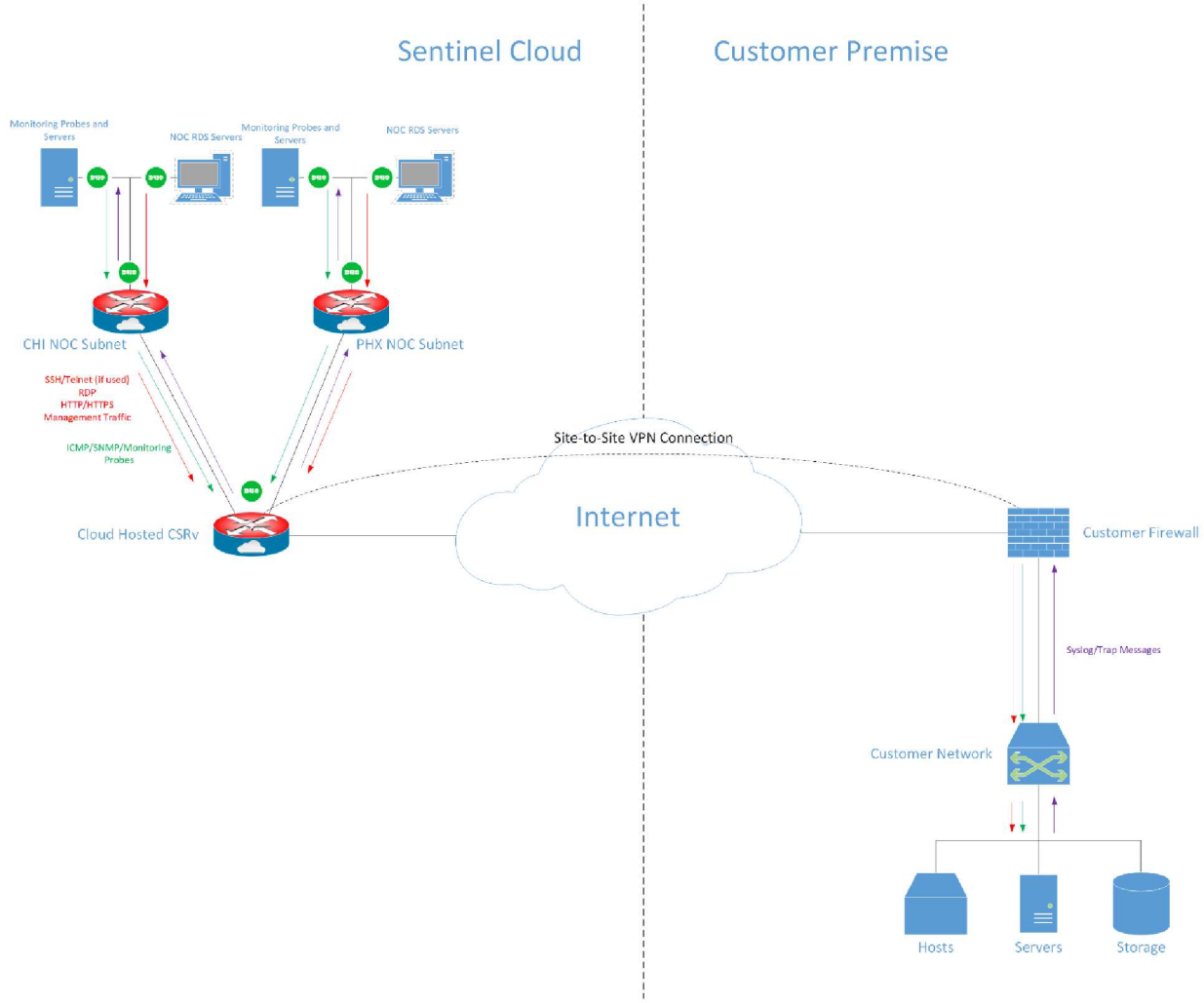
Sentinel utilizes PMI best practices for the onboarding of Managed Services Customers. During the onboarding and transition period of the managed services engagement, Sentinel will define key stakeholders necessary to execute all onboarding responsibilities (e.g. PMs SDMs, SMEs, etc.), and document any risks that could affect the onboarding project.

To ensure complete transition within 30-45 days, Sentinel will provide a complete project plan and work breakdown structure outlining the tasks and responsibilities of the onboarding phase. Sentinel will execute all necessary tasks outlined within the work breakdown structure in order to complete the project on time, and as needed we will assist with gathering any information required to complete the Customer Onboarding Forms. Once all the required onboarding forms are complete and credentials have been created to allow Sentinel access to the network, the Sentinel onboarding Project Manager will engage engineering resources to configure and establish VPN connectivity to the NOC network. After connectivity has been established to the network and access has been granted to all applicable devices, the Sentinel onboarding engineer will execute or assist with all necessary configurations to establish connectivity to each device. Following the completion of all devices being monitored, the Sentinel onboarding team will conduct training on how to navigate and utilize the features within our Sentinel Monitoring System. The onboarding team will cross train and hand over all findings that have been discovered during the onboarding phase to the dedicated support teams. Once the project plan has been fully executed and all work has been accepted, you will be officially transitioned to the NOC and managed services team that will be supporting the core technologies: network, server, and security.

ONBOARDING TIMELINE SAMPLE

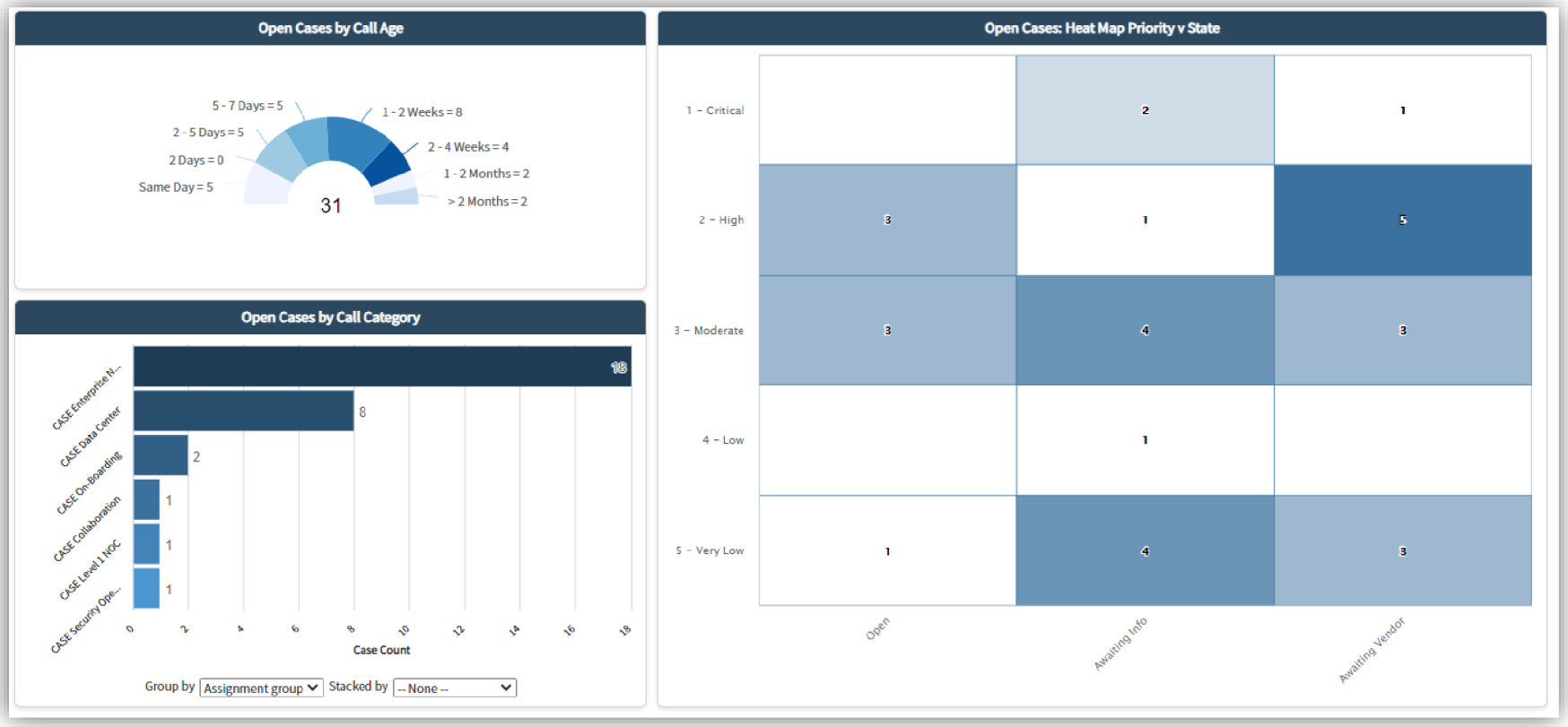


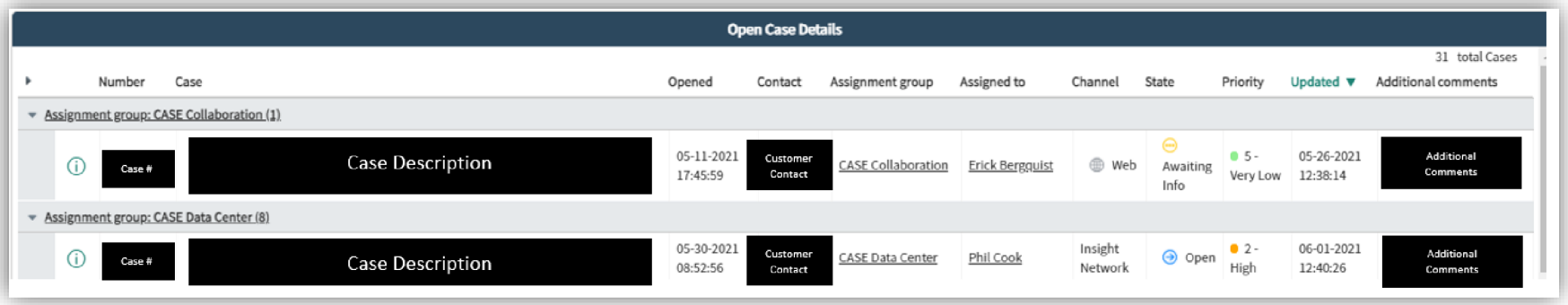
CONNECTIVITY DIAGRAM



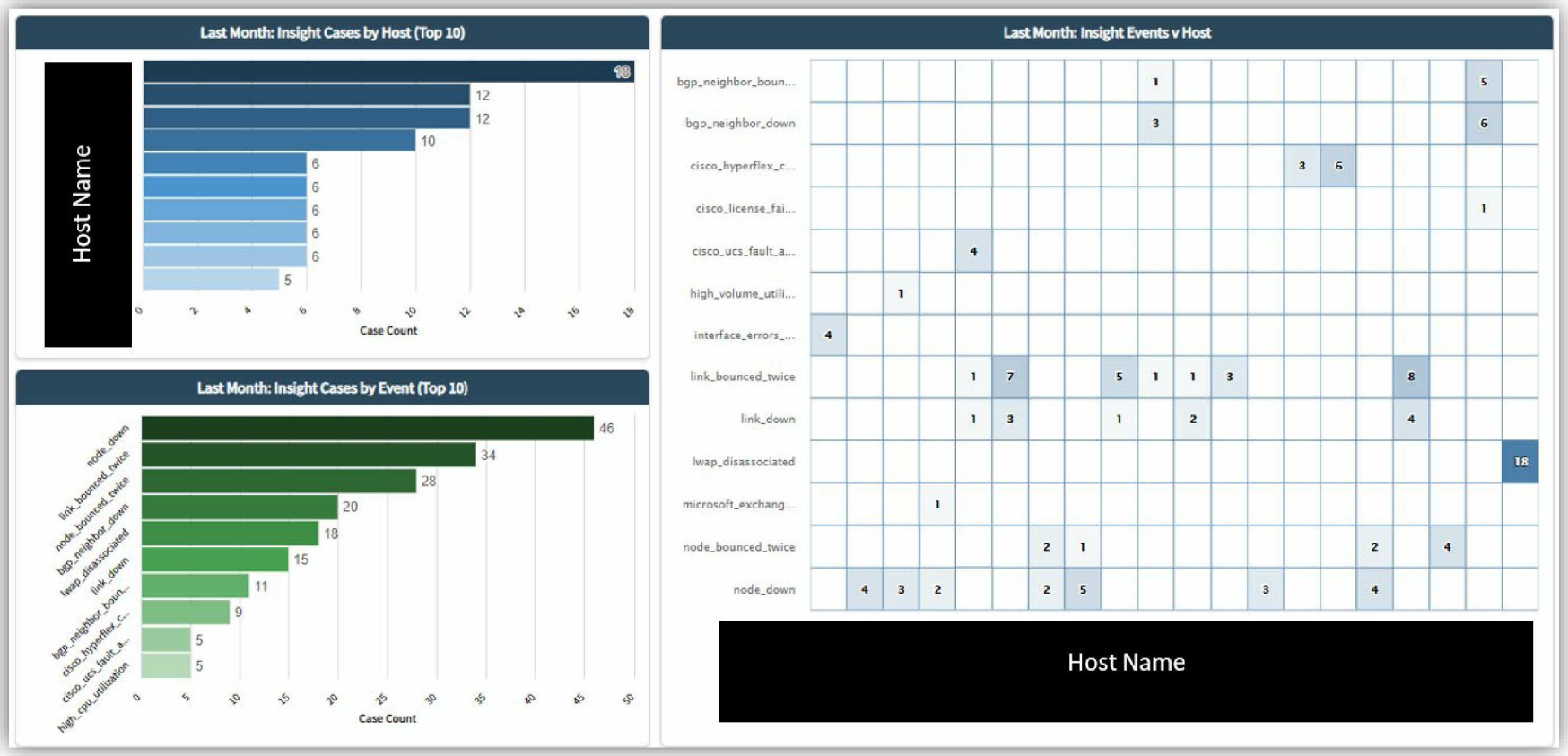
Quality Assurance

Sentinel's Quality Assurance team will host regularly scheduled review meetings to review NOC monitored data, uptime & availability, traffic patterns, root cause analyses of chronic issues, trouble ticket data and SLAs, and help identify environment trends or capacity issues. Additional dashboards within ServiceNow will show an executive view into the performance, availability, usage and equipment inventory. Below are sample dashboards:




Open Case Details
31 total Cases
Number
Case
Opened
Contact
Assignment group
Assigned to
Channel
State
Priority
Updated
Additional comments
Assignment group: CASE Collaboration (1)
Case #
Case Description
05-11-2021 17:45:59
Customer Contact
CASE Collaboration
Erick Bergquist
Web
Awaiting Info
5 - Very Low
05-26-2021 12:38:14
Additional Comments
Assignment group: CASE Data Center (8)
Case #
Case Description
05-30-2021 08:52:56
Customer Contact
CASE Data Center
Phil Cook
Insight Network
Open
2 - High
06-01-2021 12:40:26
Additional Comments

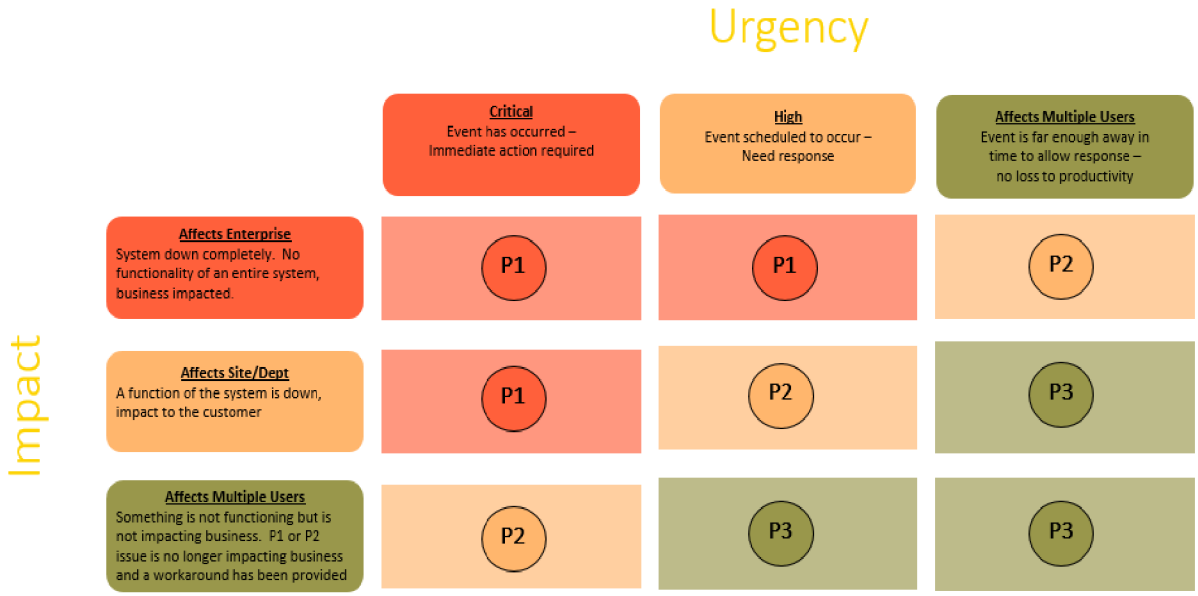
Last Month: Case Opened by Category
Case Count
Open
Resolved
Trending: Case Opened/Resolved by Month
Case Count
Dec/2020
Jan/2021
Feb/2021
Mar/2021
Apr/2021
May/2021
June/2021
July/2021
Aug/2021
Sep/2021
Open
Resolved
Last Month: Cases by Category
3 - Moderate
2 - High
1 - Critical
5 - Very Low
4 - Low
101
92
47
36
7
Case Count
Group by Priority
Stacked by -- None --


Last Month: Insight Cases by Host (Top 10)
Host Name
18
12
12
10
6
6
6
6
6
5
0
2
4
6
8
10
12
14
16
18
Case Count
Last Month: Insight Cases by Event (Top 10)
node_down
link_bounced_twice
node_bounced_twice
bgp_neighbor_down
lwap_disassociated
link_down
bgp_neighbor_boun...
cisco_hyperflex_c...
cisco_ucs_fault_a...
high_cpu_utilization
46
34
28
20
18
15
11
9
5
5
0
5
10
15
20
25
30
35
40
45
50
Case Count
Last Month: Insight Events v Host
bgp_neighbor_boun...
bgp_neighbor_down
cisco_hyperflex_c...
cisco_license_fai...
cisco_ucs_fault_a...
high_volume_utili...
interface_errors_...
link_bounced_twice
link_down
lwap_disassociated
microsoft_exchang...
node_bounced_twice
node_down
Host Name

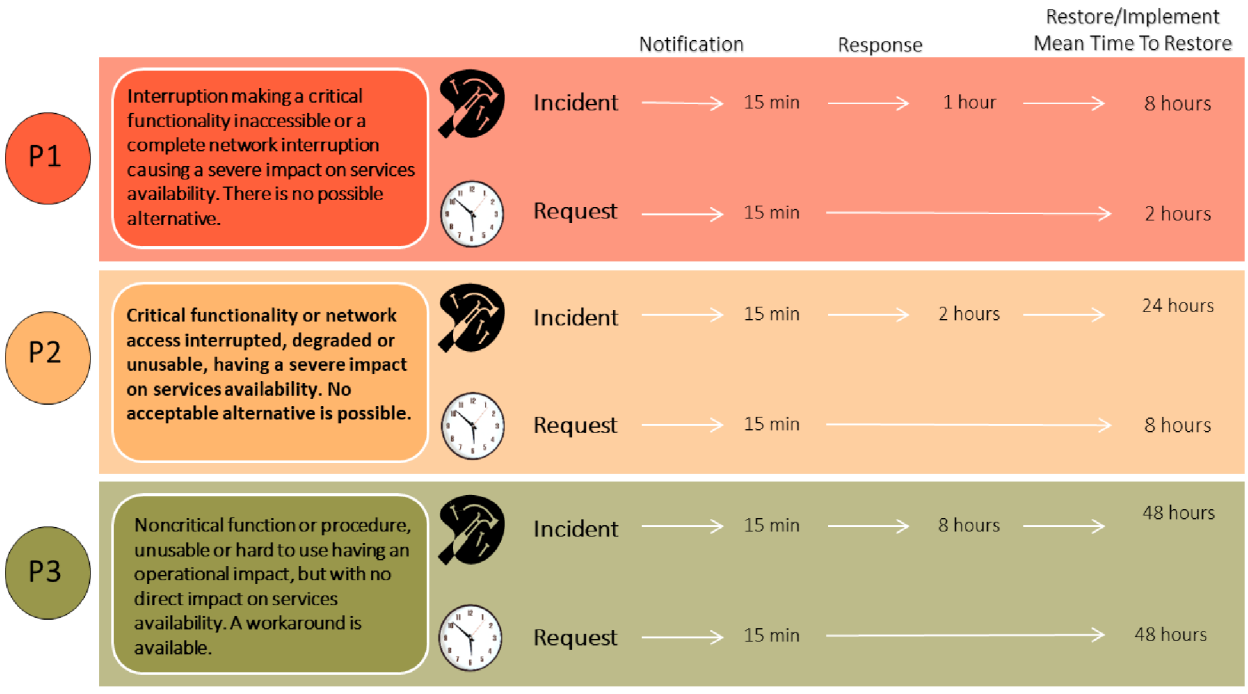
Service Level Agreements

Sentinel makes commitments to industry leading SLAs within NOC Monitoring & Managed Services. SLAs are defined from first communication to a MTTR (Mean Time to Repair) for incidents and change tickets. All SLAs are tracked and worked through Sentinel's trouble ticketing system, ServiceNow, and reporting is made available through the ticketing console on www.sentinel.com.

The following is a matrix of Sentinel's SLAs built on industry standards (ITIL) Urgency/Impact definitions.



Sentinel guarantees the following SLAs and will report on SLA performance through automated reporting and the monthly quality assurance review meetings.



Optimization & Tuning Service (OTS) – Optional Add-on

The Fortis™ by Sentinel Optimization & Tuning Service (OTS) requires the covered product(s) to include Managed Security or Managed Services Support and cannot be sold standalone. OTS is designed to be a 'run it for you' offering, the following defines the services offered under OTS; specific inclusions are defined in the Pricing Summary per product:

- Where scanning is part of the product (e.g., vulnerability scanners & autonomous penetration testing), monthly cadence-based scanning and associated reporting is included.
- Monthly product optimization and tuning including reviews and management of the solution configurations & policies via automated case generation. End user and on-desktop agent configurations is not in scope.
- Monthly review of product versions, end-of-life, and end-of-support released with guidance provided to the Customer on upcoming product releases including potential impacts and recommended actions to be taken.
- Reporting via native product report capabilities, on request.

Completed Cost Proposal Form

For out-of-scope work and for things that aren't covered under our managed services agreement, the rate will be $251/hour.

COST PROPOSAL FORM

(complete and submit with proposal)

PROJECT: RFP #26-483 **Annual Managed Network Services Agreement**

The information requested in this section is required to support the reasonableness of each proposal. Use the format below. Please provide the pricing for installation and ongoing support.

Business Name Sentinel Technologies, Inc.

Service	Description	Cost
Pre and Post Installation/Configuration	Network scoping, testing, provisioning and installation/configuration.	$ 0
Annual Monitoring and Alerts	24x7 monitoring of covered network devices with proactive alerting and incident detection.	$ 2,230.08/month
Annual Incident Management	Incident triage, troubleshooting, and resolution following documented SLA's.	$ Included
Annual Configuration and Change Management	Configuration management for firewalls, switches, and network services. Change planning, risk assessment, and implementation.	$ Included
Annual Firewall and Security Support	Palo Alto firewall security policies, NAT and VPN administration.	$ Included
Annual Hardware and Software Maintenance	Vendor coordination for hardware support cases. Firmware and software upgrade monitoring. Hardware replacement assistance and support.	$ Included
Service Level Agreement (SLA)	Four (4) hours or less response and engagement for submitted support requests. High-priority or systems-down incidents require One (1) hour or less response and engagement by a senior-level engineer.	$ Included
Training	Training for any customer requirements, ticketing systems, portals, support contact procedures, etc.	$ Included
Optional Services or Enhancements	Optional Services, upgrades or enhancements that are not part of the required scope	$ 800/month
Optional additional year(s) extensions	Optional extension of coverage beyond the first year if purchased at time of initial commitment.	N/A
Cost for Year 2		$2,230.08/month
Cost for Year 3		$2,230.08/month
Total Cost		$ 26,760.96 First Year

Pricing

SENTINEL MONITORING & MANAGED SERVICES

Sentinel's professional support fees are both highly competitive and value-oriented. Our commitment to our Customers is to deliver measurable benefits that far exceed the associated investment. Our firm's strategy is to bring professionals with focused expertise at a reasonable price.

Genesee County will see immediate value and will have selected the best-in-class combination of value, partnership, services, support, and expert engineers.

Summary Page

One Time Setup Fee:	$0.00
Monthly Total:	**$2,230.08**

NOTES

Customer Success Program			
Product Description	Location	Quantity	Comments
Digital Experience Platform (DXP)		1	

Infrastructure			
Product Description	Location	Quantity	Comments
Firewall Security Device		4	(2) Palo Alto PA-3420, (2) Palo Alto PA-1420
Firewall Management - Palo Panorama		2	
Switch		14	(4) Cisco Nexus N9K, (5) Cisco Catalyst 9500, (5) Cisco Catalyst 9300

Support Services			
Product Description	Location	Quantity	Comments
Service Fee		1	

Confidential Information Property of Sentinel Technologies, Inc.

One Time Setup Fee:	$500.00
Monthly Total:	**$650.00**

NOTES

Optional: This optional addition of OTS (optimization & Tuning Services) for 4 Palo Alto firewalls would include rule optimization

Customer Success Program			
Product Description	Location	Quantity	Comments
Digital Experience Platform (DXP)		1	

Security			
Product Description	Location	Quantity	Comments
OTS (Optimization & Tuning Services) - Firewalls		1	
OTS - Qty of Firewalls under Support		4	

Confidential Information Property of Sentinel Technologies, Inc.

Statement of Exceptions

Furnish a statement on company letterhead giving a complete description of all exceptions to the terms, conditions, and specifications set forth in the Standard Proposed Contract and this RFP.

Sentinel Response:

SENTINEL

Sentinel Technologies
10355 Citation Drive
Suite 200
Brighton
Michigan 48116
tel 517 336 3600
fax 630 769 1399
sentinel.com

04/09/2026

Rita Schubert
Purchasing Manager
Genesee County
324 S. Saginaw Street, Suite 9A, Flint, MI 48502
Office: 810.257.3195
rschubert@geneseecountymi.gov

Hello,

Below is a list of our exceptions to the bid terms and conditions:

- Sample Contract, Section 8.3, Termination for Convenience: for any termination for convenience, Contractor requests at least 90 days' written notice.

Thank you,

Edward Truesdale
EVP Operations
Sentinel Technologies, Inc.

Litigation

Please describe any lawsuits that were filed against your company in the last five (5) years and the results of those lawsuits. Please describe any mediation or arbitrations your company has been involved with in the last five (5) years and the results of those arbitrations/mediations.

Sentinel Response: No such lawsuits as material to the services at issue.

Demonstration of Financial Stability

Submit with the bid your organization's most recent financial audit, annual compiled financial statements, or annual consolidated financial statements.

Sentinel Response:

Cherry Bekaert LLP
Your Guide Forward

SENTINEL TECHNOLOGIES, INC. AND SUBSIDIARY
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Cherry Bekaert LLP
Your Guide Forward

Report of Independent Auditor

To the Board of Directors
Sentinel Technologies, Inc. and Subsidiary
Downers Grove, Illinois

Opinion

We have audited the accompanying consolidated financial statements of Sentinel Technologies, Inc. and Subsidiary (the "Companies") which comprise the consolidated balance sheets as of December 31, 2024 and 2023, and the related consolidated statements of income, changes in stockholders' equity, and cash flows for the years then ended, and the related notes to the consolidated financial statements.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of the Companies as of December 31, 2024 and 2023, and the results of their operations and their cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Consolidated Financial Statements* section of our report. We are required to be independent of the Companies and to meet our other ethical responsibilities in accordance with the relevant ethical requirements relating to our audits. We believe the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Companies' ability to continue as a going concern within one year after the date the consolidated financial statements are available to be issued.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and, therefore, is not a guarantee that an audit conducted in accordance with generally accepted auditing standards will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the consolidated financial statements.

In performing an audit in accordance with generally accepted auditing standards, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Companies' internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the consolidated financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Companies' ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control related matters that we identified during the audits.

Cherry Bekaert LLP

Elgin, Illinois
March 26, 2025

SENTINEL TECHNOLOGIES, INC. AND SUBSIDIARY
CONSOLIDATED BALANCE SHEETS

DECEMBER 31, 2024 AND 2023

	2024	2023
ASSETS		
Current Assets:		
Cash and cash equivalents	$ 19,919,681	$ 2,932,554
Accounts receivable, net	60,840,398	68,987,455
Inventories, net	2,719,566	5,423,562
Current portion of prepaid expenses	11,882,170	16,789,668
Total Current Assets	95,361,815	94,133,239
Property and Equipment, Net	2,677,374	2,878,498
Other Assets:		
Life insurance – cash surrender value	5,667,690	6,553,281
Prepaid expenses, net of current portion	2,931,362	4,127,127
Deferred income taxes, net	3,122,235	3,283,396
Right-of-use assets – operating leases, net	3,317,789	5,149,355
Other assets	99,695	97,211
Total Other Assets	15,138,771	19,210,370
Total Assets	$ 113,177,960	$ 116,222,107
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Accounts payable	$ 28,782,546	$ 32,682,285
Accrued liabilities	9,602,001	10,047,226
Income taxes payable	972,530	411,597
Current portion of unearned revenue	25,146,690	28,163,945
Current portion of long-term debt	303,127	-
Current portion of deferred compensation	192,983	259,798
Current portion of obligations under operating leases	1,566,484	1,807,799
Current portion of obligations under finance leases	206,953	263,024
Total Current Liabilities	66,773,314	73,635,674
Noncurrent Liabilities:		
Long-term debt, net of current portion	526,070	-
Unearned revenue, net of current portion	6,015,272	7,142,846
Deferred compensation, net of current portion	6,643,280	6,906,807
Obligations under operating leases, net of current portion	1,983,549	3,556,490
Obligations under finance leases, net of current portion	72,822	258,161
Total Noncurrent Liabilities	15,240,993	17,864,304
Total Liabilities	82,014,307	91,499,978
Stockholders' Equity	31,163,653	24,722,129
Total Liabilities and Stockholders' Equity	$ 113,177,960	$ 116,222,107

The accompanying notes to the consolidated financial statements are an integral part of these statements.

SENTINEL TECHNOLOGIES, INC. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF INCOME

YEARS ENDED DECEMBER 31, 2024 AND 2023

	2024	% of Net Revenues	2023	% of Net Revenues
Revenues, net	$ 356,279,096	100.0	$ 322,874,678	100.0
Cost of revenue	267,535,757	75.1	243,765,328	75.5
Gross Profit	88,743,339	24.9	79,109,350	24.5
Selling, general, and administrative expenses	76,680,163	21.5	74,045,029	22.9
Income from Operations	12,063,176	3.4	5,064,321	1.6
Other Income (Expense):				
Miscellaneous income	275,625	0.1	70,561	-
Interest income	23	-	25	-
Interest expense	(48,606)	-	(31,111)	-
Total Other Income	227,042	0.1	39,475	-
Income Before Income Taxes	12,290,218	3.5	5,103,796	1.6
Provision for income taxes	3,361,723	0.9	1,676,181	0.5
Net Income	$ 8,928,495	2.6	$ 3,427,615	1.1

The accompanying notes to the consolidated financial statements are an integral part of these statements.
4

SENTINEL TECHNOLOGIES, INC. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY

YEARS ENDED DECEMBER 31, 2024 AND 2023

	Common Stock		Additional Paid-In Capital	Treasury Stock		Retained	
	Shares	Amount	Amount	Shares	Amount	Earnings	Total
Balance, January 1, 2023	106,345	$ -	$ 819,029	48,664	$(15,610,140)	$ 37,516,411	$ 22,725,300
Purchase of treasury stock	-	-	-	1,887	(1,430,786)	-	(1,430,786)
Net income	-	-	-	-	-	3,427,615	3,427,615
Balance, December 31, 2023	106,345	-	819,029	50,551	(17,040,926)	40,944,026	24,722,129
Purchase of treasury stock	-	-	-	2,950	(2,486,971)	-	(2,486,971)
Net income	-	-	-	-	-	8,928,495	8,928,495
Balance, December 31, 2024	106,345	$ -	$ 819,029	53,501	$(19,527,897)	$ 49,872,521	$ 31,163,653

The accompanying notes to the consolidated financial statements are an integral part of these statements.

CONFIDENTIAL INFORMATION PROPERTY OF SENTINEL TECHNOLOGIES, INC.

SENTINEL TECHNOLOGIES, INC. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF CASH FLOWS

YEARS ENDED DECEMBER 31, 2024 AND 2023

	2024	2023
Cash provided from operating activities:		
Net income	$ 8,928,495	$ 3,427,615
Adjustments to reconcile net income to net cash flows from operating activities:		
Amortization of right-to-use assets under operating leases	1,921,955	2,284,910
Amortization of right-to-use assets under finance leases	252,886	(319,415)
Depreciation and amortization	1,238,084	1,721,623
(Decrease) increase in allowance for credit losses on accounts receivable	52,938	(329,747)
Decrease in provision for obsolete and excess inventory	(588)	(68,382)
Deferred income taxes	161,161	176,938
(Decrease) increase in life insurance – cash surrender value, net of premiums paid	74,380	(70,538)
Gain on sale of assets	19,971	-
Changes in:		
Accounts receivable	8,387,174	7,714,020
Inventories	2,704,584	2,560,189
Prepaid expenses	5,805,985	(1,927,399)
Other assets	2,442	29,542
Accounts payable	(3,899,739)	(4,683,959)
Accrued liabilities	(445,225)	(1,947,473)
Income taxes payable	560,933	204,506
Unearned revenue	(4,144,829)	(1,010,527)
Deferred compensation	(330,342)	442,992
Obligations under operating leases	(1,904,647)	(2,082,108)
Net cash flows from operating activities	19,385,618	6,122,787
Cash flows from investing activities:		
Purchases of property and equipment	(405,107)	(874,229)
Proceeds from sale of property and equipment	43,891	-
Life insurance proceeds	811,211	-
Net cash flows from investing activities	449,995	(874,229)
Cash flows from financing activities:		
Repayments from long-term debt	(120,105)	-
Repayments from short-term borrowings	(3,000,000)	(2,000,000)
Proceeds from short-term borrowings	3,000,000	-
Principal payments on obligations under finance leases	(241,410)	(316,497)
Purchase of treasury stock	(2,486,971)	(1,430,786)
Net cash flows from financing activities	(2,848,486)	(3,747,283)
Net change in cash and cash equivalents	16,987,127	1,501,275
Cash and cash equivalents, beginning of year	2,932,554	1,431,279
Cash and cash equivalents, end of year	$ 19,919,681	$ 2,932,554

The accompanying notes to the consolidated financial statements are an integral part of these statements.
6

SENTINEL TECHNOLOGIES, INC. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

YEARS ENDED DECEMBER 31, 2024 AND 2023

	2024	2023
Noncash financing transactions:		
Noncash right-of-use assets and obligations under right-of-use assets – operating	$ -	$ 900,116
Noncash right-of-use assets and obligations under right-of-use assets – financing	$ -	$ 132,459
Long-term debt used to purchase property and equipment	$ 949,302	$ -
Other cash flow information:		
Interest paid	$ 48,606	$ 31,111
Income taxes paid	$ 2,639,631	$ 1,294,738

The accompanying notes to the consolidated financial statements are an integral part of these statements.
7

SENTINEL TECHNOLOGIES, INC. AND SUBSIDIARY
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2024 AND 2023

Note 1—Nature of operations

Sentinel Technologies, Inc. ("Sentinel") and Sentinel Technologies, Inc. AZ (consolidated as the "Companies") specializes in consulting, integration, sale, and installation of advanced technology solutions. The Companies maintain their principal offices in Downers Grove, Illinois and have satellite facilities in Illinois, Arizona, Colorado, Michigan, and Wisconsin.

Note 2—Summary of significant accounting policies

Basis of Presentation – The consolidated financial statements have been prepared on the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP").

Principles of Consolidation – The consolidated financial statements include the accounts of Sentinel and its wholly-owned subsidiary, Sentinel Technologies, Inc. AZ. All intercompany transactions and accounts have been eliminated.

Accounting Estimates – The preparation of consolidated financial statements in accordance with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Revenue Recognition – The Companies' revenue is generally derived from the sale of advanced technology solutions to customers, including the reselling of third party products and services, professional services, and managed services. Revenue is recognized in accordance with Accounting Standards Codification ("ASC") Topic 606, *Revenue from Contracts with Customers*.

The Companies' have elected to use the portfolio approach practical expedient. The Companies' contracts with customers contain similar terms and, as a result, the Companies have elected to apply its revenue recognition policies to a portfolio of contracts with similar characteristics. The Companies do not expect the results of doing so to differ materially from applying the guidance to individual contracts.

Under ASC 606, the Companies recognize revenue when they have a contract with a customer and as they satisfy the performance obligations of that contract through transfer of the promised good or service to the customer. A product or service is transferred when the customer obtains control of that product or service. A contract may contain multiple performance obligations. Prices are specifically identified for each performance obligation within a contract. Costs incurred to obtain a contract are expensed as incurred when the amortization period is less than a year. Incidental items that are immaterial in the context of the contract are recognized as expense.

Third party products and services consist of reselling hardware, software and software as a service licenses, and software support. Revenue for third party products and services is recognized at the point in time when the customer obtains control of the product and services, generally when shipped. As a provider of third party products and services, the Companies assess whether they have promised to provide the customer the specific product or service itself (as a principal) in which case revenue is recognized on a gross basis, or to arrange for those specific products and services to be provided by another party (as an agent) in which case revenue is recognized on a net basis. A primary factor used in the assessment of principal versus agent accounting guidance is the Companies' role in fulfilling the promise to provide the specific products and services.

SENTINEL TECHNOLOGIES, INC. AND SUBSIDIARY
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2024 AND 2023

Note 2—Summary of significant accounting policies (continued)

For sales of third party products (including software and software as a service), the Companies are the principal with revenues recognized on the gross basis. For sales of third party maintenance (including software support) that do not require the Companies' services, the Companies are the agent with revenue recognized on the net basis.

Professional services consist of project management, staging, configuration, and integration services. The customer contract terms determine whether professional service revenues are recognized on a time and material basis, in which case revenue is determined by applying the agreed-upon billing rate as services are performed, or on a fixed fee basis, in which case revenues are recognized over time in proportion to the progress toward complete satisfaction of the performance obligation.

Managed services consist of stand-ready maintenance services provided by the Companies over the term of a contract, generally one month to five years. Revenues are recognized on a straight-line basis over the term of the contract.

The following table disaggregates the revenues of the Companies' revenue based on the timing of satisfaction of performance obligations for the years ended December 31:

	2024	2023
Performance obligations satisfied at a point in time	$ 206,626,460	$ 186,372,776
Performance obligations satisfied over time	149,652,636	136,501,902
	$ 356,279,096	$ 322,874,678

Contract Balances – The timing of revenue recognition, billings, and cash collections results in billed accounts receivable and unearned revenue on the consolidated balance sheets. The beginning and ending contract balances were as follows:

	December 31, 2024	December 31, 2023	December 31, 2022
Accounts receivable	$ 60,945,281	$ 69,332,455	$ 77,046,475
Unearned revenue	31,161,962	35,306,791	36,317,318

Accounts Receivable and Unearned Revenue – Billings may be based on payment schedules that differ from the timing of revenue recognition. These differences are reflected in the consolidated balance sheets as accounts receivable and unearned revenue.

The allowance for credit losses is based on the Companies' assessment of the collectability of customer accounts receivable. In accordance with ASC Topic 326, *Financial Instruments – Credit Losses,* the Companies makes ongoing estimates relating to the collectability of accounts receivable and records an allowance for estimated losses expected from the inability of its customers to make required payments. The Companies establish expected credit losses by evaluating historical levels of credit losses, current economic conditions that may affect a customer's ability to pay, and creditworthiness of significant customers. These inputs are used to determine a range of expected credit losses and an allowance is recorded within the range. Accounts receivable is written off when there is no reasonable expectation of recovery. As of December 31, 2024 and 2023, the allowance for credit losses was $397,938 and $345,000, respectively.

SENTINEL TECHNOLOGIES, INC. AND SUBSIDIARY
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2024 AND 2023

Note 2—Summary of significant accounting policies (continued)

Cash and Cash Equivalents – For purposes of reporting cash flows, cash and cash equivalents include cash on hand, cash deposits in banks, and highly liquid investments with original maturities of three months or less.

Concentration of Credit Risk – The Companies maintain their cash in bank deposits which, at times, may exceed federally insured limits. The Companies believe they are not exposed to any significant credit risk on cash. As of December 31, 2024 and 2023, cash held in excess of insured limits was $19,936,085 and $3,477,312, respectively.

The principal markets for the products for the Companies are in the United States of America. Management performs continuing credit evaluations of its customers and generally does not require collateral. Historically, the Companies have not experienced significant losses related to receivables from individual customers.

Inventories – Inventories are stated at the lower of cost or net realizable value. The average cost method is used to determine the cost for maintenance inventories while the specific identification cost method is used to determine the cost for inventories held for resale. Inventories include both new and used computer parts. Inventories are stated net of a market adjustment for obsolete and excess inventories totaling $55,030 and $55,618 as of December 31, 2024 and 2023, respectively.

Property and Equipment – The cost of property and equipment is depreciated over the estimated useful lives of the related assets. Leasehold improvements are amortized over the lesser of the term of the related lease or the estimated useful lives of the assets. Depreciation and amortization are computed under the straight-line method of depreciation. The useful lives of property and equipment for purposes of computing depreciation are as follows:

Equipment	3 to 7 years
Furniture and fixtures	3 to 7 years
Leasehold improvements	Life of lease

Depreciation and amortization expense for property and equipment charged to operations was $1,490,970 and $1,402,208 for the years ended December 31, 2024 and 2023, respectively.

Income Taxes – The Companies account for income taxes using an asset and liability approach that requires the recognition of deferred tax assets and liabilities for the expected future tax consequences attributable to differences between consolidated financial statements carrying amounts of existing assets and liabilities and their respective tax basis. Deferred taxes are measured using enacted tax laws and rates expected to be recovered or settled.

The Companies recognize the consolidated financial statements impact of a tax position when it is more likely than not that the position will be sustained upon examination. The Companies are no longer subject to federal, state, and local income tax examinations by tax authorities for the years before the 2021 tax year. Based on the evaluation of the Companies tax positions, management believes all positions taken would be upheld under an examination; therefore, no provision for the effects of uncertain tax positions has been recorded for the years ended December 31, 2024 and 2023.

Stock Option Plans – The Companies have stock option plans that provide for the issuance of common stock, which are described in Note 11. Effective January 1, 2006, the Companies adopted the fair value method of accounting for employee stock compensation cost.

SENTINEL TECHNOLOGIES, INC. AND SUBSIDIARY
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2024 AND 2023

Note 2—Summary of significant accounting policies (continued)

Leases – The Companies lease certain buildings, equipment, and vehicles. The determination of whether an arrangement is a lease is made at the lease's inception. Under ASC 842, a contract is (or contains) a lease if it conveys the right to control the use of an identified asset for a period of time in exchange for consideration. Control is defined under the standard as having both the right to obtain substantially all of the economic benefits from use of the asset and the right to direct the use of the asset. Management only reassesses its determination if the terms and conditions of the contract are changed.

Operating leases are included in right-of-use ("ROU") operating leases, net, current portion of obligations under operating leases, and obligations under operating leases, net of current portion in the consolidated balance sheets. Finance leases are included in property and equipment, current portion of obligations under finance leases, and obligations under finance leases, net of current portion in the consolidated balance sheets.

The ROU assets represent the right to use an underlying asset for the lease term, and lease liabilities represent the obligation to make lease payments. Operating lease ROU assets and liabilities are recognized at the lease commencement date based on the present value of lease payments over the lease term. The Companies use the implicit rate when it is readily determinable. Since most of the Companies' leases do not provide an implicit rate to determine the present value of lease payments, management uses the risk-free borrowing rate based on the information available at lease commencement. Operating lease ROU assets also include any lease payments made and excludes any lease incentives. Lease expense for lease payments is recognized on a straight-line basis over the lease term. The Companies' lease terms may include options to extend or terminate the lease when it is reasonably certain the Companies will exercise the option.

The Companies have lease agreements with lease and non-lease components, which are generally accounted for separately with amounts allocated to the lease and non-lease components based on stand-alone prices. The Companies have elected the practical expedient not to separate lease and non-lease components for leases. Additionally, for equipment leases, the Companies apply a portfolio approach to account for the operating lease ROU assets and liabilities.

Subsequent Events – The Companies have evaluated subsequent events through March 26, 2025, the date the consolidated financial statements were available to be issued.

Reclassifications – Certain accounts in the prior-year financial statements have been reclassified for comparative purposes to conform with the presentation in the current-year consolidated financial statements. These reclassifications had no effect on net income or cash flows from operations.

Note 3—Accounts receivable

Accounts receivable consists of the following at December 31:

	2024	2023
Billed receivables:		
Trade receivables	$ 53,830,374	$ 56,905,284
Allowance for credit losses	(397,938)	(345,000)
	53,432,436	56,560,284
Unbilled receivables	7,407,962	12,427,171
	$ 60,840,398	$ 68,987,455

SENTINEL TECHNOLOGIES, INC. AND SUBSIDIARY
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2024 AND 2023

Note 4—Prepaid expenses

Prepaid expenses consist of the following at December 31:

	2024	2023
Prepaid subcontracted expense	$ 10,641,663	$ 10,864,224
Other prepaid expenses	1,240,507	5,925,444
Current prepaid expenses	11,882,170	16,789,668
Noncurrent prepaid subcontracted expense	2,931,362	4,127,127
	$ 14,813,532	$ 20,916,795

Note 5—Property and equipment

Property and equipment, net consists of the following at December 31:

	2024	2023
Equipment	$ 997,610	$ 1,189,356
Furniture and fixtures	15,468,511	15,298,854
Leasehold improvements	1,566,828	1,538,077
	18,032,949	18,026,287
Less accumulated depreciation and amortization	(15,355,575)	(15,147,789)
	$ 2,677,374	$ 2,878,498

Note 6—Accrued liabilities

Accrued liabilities consist of the following at December 31:

	2024	2023
Accrued payroll and payroll taxes	$ 7,276,299	$ 7,853,485
Accrued health insurance	2,080,027	1,883,482
Other accrued liabilities	245,675	310,259
Current accrued liabilities	$ 9,602,001	$ 10,047,226

Note 7—Short-term borrowings

The Companies have a credit agreement that provides up to $17,500,000 as cash advance working capital. In general, the agreement allows the Companies to borrow funds at the 90-day secured overnight financing rate plus 250 basis points (6.875% at December 31, 2024) subject to terms and conditions of the agreement that include the Companies maintaining certain collateral levels and financial covenant requirements. As of December 31, 2024, the credit agreement was collateralized by general assignments on all the assets of the Companies. For the years ended December 31, 2024 and 2023, there were no outstanding borrowed balance and the Companies were in compliance with all required financial covenants.

SENTINEL TECHNOLOGIES, INC. AND SUBSIDIARY
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2024 AND 2023

Note 8—Long-term debt

In June 2024, the Companies entered into a loan in an amount of $949,302 to finance equipment. Monthly payments of $29,355 are required and began on July 9, 2024. The note bears interest at 7.099%. The note matures in July 2027.

Long-term debt, net current portion consist of the following at December 31, 2024:

Long-term debt	$	829,197
Less current portion		(303,127)
Total long-term debt, net of current portion	$	526,070

Principal payments due on long-term debt during each of the next three years are as follows:

2025	$	303,127
2026		325,363
2027		200,707
Total principal payments due on long-term debt	$	829,197

Note 9—Deferred compensation

During 2010, the Companies entered into an agreement to pay certain employees deferred compensation in recognition of meeting and exceeding certain operational and sales goals. The original participants at the inception of the plan were fully vested immediately. All new participants' deferred compensation will vest after 10 years of service. The vested amounts in the plan are available for distribution upon the latter of attaining age 65 or separation of service. Distribution payments shall be paid in annual installments over 10 years. The deferred compensation liability was $6,836,263 and $7,166,605 as of December 31, 2024 and 2023, respectively, and calculated using the net present value method.

Note 10—Income taxes

The components of the provision for income taxes are as follows at December 31:

		2024		2023
Current:				
Federal	$	2,349,351	$	1,011,869
State		851,211		487,374
Deferred tax expense		161,161		176,938
	$	3,361,723	$	1,676,181

CONFIDENTIAL INFORMATION PROPERTY OF SENTINEL TECHNOLOGIES, INC.

SENTINEL TECHNOLOGIES, INC. AND SUBSIDIARY
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2024 AND 2023

Note 10—Income taxes (continued)

The tax effect of temporary differences that give rise to significant portions of the deferred tax assets and liabilities is presented as follows:

	2024	2023
Deferred tax assets:		
Provision for obsolete and excess inventory	$ 26,385	$ 23,370
Allowance for credit losses	108,717	94,254
Other accrued expenses	249,306	303,357
Deferred compensation	1,796,690	1,957,916
Unearned revenue	1,533,507	1,588,897
	3,714,605	3,967,794
Deferred tax liability:		
Property and equipment depreciation differences	(592,370)	(684,398)
	$ 3,122,235	$ 3,283,396

The Companies' effective tax rates for the years ended December 31, 2024 and 2023 varied from the statutory rates due primarily to the permanent differences, state and local taxes, adjustment to the prior year book to tax differences, and changes in valuation allowances.

The provision for income taxes differs from the amounts computed by applying the statutory federal income tax rate as follows:

	2024	2023
Statutory federal income tax provision	$ 2,580,946	$ 1,071,798
Adjustments:		
State income taxes - net of federal benefit	776,742	322,560
Other permanent differences	4,035	281,823
	$ 3,361,723	$ 1,676,181

Note 11—Common stock

The authorized shares of the Companies' no-par value common stock were 147,000 at December 31, 2024 and 2023. The issued shares of the Companies' no-par value common stock were 106,345 shares for both years. The outstanding shares of the Companies' no-par value common stock were 52,844 and 55,794 on December 31, 2024 and 2023, respectively. The transfer, sale, assignment, pledge, or other disposition of common stock by stockholders is subject to the terms and conditions of Stock Restriction Agreements, which provide the Companies and other stockholders with the right of first refusal before certain transfers detailed in the agreements are transacted.

During 2024 and 2023, the Companies purchased 2,950 and 1,887 shares of common stock for $843.04 and $758.23 per share for a total of $2,486,971 and $1,430,786, respectively.

During 2024 and 2023, the Companies issued no shares of common stock from treasury.

CONFIDENTIAL INFORMATION PROPERTY OF SENTINEL TECHNOLOGIES, INC.

SENTINEL TECHNOLOGIES, INC. AND SUBSIDIARY
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2024 AND 2023

Note 12—Stock options

Stock Options Granted Prior to 1997 – Stock options granted prior to 1997 are compensatory and grant the right to purchase shares of common stock at a purchase price of one cent per share. The options vest at a rate of 20% per year beginning in the year in which they are granted. Options become fully vested in the event of merger or sale of the Companies, death or disability of the participant, retirement, or voluntary or involuntary termination of employment for reason other than cause. Options are exercisable in the year in which they vest, with the participant's right to purchase the shares forfeited if the participant elects not to exercise his/her options during the exercise period. Deferred compensation expense with respect to options is amortized on a straight-line basis over the five-year vesting period. At December 31, 2024 and 2023, no options granted prior to 1997 were outstanding and 7,600 shares remain available for future options under pre-1997 option plans.

Stock Options Granted After 1996 – Stock options granted after 1996 have been granted with an exercise price equal to the fair value at the date of grant. The fair value is determined by referring to the most recent independent valuation of the Companies' common stock. Options granted after 1996 generally vest over three years and expire 20 years from the date of grant (amended from ten years in 2007). In 2017 the expiration date for these options was extended 10 years to 2027. Options become fully vested in the event of merger or sale of the Companies, death or disability of the participant, or retirement of the participant.

Stock options outstanding at December 31, 2024 were as follows:

Exercise Price	Number Outstanding and Exercisable	Average Remaining Life of Contract	Weighted Average Exercise Price
$ 68.68	4,400	2.5 years	$ 68.68

There were no options granted, exercised, or forfeited during 2024.

2018 Stock Option Plan – In December 2017, the Companies adopted a 2018 Stock Option Plan that grants the right to purchase shares of common stock at a minimum purchase price that is equal to or above the fair value at the date of grant. The fair value is determined by referring to the most recent independent valuation of the Companies' common stock. These options have vesting periods ranging from immediate to five years (20% vesting per year). The option must be exercised while the participant is employed by the Companies. If the participant's employment with the Companies terminates for any reason, all unexercised vested and nonvested options automatically terminate. There are a total of 20,250 shares set aside for this option plan. At December 31, 2024 and 2023, none of these options had been granted.

Employee Stock Ownership Plan – The Sentinel Technologies, Inc. Employee Stock Ownership Plan ("ESOP") was established in 1988. The ESOP is a noncontributory plan covering eligible employees with a year of service. At December 31, 2024 and 2023, 18,026 and 19,136 shares, with an appraised share value of $878.56 and $783.15, respectively, have been allocated to participants. There were no discretionary contributions made by the Companies for the years ended December 31, 2024 and 2023. Allocations of the Companies' contributions and shares are based on participant earnings or account balances. There were no accrued liabilities for contributions payable to the ESOP at December 31, 2024 or 2023. In December 2023, the ESOP was amended to freeze the plan for any new participants effective January 1, 2024.

SENTINEL TECHNOLOGIES, INC. AND SUBSIDIARY
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2024 AND 2023

Note 13—Leases

The Companies have operating lease agreements that require monthly payments ranging from $544 to $87,820 and lease maturity dates up through June 2029. The Companies are also obligated by lease agreements that meets the criteria of a finance lease. The finance leases require monthly payments ranging from $1,156 to $1,938 and the leases maturity dates up through June 2029.

Certain leases include optional renewal periods. When it is reasonably certain a renewal option will be exercised, that renewal period is included in the lease term, and the related payments are reflected in the ROU asset and lease liability.

All of the Companies' leases include fixed rental payments. While the majority of the leases are gross leases, the Companies also have a number of leases which require separate payments to the lessor based on the property taxes assessed on the property, as well as a portion of the common area maintenance associated with the property, and for equipment leases, including vehicles, the Companies account for the lease and non-lease components as a single lease. The Companies have elected the practical expedient not to separate lease and non-lease components for leases.

Lease expense for the years ended December 31 were as follows.

	2024	2023
Finance leases:		
Amortization of ROU assets	$ 252,886	$ (319,415)
Interest expenses	16,194	26,979
Operating leases:		
Fixed rent expense	1,929,748	2,390,847
	$ 2,198,828	$ 2,098,411

The amount recognized as a ROU asset related to the finance leases is included in property and equipment, net in the accompanying consolidated balance sheets, while the related lease liability is included in current portion of obligations under finance leases and obligations under finance leases, net of current portion. As of December 31, 2024 and 2023, ROU assets and lease liabilities related to finance leases were as follows:

	2024	2023
ROU assets	$ 224,498	$ 506,809
Finance lease obligations - current	206,953	263,024
Finance lease obligations - noncurrent	72,822	258,161
	$ 279,775	$ 521,185

SENTINEL TECHNOLOGIES, INC. AND SUBSIDIARY
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2024 AND 2023

Note 13—Leases (continued)

The following is a schedule of future minimum rental payments that existed at December 31, 2024:

	Operating	Finance	Total
2025	$ 1,625,408	$ 214,494	$ 1,839,902
2026	1,529,201	63,794	1,592,995
2027	350,510	10,754	361,264
2028	105,243	-	105,243
2029	35,110	-	35,110
	3,645,472	289,042	3,934,514
Less interest	(95,439)	(9,267)	(104,706)
	$ 3,550,033	$ 279,775	$ 3,829,808

As of December 31, 2024 and 2023, the weighted-average remaining lease term for all operating leases is 2.39 years and 3.13, years, respectively, while the remaining lease term for the finance leases is 1.61 years and 2.19 years, respectively.

Because the Companies generally do not have access to the rate implicit in the lease, the Companies utilize risk free rates as the discount rate. The weighted-average discount rate associated with operating leases as of December 31, 2024 and 2023 is 2.00%, while the weighted-average discount rate associated with finance leases as of December 31, 2024 and 2023 is 4.89% and 4.54%, respectively.

Note 14—Contingencies

The Companies are generally self-insured for losses and liabilities related to health claims up to predetermined amounts, above which, third party insurance applies. Losses are accrued based upon the Companies' estimates of the aggregate liability for claims incurred based on prior experience. Individual claim exposure is $130,000 for 2024 and 2023. The aggregate maximum claim exposure amounts were $7,400,000 and $8,000,000 at December 31, 2024 and 2023, respectively. At December 31, 2024 and 2023, accrued expenses of $2,080,027 and $1,883,482, respectively, are included in accrued liabilities (see Note 6).

Note 15—Concentrations

At December 31, 2024, one customer accounted for 5% of the total gross accounts receivable balance with no other customer greater than 3%. At December 31, 2023, one customer accounted for 10% of the total gross accounts receivable balance with no other customers greater than 5%.

One customer accounted for 10% of total revenue in 2024 with no other customers accounting for greater than 2% One customer accounted for 9% of total revenue in 2023 with no other customers accounting for greater than 2%.

CONFIDENTIAL INFORMATION PROPERTY OF SENTINEL TECHNOLOGIES, INC.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 6/10/2026

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Alliant Insurance Services, Inc. 32 Old Slip 29th Fl New York NY 10005	**CONTACT NAME:** Jake Guttentag **PHONE (A/C, No, Ext):** **FAX (A/C, No):** **E-MAIL ADDRESS:** Jake.Guttentag@alliant.com
INSURED SENTTEC-03 Sentinel Technologies, Inc. 2550 Warrenville Road Downers Grove IL 60515	**INSURER(S) AFFORDING COVERAGE** / **NAIC #** **INSURER A :** Hanover American Insurance Com / 36064 **INSURER B :** Allmerica Financial Benefit In / 41840 **INSURER C :** Hanover Insurance Company / 22292 **INSURER D :** Westfield Specialty Insurance / 16992 **INSURER E :** Allmerica Financial Benefit In / 41840 **INSURER F :** Liberty Surplus Insurance Corp / 10725

COVERAGES **CERTIFICATE NUMBER:** 596528999 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X **COMMERCIAL GENERAL LIABILITY** CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT X LOC OTHER:			ZZYM14351600	11/3/2025	11/3/2026	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG 	$ 1,000,000 $ 100,000 $ 10,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
B	**AUTOMOBILE LIABILITY** X ANY AUTO X OWNED AUTOS ONLY SCHEDULED AUTOS X HIRED AUTOS ONLY X NON-OWNED AUTOS ONLY			AWYM143739	11/3/2025	11/3/2026	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) 	$ 1,000,000 $ $ $ $
C	X **UMBRELLA LIAB** X OCCUR **EXCESS LIAB** CLAIMS-MADE DED X RETENTION $ 0			UHYM20145200	11/3/2025	11/3/2026	EACH OCCURRENCE AGGREGATE 	$ 15,000,000 $ 15,000,000 $
B E	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** Y / N ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		WMYM190426 W2Y-M205505-00	11/3/2025 11/3/2025	11/3/2026 11/3/2026	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
D F	Cyber/Tech E&O Excess Cyber/Tech E&O	Y		PCE-510086G-00 EO5NADERJ2001	11/3/2025 11/3/2025	11/3/2026 11/3/2026	Each Claim/Aggregate Each Claim/Aggregate	$5,000,000 $5,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

WC - WMYM190426 - AOS
WC - W2Y-M205505-00 - CA NY

Genesee County is included as Additional Insured with regards to the Cyber Liability as required by written contract subject to the policy terms and conditions.

CERTIFICATE HOLDER

Genesee County
324 S. Saginaw Street, Suite 926
Flint MI 48502

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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Bid Results

RFP # 26-483
Project Name: Annual Managed Network Services Agreement

Vendor's Name:	**Bid Price Submitted**
Sentinel	$26,760.96
Global Solutions	$132,680.00
Systal Technology	$148,824.74

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 6/17/2026

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Alliant Insurance Services, Inc.
32 Old Slip 29th Fl
New York NY 10005

CONTACT NAME: Jake Guttentag
PHONE (A/C, No, Ext): | **FAX (A/C, No):**
E-MAIL ADDRESS: Jake.Guttentag@alliant.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Hanover American Insurance Com	36064
INSURER B : Allmerica Financial Benefit In	41840
INSURER C : Hanover Insurance Company	22292
INSURER D : Westfield Specialty Insurance	16992
INSURER E : Allmerica Financial Benefit In	41840
INSURER F : Liberty Surplus Insurance Corp	10725

INSURED SENTTEC-03
Sentinel Technologies, Inc.
2550 Warrenville Road
Downers Grove IL 60515

COVERAGES **CERTIFICATE NUMBER:** 1184765821 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X **COMMERCIAL GENERAL LIABILITY** [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: [ ] POLICY [X] PRO-JECT [X] LOC [ ] OTHER:	Y	Y	ZZYM14351600	11/3/2025	11/3/2026	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG 	$ 1,000,000 $ 100,000 $ 10,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
B	**AUTOMOBILE LIABILITY** X ANY AUTO X OWNED AUTOS ONLY [ ] SCHEDULED AUTOS X HIRED AUTOS ONLY [X] NON-OWNED AUTOS ONLY	Y		AWYM143739	11/3/2025	11/3/2026	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) 	$ 1,000,000 $ $ $ $
C	X **UMBRELLA LIAB** [X] OCCUR **EXCESS LIAB** [ ] CLAIMS-MADE DED [X] RETENTION $ 0			UHYM20145200	11/3/2025	11/3/2026	EACH OCCURRENCE AGGREGATE 	$ 15,000,000 $ 15,000,000 $
B E	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** Y / N ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? [ ] **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		WMYM190426 W2Y-M205505-00	11/3/2025 11/3/2025	11/3/2026 11/3/2026	X PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
D F	Cyber/Tech E&O Excess Cyber/Tech E&O	Y		PCE-510086G-00 EO5NADERJ2001	11/3/2025 11/3/2025	11/3/2026 11/3/2026	Each Claim/Aggregate Each Claim/Aggregate	$5,000,000 $5,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
WC - WMYM190426 - AOS
WC - W2Y-M205505-00 - CA NY

Genesee County is included as Additional Insured with regards to General Liability, Auto Liability and Cyber Liability as required by written contract subject to the policy terms and conditions. Coverage is Primary and Non-Contributory with regards to the General Liability as required by written contract subject to the policy terms and conditions. Waiver of Subrogation applies with regards to the General Liability, as required by written contract subject to the policy terms and conditions.

CERTIFICATE HOLDER

Genesee County
324 S. Saginaw Street, Suite 926
Flint MI 48502

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

LESSOR - ADDITIONAL INSURED AND LOSS PAYEE

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM
BUSINESS AUTO PHYSICAL DAMAGE COVERAGE FORM
GARAGE COVERAGE FORM
MOTOR CARRIER COVERAGE FORM
TRUCKERS COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by the endorsement.

This endorsement changes the policy effective on the inception date of the policy unless another date is indicated below.

Named Insured: **Endorsement Effective Date:**
Countersignature Of Authorized Representative
Name: **Title:** **Signature:** **Date:**

Copyroght, ISO Properties, Inc., 2005

SCHEDULE

Insurance Company:	
Policy Number:	**Effective Date:**
Expiration Date:	
Named Insured:	
Address:	
Additional Insured (Lessor):	
Address:	
Designation Or Description Of "Leased Autos":	

Coverages	Limit Of Insurance
Liability	$ Each "Accident"
Comprehensive	Actual Cash Value Or Cost Of Repair Whichever Is Less, Minus $ Deductible For Each Covered "Leased Auto"
Collision	Actual Cash Value Or Cost Of Repair Whichever Is Less, Minus $ Deductible For Each Covered "Leased Auto"
Specified Causes Of Loss	Actual Cash Value Or Cost Of Repair Whichever Is Less, Minus $ Deductible For Each Covered "Leased Auto"
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

A. Coverage

1. Any "leased auto" designated or described in the Schedule will be considered a covered "auto" you own and not a covered "auto" you hire or borrow.
2. For a "leased auto" designated or described in the Schedule, **Who Is An Insured** is changed to include as an "insured" the lessor named in the Schedule. However, the lessor is an "insured" only for "bodily injury" or "property damage" resulting from the acts or omissions by:
   a. You;
   b. Any of your "employees" or agents; or
   c. Any person, except the lessor or any "employee" or agent of the lessor, operating a "leased auto" with the permission of any of the above.
3. The coverages provided under this endorsement apply to any "leased auto" described in the Schedule until the expiration date shown in the Schedule, or when the lessor or his or her agent takes possession of the "leased auto", whichever occurs first.

B. Loss Payable Clause

1. We will pay, as interest may appear, you and the lessor named in this endorsement for "loss" to a "leased auto".

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2. The insurance covers the interest of the lessor unless the "loss" results from fraudulent acts or omissions on your part.
3. If we make any payment to the lessor, we will obtain his or her rights against any other party.

C. Cancellation

1. If we cancel the policy, we will mail notice to the lessor in accordance with the Cancellation Common Policy Condition.
2. If you cancel the policy, we will mail notice to the lessor.
3. Cancellation ends this agreement.

D. The lessor is not liable for payment of your premiums.

E. Additional Definition

As used in this endorsement:

"Leased auto" means an "auto" leased or rented to you, including any substitute, replacement or extra "auto" needed to meet seasonal or other needs, under a leasing or rental agreement that requires you to provide direct primary insurance for the lessor.

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THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

COMMERCIAL GENERAL LIABILITY BROADENING ENDORSEMENT

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SUMMARY OF COVERAGES

1.	Additional Insured by Contract, Agreement or Permit	Included
2.	Additional Insured – Primary and Non-Contributory	Included
3.	Blanket Waiver of Subrogation	Included
4.	Bodily Injury Redefined	Included
5.	Broad Form Property Damage – Borrowed Equipment, Customers Goods & Use of Elevators	Included
6.	Knowledge of Occurrence	Included
7.	Liberalization Clause	Included
8.	Medical Payments – Extended Reporting Period	Included
9.	Newly Acquired or Formed Organizations - Covered until end of policy period	Included
10.	Non-owned Watercraft	51 ft.
11.	Supplementary Payments Increased Limits	
	- Bail Bonds	$2,500
	- Loss of Earnings	$1000
12.	Unintentional Failure to Disclose Hazards	Included
13.	Unintentional Failure to Notify	Included

This endorsement amends coverages provided under the Commercial General Liability Coverage Part through new coverages, higher limits and broader coverage grants.

1. Additional Insured by Contract, Agreement or Permit

The following is added to **SECTION II – WHO IS AN INSURED**:

Additional Insured by Contract, Agreement or Permit

a. Any person or organization with whom you agreed in a written contract, written agreement or permit that such person or organization to add an additional insured on your policy is an additional insured only with respect to liability for “bodily injury”, “property damage”, or “personal and advertising injury” caused, in whole or in part, by your acts or omissions, or the acts or omissions of those acting on your behalf, but only with respect to:

(1) "Your work" for the additional insured(s) designated in the contract, agreement or permit;

(2) Premises you own, rent, lease or occupy; or

(3) Your maintenance, operation or use of equipment leased to you.

b. The insurance afforded to such additional insured described above:

(1) Only applies to the extent permitted by law; and

(2) Will not be broader than the insurance which you are required by the contract, agreement or permit to provide for such additional insured.

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(3) Applies on a primary basis if that is required by the written contract, written agreement or permit.

(4) Will not be broader than coverage provided to any other insured.

(5) Does not apply if the "bodily injury", "property damage" or "personal and advertising injury" is otherwise excluded from coverage under this Coverage Part, including any endorsements thereto.

c. This provision does not apply:

(1) Unless the written contract or written agreement was executed or permit was issued prior to the "bodily injury", "property damage", or "personal injury and advertising injury".

(2) To any person or organization included as an insured by another endorsement issued by us and made part of this Coverage Part.

(3) To any lessor of equipment:

(a) After the equipment lease expires; or

(b) If the "bodily injury", "property damage", "personal and advertising injury" arises out of sole negligence of the lessor

(4) To any:

(a) Owners or other interests from. whom land has been leased which takes place after the lease for the land expires; or

(b) Managers or lessors of premises if:

(i) The occurrence takes place after you cease to be a tenant in that premises; or

(ii) The "bodily injury", "property damage", "personal injury" or "advertising injury" arises out of structural alterations, new construction or demolition operations performed by or on behalf of the manager or lessor.

(5) To "bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of or the failure to render any professional services.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage" or the offense which caused the "personal and advertising injury" involved the rendering of or failure to render any professional services by or for you.

d. With respect to the insurance afforded to these additional insureds, the following is added to **SECTION III – LIMITS OF INSURANCE**:

The most we will pay on behalf of the additional insured for a covered claim is the lesser of the amount of insurance:

1. Required by the contract, agreement or permit described in Paragraph **a.;** or

2. Available under the applicable Limits of Insurance shown in the Declarations.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

2. Additional Insured – Primary and Non-Contributory

The following is added to **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS,** Paragraph **4. Other insurance:**

Additional Insured – Primary and Non-Contributory

If you agree in a written contract, written agreement or permit that the insurance provided to any person or organization included as an Additional Insured under **SECTION II – WHO IS AN INSURED**, is primary and non-contributory, the following applies:

If other valid and collectible insurance is available to the Additional Insured for a loss covered under Coverages **A** or **B** of this Coverage Part, our obligations are limited as follows:

a. Primary Insurance

This insurance is primary to other insurance that is available to the Additional Insured which covers the

Additional Insured as a Named Insured. We will not seek contribution from any other insurance available to the Additional Insured except:

(1) For the sole negligence of the Additional Insured;

(2) When the Additional Insured is an Additional Insured under another primary liability policy; or

(3) when **b.** below applies.

If this insurance is primary, our obligations are not affected unless any of the other insurance is also primary. Then, we will share with all that other insurance by the method described in **c.** below.

b. Excess Insurance

(1) This insurance is excess over any of the other insurance, whether primary, excess, contingent or on any other basis:

(a) That is Fire, Extended Coverage, Builder's Risk, Installation Risk or similar coverage for "your work";

(b) That is Fire insurance for premises rented to the Additional Insured or temporarily occupied by the Additional Insured with permission of the owner;

(c) That is insurance purchased by the Additional Insured to cover the Additional Insured's liability as a tenant for "property damage" to premises rented to the Additional Insured or temporarily occupied by the Additional with permission of the owner; or

(d) If the loss arises out of the maintenance or use of aircraft, "autos" or watercraft to the extent not subject to Exclusion **g.** of **SECTION I – COVERAGE A – BODILY INURY AND PROPERTY DAMAGE LIABILITY**.

(2) When this insurance is excess, we will have no duty under Coverages **A** or **B** to defend the insured against any "suit" if any other insurer has a duty to defend the insured against that "suit". If no other insurer defends, we will undertake to do so, but we will be entitled to the insured's rights against all those other insurers.

(3) When this insurance is excess over other Insurance, we will pay only our share of the amount of the loss, if any, that exceeds the sum of:

(a) The total amount that all such other insurance would pay for the loss in the absence of this insurance; and

(b) The total of all deductible and self insured amounts under all that other insurance.

We will share the remaining loss, if any, with any other insurance that is not described in this Excess Insurance provision and was not bought specifically to apply in excess of the Limits of Insurance shown in the Declarations of this Coverage Part.

c. Method Of Sharing

If all of the other insurance permits contribution by equal shares, we will follow this method also. Under this approach each insurer contributes equal amounts until it has paid its applicable limit of insurance or none of the loss remains, whichever comes first. If any of the other insurance does not permit contribution by equal shares, we will contribute by limits. Under this method, each insurer's share is based on the ratio of its applicable limit of insurance to the total applicable limits of insurance of all insurers

3. Blanket Waiver of Subrogation

The following is added to **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS,** Paragraph **8. Transfer Of Rights Of Recovery Against Others To Us**:

We waive any right of recovery we may have against any person or organization with whom you have a written contract that requires such waiver because of payments we make for damage under this coverage form. The damage must arise out of your activities under a written contract with that person or organization. This waiver applies only to the extent that subrogation is waived under a written contract executed prior to the "occurrence" or offense giving rise to such payments.

4. Bodily Injury Redefined

SECTION V – DEFINITIONS, Definition **3.** "bodily injury" is replaced by the following:

3. "Bodily injury" means bodily injury, sickness or disease sustained by a person including death resulting from any of these at any time. "Bodily injury" includes mental anguish or other mental injury resulting from "bodily injury".

5. Broad Form Property Damage – Borrowed Equipment, Customers Goods, Use of Elevators

a. SECTION I – COVERAGES, COVERAGE A – BODILIY INJURY AND PROPERTY DAMAGE LIABILITY, Paragraph **2. Exclusions** subparagraph **j.** is amended as follows:

Paragraph **(4)** does not apply to "property damage" to borrowed equipment while at a jobsite and not being used to perform operations.

Paragraphs **(3), (4)** and **(6)** do not apply to "property damage" to "customers goods" while on your premises nor do they apply to the use of elevators at premises you own, rent, lease or occupy.

b. The following is added to **SECTION V – DEFINTIONS:**

24. "Customers goods" means property of your customer on your premises for the purpose of being:

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a. worked on; or

b. used in your manufacturing process.

c. The insurance afforded under this provision is excess over any other valid and collectible property insurance (including deductible) available to the insured whether primary, excess, contingent

6. Knowledge of Occurrence

The following is added to **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS,** Paragraph **2. Duties in the Event of Occurrence, Offense, Claim or Suit:**

e. Notice of an "occurrence", offense, claim or "suit" will be considered knowledge of the insured if reported to an individual named insured, partner, executive officer or an "employee" designated by you to give us such a notice.

7. Liberalization Clause

The following is added to **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS:**

Liberalization Clause

If we adopt any revision that would broaden the coverage under this Coverage Form without additional premium, within 45 days prior to or during the policy period, the broadened coverage will immediately apply to this Coverage Part.

8. Medical Payments – Extended Reporting Period

a. SECTION I – COVERAGES, COVERAGE C – MEDICAL PAYMENTS, Paragraph **1. Insuring Agreement,** subparagraph **a.(3)(b)** is replaced by the following:

(b) The expenses are incurred and reported to us within three years of the date of the accident; and

b. This coverage does not apply if **COVERAGE C – MEDICAL PAYMENTS** is excluded either by the provisions of the Coverage Part or by endorsement.

9. Newly Acquired Or Formed Organizations

SECTION II – WHO IS AN INSURED, Paragraph **3.a.** is replaced by the following:

a. Coverage under this provision is afforded until the end of the policy period.

10. Non-Owned Watercraft

SECTION I – COVERAGES, COVERAGE A BODILY INJURY AND PROPERTY DAMAGE LIABILITY, Paragraph **2. Exclusions,** subparagraph **g.(2)** is replaced by the following:

g. Aircraft, Auto Or Watercraft

(2) A watercraft you do not own that is:

(a) Less than 51 feet long; and

(b) Not being used to carry persons or property for a charge;

This provision applies to any person who, with your consent, either uses or is responsible for the use of a watercraft.

11. Supplementary Payments Increased Limits

SECTION I – SUPPLEMENTARY PAYMENTS COVERAGES A AND B, Paragraphs **1.b.** and **1.d.** are replaced by the following:

1.b. Up to $2,500 for cost of bail bonds required because of accidents or traffic law violations arising out of the use of any vehicle to which the Bodily Injury Liability Coverage applies. We do not have to furnish these bonds.

1.d. All reasonable expenses incurred by the insured at our request to assist us in the investigation or defense of the claim or “suit", including actual loss of earnings up to $1000 a day because of time off from work.

12. Unintentional Failure to Disclose Hazards

The following is added to **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS,** Paragraph **6. Representations:**

We will not disclaim coverage under this Coverage Part if you fail to disclose all hazards existing as of the inception date of the policy provided such failure is not intentional.

13. Unintentional Failure to Notify

The following is added to **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS,** Paragraph **2. Duties in the Event of Occurrence, Offense, Claim or Suit:**

Your rights afforded under this policy shall not be prejudiced if you fail to give us notice of an "occurrence", offense, claim or "suit", solely due to your reasonable and documented belief that the "bodily injury" or "property damage" is not covered under this policy.

ALL OTHER TERMS, CONDITIONS, AND EXCLUSIONS REMAIN UNCHANGED.

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THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

COMMERCIAL GENERAL LIABILITY ENHANCEMENT ENDORSEMENT – TECHNOLOGY

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SUMMARY OF COVERAGES

1.	Additional Insured – Broad Form Vendors	Included
2.	Additional Insured – Employee and Volunteer Worker Broadened Bodily Injury Coverage	Included
3.	Aggregate Limit per Location	Included
4.	Aircraft – Nonowned Hired, Chartered or Loaned with Paid Crew	Included
5.	Alienated Premises	Included
6.	Broad Form Named Insured	Included
7.	Damage to your Product	$50,000
8.	Extended Property Damage	Included
9.	Incidental Malpractice (Employed nurses, EMT's & paramedics)	Included
10.	Mobile Equipment Redefined	Included
11.	Personal Injury – Broad Form	Included
12.	Product Recall Expense	
	- Each Occurrence Limit	$25,000
	- Aggregate Limit	$50,000
	- Deductible	$500
13.	Property Damage Legal Liability – Broad Form - Fire, Lightning, Explosion, Smoke and Leakage from Fire Protective Systems Damage Limit	$1,000,000

This endorsement amends coverages provided under the Commercial General Liability Coverage Part through new coverages, higher limits and broader coverage grants.

1. Additional Insured – Broad Form Vendors

The following is added to **SECTION II – WHO IS AN INSURED**:

Additional Insured – Broad Form Vendors

a. Any person or organization that is a vendor with whom you agreed in a written contract or written agreement to include as an additional insured under this Coverage Part is an insured, but only with respect to liability for "bodily injury" or "property damage" arising out of "your products" which are distributed or sold in the regular course of the vendor's business.

b. The insurance afforded to such vendor described above:

(1) Only applies to the extent permitted by law;

(2) Will not be broader than the insurance which you are required by the contract or agreement to provide for such vendor;

(3) Will not be broader than coverage provided to any other insured; and

(4) Does not apply if the "bodily injury", "property damage" or "personal and advertising injury" is otherwise excluded from coverage under this Coverage Part, including any endorsements thereto

c. With respect to insurance afforded to such vendors, the following additional exclusions apply:

The insurance afforded to the vendor does not apply to:

(1) "Bodily injury" or "property damage" for which the vendor is obligated to pay damages by reasons of the assumption of liability in a contract or agreement. This

exclusion does not apply to liability for damages that the insured would have in the absence of the contract or agreement;

(2) Any express warranty unauthorized by you;

(3) Any physical or chemical change in the product made intentionally by the vendor;

(4) Repackaging, unless unpacked solely for the purpose of inspection, demonstration, testing, or the substitution of parts under instruction from the manufacturer, and then repackaged in the original container;

(5) Any failure to make such inspection, adjustments, tests or servicing as the vendor has agreed to make or normally undertakes to make in the usual course of business in connection with the sale of the product;

(6) Demonstration, installation, servicing or repair operations, except such operations performed at the vendor's premises in connection with the sale of the product;

(7) Products which, after distribution or sale by you, have been labeled or relabeled or used as a container, part or ingredient of any other thing or substance by or for the vendor;

(8) "Bodily injury" or "property damage" arising out of the sole negligence of the vendor for its own acts or omissions or those of its employees or anyone else acting on its behalf. However, this exclusion does not apply to:

(a) The exceptions contained within the exclusion in sub-paragraphs **(4)** or **(6)** above; or

(b) Such inspections, adjustments, tests or servicing as the vendor has agreed to make or normally undertakes to make in the usual course of business, in connection with the distribution or sale of the products.

(9) "Bodily injury" or "property damage" arising out of an "occurrence" that took place before you have signed the contract or agreement with the vendor.

(10) To any person or organization included as an insured by another endorsement issued by us and made part of this Coverage Part.

(11) Any insured person or organization, from whom you have acquired such products, or any ingredient, part or container, entering into, accompanying or containing such products.

d. With respect to the insurance afforded to these vendors, the following is added to **SECTION III – LIMITS OF INSURANCE**:

The most we will pay on behalf of the vendor for a covered claim is the lesser of the amount of insurance:

1. Required by the contract or agreement described in Paragraph **a.;** or

2. Available under the applicable Limits of Insurance shown in the Declarations;

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

2. Additional Insured – Employee and Volunteer Worker Broadened Bodily Injury Coverage

The following is added to **SECTION II – WHO IS AN INSURED**, Paragraph **2.a.(1)**:

Your "employees" and "volunteer workers" are insured for "bodily injury" that results from the providing of or failure to provide first aid by an "employee" or "volunteer worker", other than a licensed medical provider.

3. Aggregate Limit Per Location

a. SECTION III – LIMITS OF INSURANCE, the General Aggregate Limit applies separately to each of your "locations" owned by or rented to you.

b. For purpose of this coverage only, the following is added to **SECTION V – DEFINITIONS**:

"Location" means premises involving the same or connecting lots, or premises whose connection is interrupted only by a street, roadway, waterway or right-of-way of a railroad.

4. Aircraft – Nonowned Hired, Chartered or Loaned with Paid Crew

The following is added to **SECTION I – COVERAGES, COVERAGE A BODILY INJURY AND PROPERTY DAMAGE LIABILITY,** Paragraph **2. Exclusions,** subparagraph **g.:**

This exclusion does not apply to:

g. Aircraft, Auto or Watercraft

An aircraft you do not own that is hired, chartered or loaned with a paid crew.

This exception does not apply if the insured has any other valid and collectible insurance for "bodily injury" or "property damage" liability that would also be covered under this provision, whether the other insurance is primary, excess, contingent or on any other basis. In that case, this provision does not provide any insurance.

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5. Alienated Premises

SECTION I – COVERAGES, COVERAGE A – BODILY INJURY AND PROPERTY DAMAGE LIABILITY, Paragraph **2. Exclusions,** subparagraph **j.(2)** is replaced by the following:

(2) Premises you sell, give away or abandon, if the "property damage" arises out of any part of those premises and occurred from hazards that were known by you, or should have reasonably been known by you, at the time the property was transferred or abandoned.

6. Broad Form Named Insured

If you are designated in the Declarations as anything other than an individual, then any organization:

a. Over which you maintained a combined ownership interest of more than 50% on the effective date of this policy;

b. That is not a partnership, joint venture or limited liability company; and

c. That is not excluded by any endorsement to this policy, will qualify as a Named Insured if there is no other similar insurance available to that organization, or that would be available but for exhaustion of its limits.

Any such organization will cease to qualify as a Named Insured as of the date during the policy period when the combined ownership interest of the Named Insureds in the organization equals or falls below 50%.

7. Damage to Your Product

SECTION I – COVERAGES, COVERAGE A BODILY INJURY AND PROPERTY DAMAGE LIABILITY, Paragraph **2. Exclusions,** subparagraph **k. Damage to Your Product** is replaced by the following:

"Property damage" to "your product" if caused by any of the following:

(1) Delay in, or failure to begin, complete or deliver, "your product";

(2) Loss of market;

(3) Any fraudulent, malicious, criminal or intentional act committed by an insured or with an insured's consent or knowledge; or

(4) Wear or tear, or gradual deterioration.

Subject to the Products Completed Operations Aggregate Limit, the Damage to "Your Product" Limit shown in the Schedule above is the most that we will pay because of all "property damage" to "your product" arising out of any one "occurrence".

Coverage provided by this section is subject to the Retention stated in the Declarations, and is subject to all other policy terms and conditions.

8. Extended Property Damage

SECTION I – COVERAGES, COVERAGE A – BODILY INJURY AND PROPERTY DAMAGE LIABILITY, Paragraph **2. Exclusions,** subparagraph **a.** is replaced by the following:

a. Expected or intended Injury

Bodily injury" or "property damage" expected or intended from the standpoint of the insured. This exclusion does not apply to "bodily injury" or "property damage" resulting from the use of reasonable force to protect persons or property.

9. Incidental Malpractice – Employed Nurses, EMT's and Paramedics

SECTION II – WHO IS AN INSURED, Paragraph **2.a.(1)(d)** does not apply to a nurse, emergency medical technician or paramedic employed by you if you are not engaged in the business or occupation of providing medical, paramedical, surgical, dental, x-ray or nursing services.

10. Mobile Equipment Redefined

SECTION V – DEFINITIONS, Definition **12.** "Mobile Equipment", paragraph **f.(1)** does not apply to self-propelled vehicles of less than 1,000 pounds gross vehicle weight.

11. Personal Injury – Broad Form

a. SECTION I – COVERAGES, COVERAGE B – PERSONAL AND ADVERTISING INJURY LIABILITY, Paragraph **2. Exclusions,** subparagraph **e.** is deleted.

b. SECTION V – DEFINITIONS, Definition **14**, "Personal and advertising injury" subparagraph **b.** is replaced by the following:

b. Malicious prosecution or abuse of process.

c. The following is added to **SECTION V – DEFINITIONS,** Definition **14.** "Personal and advertising injury":

"Discrimination" (unless insurance thereof is prohibited by law) that results in injury to the feelings or reputation of a natural person, but only if such "discrimination" is:

(1) Not done intentionally by or at the direction of:

(a) The insured;

(b) Any officer of the corporation, director, stockholder, partner or member of the insured; and

(2) Not directly or indirectly related to an "employee", not to the employment,

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prospective employment or termination of any person or persons by an insured.

d. The following is added to **SECTION V – DEFINITIONS**:

"Discrimination" means the unlawful treatment of individuals based upon race, color, ethnic origin, gender, religion, age, or sexual preference. "Discrimination" does not include the unlawful treatment of individuals based upon developmental, physical, cognitive, mental, sensory or emotional impairment or any combination of these.

e. This coverage does not apply if **COVERAGE B – PERSONAL AND ADVERTISING INJURY LIABILITY** is excluded either by the provisions of the Coverage Form or by endorsement.

12. Product Recall Expense

a. SECTION I – COVERAGES, COVERAGE A – BODILY INJURY AND PROPERTY DAMAGE LIABILITY, Paragraph **2. Exclusions,** subparagraph **n.** is replaced by the following:

n. Recall of Products, Work or Impaired Property

Damages claimed for any loss, cost or expense incurred by you or others for the loss of use, withdrawal, recall, inspection, repair, replacement, adjustment, removal or disposal of:

(1) "Your product";

(2) "Your work"; or

(3) "Impaired property";

if such product, work, or property is withdrawn or recalled from the market or from use by any person or organization because of a known or suspected defect, deficiency, inadequacy or dangerous condition in it, but this exclusion does not apply to "product recall expenses" that you incur for the "covered recall" of "your product".

However, this exception to the exclusion does not apply to "product recall expenses" resulting solely from:

(4) Failure of any products to accomplish their intended purpose;

(5) Breach of warranties of fitness, quality, durability or performance;

(6) Loss of customer approval, or any cost incurred to regain customer approval;

(7) Redistribution or replacement of "your product" which has been recalled by like products or substitutes;

(8) Caprice or whim of the insured;

(9) A condition likely to cause loss of which any insured knew or had reason to know at the inception of this insurance;

(10) Asbestos, including loss, damage or clean up resulting from asbestos or asbestos containing materials;

(11) Recall of "your products" that have no known or suspected defect solely because a known or suspected defect in another of "your products" has been found.

b. The following is added to **SECTION II – WHO IS AN INSURED,** Paragraph **3.**:

COVERAGE A does not apply to "product recall expense" arising out of any withdrawal or recall that occurred before you acquired or formed the organization.

c. For the purposes of this endorsement only, the following is added to **SECTION III – LIMITS OF INSURANCE:**

Product Recall Expense Limits of Insurance

a. The Limits of Insurance shown in the **SUMMARY OF COVERAGES** of this endorsement and rules stated below fix the most we will pay under this Product Recall Expense Coverage regardless of the number of:

(1) Insureds:

(2) "Covered Recalls" initiated: or

(3) Number of "your products" withdrawn.

b. The Product Recall Expense Aggregate Limit is the most we will reimburse you for the sum of all "product recall expenses" incurred for all "covered recalls" initiated during the policy period.

c. The Product Recall Expense Each Occurrence Limit is the most we will pay in connection with any one defect or deficiency.

d. All "product recall expenses" in connection with substantially the same general harmful condition will be deemed to arise out of the same defect or deficiency and considered one "occurrence".

e. Any amount reimbursed for "product recall expenses" in connection with any one "occurrence" will reduce the amount of the

Product Recall Expense Aggregate Limit available for reimbursement of “product recall expenses” in connection with any other defect or deficiency.

f. If the Product Recall Expense Aggregate Limit has been reduced by reimbursement of “product recall expenses” to an amount that is less than the Product Recall Expense Each Occurrence Limit, the remaining Product Recall Expense Aggregate Limit is the most that will be available for reimbursement of “product recall expenses” in connection with any other defect or deficiency.

g. Product Recall Deductible

We will only pay for the amount of "product recall expenses" which are in excess of the $500 Product Recall Deductible. The Product Recall Deductible applies separately to each "covered recall". The limits of insurance will not be reduced by the amount of this deductible.

We may, or will if required by law, pay all or any part of any deductible amount, if applicable. Upon notice of our payment of a deductible amount, you shall promptly reimburse us for the part of the deductible amount we paid.

The Product Recall Expense Limits of Insurance apply separately to each consecutive annual period and to any remaining period of less than 12 months, starting with the beginning of the policy period shown in the Declarations, unless the policy period is extended after issuance for an additional period of less than 12 months. In that case, the additional period will be deemed part of the last preceding period for the purposes of determining the Limits of Insurance.

d. The following is added to **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS,** Paragraph **2. Duties in the Event of Occurrence, Offense, Claim or Suit**:

You must take the following actions in the event of an actual or anticipated "covered recall" that may result in "product recall expense":

(1) Give us prompt notice of any discovery or notification that "your product" must be withdrawn or recalled, including a description of "your product" and the reason for the withdrawal or recall; and

(2) Cease any further release, shipment, consignment or any other method of distribution of like or similar products until it has been determined that all such products are free from defects that could be a cause of loss under this insurance.

e. The following definitions are added to **SECTION V – DEFINITIONS**:

"Covered recall,” means a recall made necessary because you or a government body has determined that a known or suspected defect, deficiency, inadequacy, or dangerous condition in "your product" has resulted or will result in "bodily injury" or "property damage".

"Product recall expense" means:

a. Necessary and reasonable expenses for:

(1) Communications, including radio or television announcements or printed advertisements including stationery, envelopes and postage;

(2) Shipping the recalled products from any purchaser, distributor or user to the place or places designated by you;

(3) Remuneration paid to your regular "employees" for necessary overtime;

(4) Hiring additional persons, other than your regular "employees";

(5) Expenses incurred by "employees" including transportation and accommodations;

(6) Expenses to rent additional warehouse or storage space;

(7) Disposal of “your product”, but only to the extent that specific methods of destruction other than those employed for trash discarding or disposal are required to avoid “bodily injury” or “property damage” as a result of such disposal;

You incur exclusively for the purpose of recalling “your product”; and

b. Your lost profit resulting from such “covered recall”.

f. This Product Recall Expense Coverage does not apply:

(1) If the “products – completed operations hazard” is excluded from coverage under this Coverage Part including any endorsement thereto; or

(2) To “product recall expense” arising out of any of “your products” that are otherwise excluded from coverage under this Coverage Part including endorsements thereto.

13. Property Damage Legal Liability – Broad Form

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a. **SECTION I – COVERAGES, COVERAGE A – BODILY INJURY AND PROPERTY DAMAGE LIABILITY**, the last paragraph (after the exclusions) is replaced by the following:

Exclusions **c.** through **n**. do not apply to damage by fire, lightning, explosion, smoke or leakage from fire protective systems to premises while rented to you or temporarily occupied by you with the permission of the owner. A separate limit of insurance applies to this coverage as described in **SECTION III – LIMITS OF INSURANCE**.

b. **SECTION III – LIMITS OF INSURANCE,** Paragraph **6.** is replaced by the following:

6. Subject to Paragraph **5**. above, The Damage to Premises Rented to You Limit is the most we will pay under **COVERAGE A** for damages because of "property damage" to any one premises from fire, lightning, explosion, smoke and leakage from fire protective systems to premises, while rented to you or temporarily occupied by you with permission of the owner.

The Damage to Premises Rented to You Limit is the higher of:

a. $1,000,000; or

b. The Damage to Premises Rented to You Limit shown in the Declarations.

This limit will apply to all damage caused by the same event, whether such damage results from fire, lightning, explosion, smoke, leakage from fire protective systems or any combination of any of these.

c. **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS,** Paragraph **4**. **Other Insurance,** subparagraph **b. Excess Insurance**, item **(a)(ii)** is replaced by the following:

(ii) That is fire, lightning, explosion, smoke or leakage from fire protective systems insurance for premises rented to you or temporarily occupied by you with permission of the owner; or

d. **SECTION V – DEFINITIONS,** Definition **9.** "Insured contract", Paragraph **a.** is replaced by the following:

a. A contract for a lease of premises. However, that portion of the contract for a lease of premises that indemnifies any person or organization for damage by fire, lightning, explosion, smoke or leakage from fire protective systems to premises while rented to you or temporarily occupied by you with permission of the owner is not an "insured contract".

e. This coverage does not apply if Damage to Premises Rented to You is excluded either by the provisions of the Coverage Part or by endorsement.

ALL OTHER TERMS, CONDITIONS, AND EXCLUSIONS REMAIN UNCHANGED.

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Genesee County
Administration Building
324 S. Saginaw St.
Flint, MI 48502

File #: RES-2026-0732 **Agenda Date:** 7/15/2026 **Agenda #:** 2.

To: Brian K. Flewelling, Public Works Committee Chairperson

From: Michael Dawisha, CIO

RE: Approval of a 5-year agreement between Genesee County and Logicalis in an amount not to exceed $131,000.00 to provide immutable storage; the cost of this agreement will be paid from accounts 1010-228.01-978.005, 1010-228.01-801.007 and 1010-000.00-123.000

BOARD ACTION REQUESTED:

Approval of a 5-year agreement between Genesee County and Logicalis in an amount not to exceed $131,000.00 to provide immutable storage; the cost of this agreement will be paid from accounts 1010-228.01-978.005, 1010-228.01-801.007, account 1010-000.00-123.000.

BACKGROUND:

Immutable storage is a type of data storage that protects saved information from being changed, deleted, or overwritten for a set period of time. It is commonly used as part of a backup and disaster recovery system to maintain secure copies of important data. Once backup data is placed in immutable storage, it remains protected during the required retention period and can be used to restore information if the original files or systems are lost, damaged, or unavailable.

DISCUSSION:

The Information Technology Department recommends awarding the RFP 26-487 for immutable storage to Logicalis at an amount not to exceed $131,000.00. The 5-year pre-payment option saves approximately $21,000 over the 5-year period. This solution will strengthen the County's backup and recovery process by providing protected copies of critical data that cannot be changed, deleted, or overwritten during the required retention period. This is important because backups are a key part of restoring County systems after a ransomware event, accidental deletion, system failure, or other technology disruption. Awarding this agreement will help reduce the risk of extended downtime, protect important County records, and support continued access to essential services. The recommended solution also provides an additional layer of protection for existing backup systems and helps ensure the County is better prepared to recover from unexpected data loss or system outages.

IMPACT ON HUMAN RESOURCES:

There is no impact on Human Resources.

IMPACT ON BUDGET:

This is a budgeted expense not to exceed $131,000.00 using August 1, 2026, as an estimated

starting date for the agreement; to be paid out of the following accounts 1010-228.01-978.005 - $84,875.17; 1010-228.01-801.007 - $1,540.86 and pre-paid account 1010-000.00-123.000 - $44,583.97.

IMPACT ON FACILITIES:

There is no impact on Facilities.

IMPACT ON TECHNOLOGY:

Reviewed by IT.

CONFORMITY TO COUNTY PRIORITIES:

This award also supports Long-Term Financial Stability by reducing the risk of costly emergency recovery efforts, extended downtime, and permanent data loss. The solution helps protect prior technology investments and supports a more reliable and predictable approach to disaster recovery planning.

TO THE HONORABLE CHAIRPERSON AND MEMBERS OF THE GENESEE COUNTY BOARD OF COMMISSIONERS, GENESEE COUNTY, MICHIGAN

LADIES AND GENTLEMEN:

BE IT RESOLVED, by this Board of County Commissioners of Genesee County, Michigan, that the request by the Chief Information Officer to authorize awarding RPF 26-487 for immutable storage to, and entering into a 5-year agreement with, Logicalis, at a total cost for the five years not to exceed $131,000.00 to be paid from accounts 1010-228.01-978.005 ($84,875.17), 1010-228.01-801.007 ($1,540.86), and pre-paid account 1010-000.00-123.000 ($44,583.97), is approved (a copy of the memorandum request and supporting documents being on the file with the official records of the July 15, 2026 meeting of the Public Works Committee of this Board).

CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)
05/14/2026

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Aon Risk Services Central, Inc.
3000 Town Center
Suite 2750 - 27th Floor
Southfield MI 48975 USA

CONTACT NAME:
PHONE (A/C. No. Ext): (866) 283-7122 **FAX (A/C. No.):** (800) 363-0105
E-MAIL ADDRESS:

INSURER(S) AFFORDING COVERAGE		NAIC #
INSURER A:	Great Northern Insurance Co.	20303
INSURER B:	Pacific Indemnity Co	20346
INSURER C:	Federal Insurance Company	20281
INSURER D:	ACE American Insurance Company	22667
INSURER E:		
INSURER F:		

INSURED
Logicalis, Inc.
2600 W Big Beaver Road
Suite 150
Troy MI 48084 USA

COVERAGES **CERTIFICATE NUMBER:** 570119958356 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

Limits shown are as requested

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X **COMMERCIAL GENERAL LIABILITY** CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT X LOC OTHER:			35933780	08/01/2025	08/01/2026	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$1,000,000 $1,000,000 $10,000 $1,000,000 $2,000,000 $2,000,000
A	**AUTOMOBILE LIABILITY** X ANY AUTO OWNED AUTOS ONLY HIRED AUTOS ONLY SCHEDULED AUTOS NON-OWNED AUTOS ONLY X Comp Ded:$1,000 X Coll Ded: $1,000			7358-48-78	08/01/2025	08/01/2026	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$1,000,000
C	**UMBRELLA LIAB** X OCCUR X **EXCESS LIAB** CLAIMS-MADE DED RETENTION			79899639	08/01/2025	08/01/2026	EACH OCCURRENCE AGGREGATE	$4,000,000 $4,000,000
B	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N: N **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		2671736517	08/01/2025	08/01/2026	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE-EA EMPLOYEE E.L. DISEASE-POLICY LIMIT	 $1,000,000 $1,000,000 $1,000,000
D	E&O - Professional Liability - Primary			D02372988 Claims Made SIR applies per policy terms & conditions	08/01/2025	08/01/2026	E&O Aggregate Cyber Aggregate	$3,000,000 $3,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Re: RFP: 26-487 - Immutable Storage. Genesee County is included as Additional Insured in accordance with the policy provisions of the General Liability and Automobile Liability policies. The General Liability and Automobile Liability policies evidenced herein is Primary and Non-Contributory to other insurance available to an Additional Insured, but only in accordance with the policy's provisions. The above-referenced General Liability and Workers Compensation policies have no deductible/SIR. There is $0 deductible for owned vehicles on the above-referenced Automobile Liability policy. For Hired or Borrowed Vehicles Deductibles: Comprehensive $1,000 deductible for each covered auto for loss caused by theft or mischief or vandalism. Collision: $1,000 deductible for each covered auto.

CERTIFICATE HOLDER

Genesee County
Attn: Risk Management
324 S Saginaw Street
Suite 9A
Flint MI 48502 USA

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Aon Risk Services Central, Inc.

Holder Identifier : CDB

Certificate No : 570119958356

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CHUBB®

Liability Insurance

Endorsement

Policy Period	AUGUST 1, 2025 TO AUGUST 1, 2026
Effective Date	AUGUST 1, 2025
Policy Number	3593-37-80 GAB
Insured	LOGICALIS US HOLDINGS, INC.
Name of Company	GREAT NORTHERN INSURANCE COMPANY
Date Issued	AUGUST 4, 2025

This Endorsement applies to the following forms:

GENERAL LIABILITY

Under Who Is An Insured, the following provision is added.

Who Is An Insured

Additional Insured - Scheduled Person Or Organization

Persons or organizations shown in the Schedule are **insureds**; but they are **insureds** only if you are obligated pursuant to a contract or agreement to provide them with such insurance as is afforded by this policy.

However, the person or organization is an **insured** only:

- if and then only to the extent the person or organization is described in the Schedule;
- to the extent such contract or agreement requires the person or organization to be afforded status as an **insured**;
- for activities that did not occur, in whole or in part, before the execution of the contract or agreement; and
- with respect to damages, loss, cost or expense for injury or damage to which this insurance applies.

No person or organization is an **insured** under this provision:

- that is more specifically identified under any other provision of the Who Is An Insured section (regardless of any limitation applicable thereto).
- with respect to any assumption of liability (of another person or organization) by them in a contract or agreement. This limitation does not apply to the liability for damages, loss, cost or expense for injury or damage, to which this insurance applies, that the person or organization would have in the absence of such contract or agreement.

Liability Endorsement
(continued)

Under Conditions, the following provision is added to the condition titled Other Insurance.

Conditions

Other Insurance – Primary, Noncontributory Insurance – Scheduled Person Or Organization

If you are obligated, pursuant to a contract or agreement, to provide the person or organization shown in the Schedule with primary insurance such as is afforded by this policy, then in such case this insurance is primary and we will not seek contribution from insurance available to such person or organization.

Schedule

Persons or organizations that you are obligated, pursuant to a contract or agreement, to provide with such insurance as is afforded by this policy.

All other terms and conditions remain unchanged.

Authorized Representative

Who Is An Insured
(continued)

Volunteers

Persons who are volunteer workers for you are **insureds**; but they are **insureds** only for acts within the scope of their activities for you and at your direction.

Real Estate Managers

Persons (other than your **employees**) or organizations acting as your real estate managers are **insureds**; but they are **insureds** only with respect to their duties as your real estate managers.

Permissive Users Of Mobile Equipment

With respect to **mobile equipment** registered in your name under a motor vehicle registration law:

A. persons driving such equipment on a public road with your permission are **insureds**; and

B. persons or organizations responsible for the conduct of such persons described in subparagraph A. above are **insureds**; but they are **insureds** only with respect to the operation of the equipment and only if no other insurance of any kind is available to them.

However, no person or organization is an **insured** with respect to:

- **bodily injury** to any co-**employee** of the person driving the equipment; or
- **property damage** to any property owned or occupied by or loaned or rented to you, or in your charge or the charge of the employer of any person who is an **insured** under this provision.

Vendors

Persons or organizations who are vendors of **your products** are **insureds**; but they are **insureds** only with respect to their liability for damages for **bodily injury** or **property damage** resulting from the distribution or sale of **your products** in the regular course of their business and only if this insurance applies to the **products-completed operations hazard**.

However, no such person or organization is an **insured** with respect to any:

- assumption of liability by them in a contract or agreement. This limitation does not apply to the liability for damages for **bodily injury** or **property damage** that such vendor would have in the absence of such contract or agreement;
- representation or warranty unauthorized by you;
- physical or chemical change in **your products** made intentionally by the vendor;
- repackaging, unless unpacked solely for the purpose of inspection, demonstration or testing, or the substitution of parts under instruction from the manufacturer and then repacked in the original container;
- failure to make such inspections, adjustments, tests or servicing as the vendor has agreed to make or normally undertakes to make in the usual course of business in connection with the distribution or sale of **your products**;
- demonstration, installation, servicing or repair operations, except such operations performed at the vendor's premises in connection with the sale of **your products**; or
- of **your products** which, after distribution or sale by you, have been labeled or relabeled or used as a container, ingredient or part of any other thing or substance by or for the vendor.

Vendors (continued)

Further, no person or organization from whom you have acquired **your products**, or any container, ingredient or part entering into, accompanying or containing **your products**, is an **insured** under this provision.

Lessors Of Equipment

Persons or organizations from whom you lease equipment are **insureds**; but they are **insureds** only with respect to the maintenance or use by you of such equipment and only if you are contractually obligated to provide them with such insurance as is afforded by this contract.

However, no such person or organization is an **insured** with respect to any:

- damages arising out of their sole negligence; or
- **occurrence** that occurs, or offense that is committed, after the equipment lease ends.

Lessors Of Premises

Persons or organizations from whom you lease premises are **insureds**; but they are **insureds** only with respect to the ownership, maintenance or use of that particular part of such premises leased to you and only if you are contractually obligated to provide them with such insurance as is afforded by this contract.

However, no such person or organization is an **insured** with respect to any:

- damages arising out of their sole negligence;
- **occurrence** that occurs, or offense that is committed, after you cease to be a tenant in the premises; or
- structural alteration, new construction or demolition operations performed by or on behalf of them.

Subsidiary Or Newly Acquired Or Formed Organizations

If there is no other insurance available, the following organizations will qualify as named **insureds**:

- a subsidiary organization of the first named **insured** shown in the Declarations of which, at the beginning of the policy period and at the time of loss, such first named **insured** controls, either directly or indirectly, more than fifty (50) percent of the interests entitled to vote generally in the election of the governing body of such organization; or
- a subsidiary organization of the first named **insured** shown in the Declarations that such first named **insured** acquires or forms during the policy period, if at the time of loss such first named **insured** controls, either directly or indirectly, more than fifty (50) percent of the interests entitled to vote generally in the election of the governing body of such organization.

Limitations On Who Is An Insured

A. Except to the extent provided under the Subsidiary Or Newly Acquired Or Formed Organizations provision above, no person or organization is an **insured** with respect to the conduct of any person or organization that is not shown as a named **insured** in the Declarations.

B. No person or organization is an **insured** with respect to the:

1. ownership, maintenance or use of any assets; or
2. conduct of any person or organization whose assets, business or organization;

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

COMMERCIAL AUTOMOBILE BROAD FORM ENDORSEMENT

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM

To the extent that the provisions of this endorsement provide broader benefits to the "insured" than other provisions of the Business Auto Coverage Form, the provisions of this endorsement apply.

1. EXTENDED CANCELLATION CONDITION

Paragraph A.2.b. – CANCELLATION of the COMMON POLICY CONDITIONS form IL 00 17 is deleted and replaced with the following:

b. 60 days before the effective date of cancellation if we cancel for any other reason.

2. BROAD FORM INSURED

A. Subsidiaries and Newly Acquired or Formed Organizations As Insureds

The Named Insured shown in the Declarations is amended to include:

(1) Any legally incorporated subsidiary in which you own more than 50% of the voting stock on the effective date of the Coverage Form. However, the Named Insured does not include any subsidiary that is an "insured" under any other automobile policy or would be an "insured" under such a policy but for its termination or the exhaustion of its Limit of Insurance.

(2) Any organization that is acquired or formed by you and over which you maintain majority ownership. However, the Named Insured does not include any newly formed or acquired organization:

(a) That is a partnership, joint venture or limited liability company;

(b) That is an "insured" under any other automobile policy;

(c) That has exhausted its Limit of Insurance under any other policy; or

(d) 180 days or more after its acquisition or formation by you, unless you have given us notice of the acquisition or formation.

Coverage does not apply to "bodily injury" or "property damage" that results from an "accident" that occurred before you formed or acquired the organization.

B. Employees as Insureds

Paragraph A.1. – WHO IS AN INSURED – of SECTION II – COVERED AUTOS LIABILITY COVERAGE is amended to add the following:

d. Any "employee" of yours while using a covered "auto" you don't own, hire or borrow in your business or your personal affairs.

C. Lessors as Insureds

Paragraph A.1. – WHO IS AN INSURED – of SECTION II – COVERED AUTOS LIABILITY COVERAGE is amended to add the following:

e. The lessor of a covered "auto" while the "auto" is leased to you under a written agreement if:

(1) The agreement requires you to provide direct primary insurance for the lessor; and

(2) The "auto" is leased without a driver.

Such leased "auto" will be considered a covered "auto" you own and not a covered "auto" you hire.

D. Persons And Organizations As Insureds Under A Written Insured Contract

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Paragraph A.1 – WHO IS AN INSURED – of SECTION II – COVERED AUTOS LIABILITY COVERAGE is amended to add the following:

f. Any person or organization with respect to the operation, maintenance or use of a covered "auto", provided that you and such person or organization have agreed under an express provision in a written "insured contract", written agreement or a written permit issued to you by a governmental or public authority to add such person or organization to this policy as an "insured".

However, such person or organization is an "insured" only:

(1) with respect to the operation, maintenance or use of a covered "auto"; and

(2) for "bodily injury" or "property damage" caused by an "accident" which takes place after:

(a) You executed the "insured contract" or written agreement; or

(b) The permit has been issued to you.

If you have agreed in a written contract or written agreement that this insurance is primary and non-contributory with the additional insured's own insurance, this insurance is primary and we will not seek contribution from that other insurance.

This provision does not apply to other insurance to which the additional insured has also been added as an additional insured.

3. SUPPLEMENTARY PAYMENTS – INCREASED LIMITS

Under SECTION II – COVERED AUTOS LIABILITY COVERAGE, subsection A. Coverage, paragraph 2. Coverage Extensions, subparagraph a. Supplementary Payments, subparagraphs (2) and (4) are deleted and replaced by the following:

(2) Up to $5,000 for cost of bail bonds (including bonds for related traffic law violations) required because of an "accident" we cover. We do not have to furnish these bonds.

(4) All reasonable expenses incurred by the "insured" at our request, including actual loss of earnings, up to $1,000 a day because of time off from work.

4. AMENDED FELLOW EMPLOYEE EXCLUSION

EXCLUSION 5. – FELLOW EMPLOYEE – of SECTION II – COVERED AUTOS LIABILITY COVERAGE is amended to add the following:

However, this exclusion only applies if the fellow "employee" is entitled to benefits under any of the following: workers' compensation, unemployment compensation or disability benefits law, or any similar law.

5. PHYSICAL DAMAGE – ADDITIONAL TEMPORARY TRANSPORTATION EXPENSE COVERAGE

Paragraph A.4.a. – TRANSPORTATION EXPENSES – of SECTION III – PHYSICAL DAMAGE COVERAGE is amended to provide a limit of $60 per day, subject to a maximum limit of $1,800.

6. AUTO LOAN/LEASE GAP COVERAGE

Paragraph A.4. – COVERAGE EXTENSIONS – of SECTION III – PHYSICAL DAMAGE COVERAGE is amended to add the following:

c. **Unpaid Loan or Lease Amounts**

In the event of a total "loss" to a covered "auto", we will pay any unpaid amount due on the loan or lease for a covered "auto" minus:

1. The amount paid under the Physical Damage Coverage Section of the policy; and

2. Any:

a. Overdue loan/lease payments at the time of the "loss";

b. Financial penalties imposed under a lease for excessive use, abnormal wear and tear or high mileage;

c. Security deposits not returned by the lessor;

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d. Costs for extended warranties, Credit Life Insurance, Health, Accident or Disability Insurance Purchased with the loan or lease: and

e. Carry-over balances from previous loans or leases.

We will pay for any unpaid amount due on the loan or lease if caused by:

(1) Other than collision only if the Declarations indicate that Comprehensive Coverage is provided for any covered "auto";

(2) Specified Causes of Loss only if the Declarations indicate that Specified Causes of Loss Coverage is provided for any covered "auto"; or

(3) Collision only if the Declarations indicate that Collision Coverage is provided for any covered "auto".

The Auto Loan/Lease Gap Coverage insurance provided by this endorsement is excess over any other collectible insurance including but not limited to any coverage provided by or purchased from the lessor.

7. VEHICLE VINYL WRAP COVERAGE

Paragraph A.4. – COVERAGE EXTENSIONS – of SECTION III – PHYSICAL DAMAGE COVERAGE is amended to add the following:

d. **Vehicle Vinyl Wrap Coverage**

In the event of a total "loss" to an "auto" for which Comprehensive, Specified Causes of Loss, or Collision coverages are provided under this Coverage Form, then such Physical Damage Coverages are amended to add the following:

In addition to the actual cash value of the "auto", we will pay up to $1,000 for vinyl vehicle wraps which are displayed on the covered "auto" at the time of loss. Regardless of the number of "autos" deemed a total "loss", the most we will pay under this Coverage for any one "loss" is $2,000.

For purposes of this coverage, signs or other graphics painted or magnetically affixed to the vehicle are not considered vehicle wraps.

8. PERSONAL PROPERTY COVERAGE

Paragraph A.4. – COVERAGE EXTENSIONS – of SECTION III – PHYSICAL DAMAGE COVERAGE is amended to add the following:

e. **Personal Property Coverage**

We will pay up to $1,000 for "loss" to wearing apparel and other personal effects which are:

(1) Owned by an "insured"; and

(2) In or on your covered "auto".

This Coverage applies only:

(1) In the event of total theft of your covered "auto;" and

(2) If such wearing apparel or other personal effects cannot be recovered.

This Coverage is not subject to a deductible.

The limit shown above applies in addition to any other insurance for personal property provided elsewhere in this policy.

This coverage only applies to "autos" for which Comprehensive or Specified Causes of Loss coverages are provided under this Coverage Form.

9. REPLACEMENT WITH A HYBRID OR ALTERNATIVE FUEL SOURCE AUTO

Paragraph A.4. – COVERAGE EXTENSIONS – of SECTION III – PHYSICAL DAMAGE COVERAGE is amended to add the following:

f. **Replacement Of A Private Passenger Auto With A Hybrid Or Alternative Fuel Source Auto**

In the event of a total "loss" to an "auto" for which Comprehensive, Specified Causes of Loss, or Collision coverages are provided under this Coverage Form, we will pay the actual cash value, plus an additional 10%

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(up to a maximum of $2,500), if the replacement vehicle is a hybrid vehicle or alternative fuel source vehicle.

10. RENTAL AGENCY EXPENSE

Paragraph A.4. – COVERAGE EXTENSIONS – of SECTION III – PHYSICAL DAMAGE COVERAGE is amended to add the following:

g. Rental Expense

We will pay the following expenses that you or any of your "employees" are legally obligated to pay because of a written contract or agreement entered into for use of a rental vehicle in the conduct of your business:

MAXIMUM WE WILL PAY FOR ANY ONE CONTRACT OR AGREEMENT:

(1) $2,500 for loss of income incurred by the rental agency during the period of time that vehicle is out of use because of actual damage to, or "loss" of, that vehicle, including income lost due to absence of that vehicle for use as a replacement;

(2) $2,500 for decrease in trade-in value of the rental vehicle because of actual damage to that vehicle arising out of a covered "loss"; and

(3) $2,500 for administrative expenses incurred by the rental agency, as stated in the contract or agreement.

(4) $7,500.00 maximum total amount for paragraphs a., b. and c. combined.

11. EXTRA EXPENSE – BROADENED COVERAGE

Paragraph A.4. – COVERAGE EXTENSIONS – of SECTION III – PHYSICAL DAMAGE COVERAGE is amended to add the following:

h. Recovery Expense

We will pay for the expense of returning a stolen covered "auto" to you.

12. AIRBAG COVERAGE

Paragraph B.3.a. – EXCLUSIONS – of SECTION III – PHYSICAL DAMAGE COVERAGE does not apply to the accidental or unintended discharge of an airbag. Coverage is excess over any other collectible insurance or warranty specifically designed to provide this coverage.

13. SOUND RECEIVING AND TRANSMITTING EQUIPMENT – BROADENED COVERAGE

Paragraph a. under the statement "Exclusions 4.c. and 4.d. do not apply" under EXCLUSIONS – of SECTION III – PHYSICAL DAMAGE COVERAGE is deleted and replaced with the following:

a. Equipment designed solely for receiving or transmitting sound and accessories used with such equipment, provided such equipment is permanently installed in the covered "auto" at the time of the "loss" or such equipment is removable from the housing unit which is permanently installed in the covered "auto" at the time of the "loss", and such equipment is designed to be operated solely by use of the power from the "auto's" electrical system, in or upon the covered "auto"; or

14. GLASS REPAIR – WAIVER OF DEDUCTIBLE

Under Paragraph D. – DEDUCTIBLE – of SECTION III – PHYSICAL DAMAGE COVERAGE the following is added:

No deductible applies to glass damage if the glass is repaired rather than replaced.

15. TWO OR MORE DEDUCTIBLES

Paragraph D. – DEDUCTIBLE – of SECTION III – PHYSICAL DAMAGE COVERAGE is amended to add the following:

If this Coverage Form and any other Coverage Form or policy issued to you by us that is not an automobile policy or Coverage Form applies to the same "accident", the following applies:

(1) If the deductible under this Business Auto Coverage Form is the smaller (or smallest) deductible, it will be waived; or

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(2) If the deductible under this Business Auto Coverage Form is not the smaller (or smallest) deductible, it will be reduced by the amount of the smaller (or smallest) deductible.

16. AMENDED DUTIES IN THE EVENT OF ACCIDENT, CLAIM, SUIT OR LOSS

Paragraph A.2.a. – DUTIES IN THE EVENT OF AN ACCIDENT, CLAIM, SUIT OR LOSS of SECTION IV – BUSINESS AUTO CONDITIONS is deleted and replaced with the following:

a. In the event of "accident", claim, "suit" or "loss", you must promptly notify us when the "accident" is known to:

1. You or your authorized representative, if you are an individual;
2. A partner, or any authorized representative; if you are a partnership;
3. A member, if you are a limited liability company; or
4. An executive officer, insurance manager, or authorized representative, if you are an organization other than a partnership or limited liability company.

Knowledge of an "accident", claim, "suit" or "loss" by other persons does not imply that the persons listed above have such knowledge.

Notice to us should include:

1. How, when and where the "accident" or "loss" occurred;
2. The insured's name and address; and
3. To the extent possible, the names and addresses of any injured persons or witnesses.

17. WAIVER OF SUBROGATION

Paragraph A.5. – TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US of SECTION IV – BUSINESS AUTO CONDITIONS is deleted and replaced with the following:

5. We will waive the right of recovery we would otherwise have against another person or organization for "loss" to which this insurance applies, provided the "insured" has waived their rights of recovery against such person or organization in a written contract or agreement that is executed before such "loss".

To the extent that the "insured's" rights to recover damages for all or part of any payment made under this insurance has not been waived, those rights are transferred to us. That person or organization must do everything necessary to secure our rights and must do nothing after "accident" or "loss" to impair them. At our request, the insured will bring suit or transfer those rights to us and help us enforce them.

18. UNINTENTIONAL FAILURE TO DISCLOSE HAZARDS

Paragraph B.2. – CONCEALMENT, MISREPRESENTATION or FRAUD of SECTION IV – BUSINESS AUTO CONDITIONS – is deleted and replaced with the following:

If you unintentionally fail to disclose any hazards existing at the inception date of your policy, we will not void coverage under this Coverage Form because of such failure.

19. AUTOS RENTED BY EMPLOYEES

Paragraph 5.b. – OTHER INSURANCE of SECTION IV – BUSINESS AUTO CONDITIONS – is deleted and replaced with the following:

e. Any "auto" hired or rented by your "employee" on your behalf and at your direction will be considered an "auto" you hire. If an "employee's" personal insurance also applies on an excess basis to a covered "auto" hired or rented by your "employee" on your behalf and at your direction, this insurance will be primary to the "employee's" personal insurance.

20. HIRED AUTO – COVERAGE TERRITORY

Paragraph B.7.e. (1) – POLICY PERIOD, COVERAGE TERRITORY of SECTION IV – BUSINESS AUTO CONDITIONS is deleted and replaced with the following:

(1) A covered "auto" of the private passenger type is leased, hired, rented or borrowed without a driver for a period of 60 days or less; and

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21. RESULTANT MENTAL ANGUISH COVERAGE

Paragraph C. of – SECTION V – DEFINITIONS is deleted and replaced by the following:

"Bodily injury" means bodily injury, sickness or disease sustained by any person, including mental anguish or death resulting from any of these.

All other terms and conditions remain unchanged.

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Aquis House
49-51 Blagrave Street
Reading
Berkshire
RG1 1PL
t +44 (0) 118 929 5024

05 August 2025

Dear Sirs

Client Information Letter - Logicalis Group of Companies and all subsidiaries

We, Aon UK Limited, are insurance brokers acting on your behalf only in accordance with our terms of business agreement. We have agreed to provide this letter to confirm that we have placed contract(s) of insurance on behalf of You, our Client, as described below ("Insurance(s)"). The Insurance(s) is/are in force as at the date of this letter.

This letter is not to be understood as providing advice of any kind. You are responsible for any assumptions you may make regarding the cover afforded by the Insurance(s), which are subject to the terms, conditions and exclusions of each policy.

The issue of this letter does not make the person or organisation to whom/which it is sent an additional insured or loss payee, nor does it modify the Insurance(s) in any way.

We are not acting as the agent of insurer(s) in providing this letter.

We accept no obligation to update this letter should any of the Insurance(s) be cancelled, assigned, not renewed or changed in such a manner as to affect the accuracy of this document.

This letter is provided on the strict understanding that we do not owe or assume any duty, liability or responsibility whether in contract, tort or otherwise to anyone other than our Client. To the fullest extent permitted by law, we shall not be liable for any loss arising directly or indirectly from any use of this document by anyone other than our Client.

This letter will be governed by and construed in accordance with the laws of England and Wales and the parties shall submit to the exclusive jurisdiction of the courts of England and Wales to settle any dispute or claim that arises out of or in connection with this letter or its subject matter or formation (including non-contractual disputes or claims).

If you do not accept the basis on which this letter is provided, including the exclusions of liability set out above, please return the letter to us immediately.

Yours faithfully,

Claire Timmins
Client Service Specialist
For and on behalf of Aon UK Limited

This letter is provided for information only and is not to be understood as providing advice to you or anyone else on any decision that is under consideration. Under no circumstances shall any person or entity to whom/which this letter is disclosed be entitled to rely on its contents, or become insured, nor does such disclosure modify the Insurances in any way. The reader of this letter is responsible for any assumptions they make as to the coverage afforded by the Insurances, which may be subject to important conditions and/or exclusions.

Aon UK Limited
Registered office | The Aon Centre | The Leadenhall Building | 122 Leadenhall Street | London | EC3V 4AN
Registered in England & Wales No. 210725 | VAT Registration No. 480 8401 48

Aon UK Limited is authorised and regulated by the Financial Conduct Authority

The Insurances

Professional Indemnity Including Third Party Cyber Liability

Primary Insurers	Chubb European Group SE
Primary Policy Number	UKINTC88210
Primary Indemnity Limit	USD 10,000,000 in the aggregate costs inclusive
Period of Insurance	1 August 2025 to 31 July 2026

Excess Professional Indemnity Including Third Party Cyber Liability

Excess Layer 1 Insurer	AIG UK Limited
Excess Layer 1 Policy Number	FSCEO2500600
Excess Layer 1 Indemnity Limit	USD 10,000,000 in the aggregate in excess of Primary limit of USD 10,000,000
Excess Layer 2 Insurer	AXA XL
Excess Layer 2 Policy Number	FSCEO2500640
Excess Layer 2 Indemnity Limit	USD 5,000,000 in the aggregate in excess of the limit of USD 20,000,000
Period of Insurance	1 August 2025 to 31 July 2026

This letter is provided for information only and is not to be understood as providing advice to you or anyone else on any decision that is under consideration. Under no circumstances shall any person or entity to whom/which this letter is disclosed be entitled to rely on its contents, or become insured, nor does such disclosure modify the Insurances in any way. The reader of this letter is responsible for any assumptions they make as to the coverage afforded by the Insurances, which may be subject to important conditions and/or exclusions.

Aon UK Limited

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Beg	End	Total Days	10/1/2026 PPD Days	Invoice Amt	FY27-Prepaid	FY26
8/1/2026	7/31/2031	1826	1765	$ 46,124.83	$ 44,583.97	$ 1,540.86

FY26	8/1/2026	9/30/2026	61	$	1,540.86
FY27	10/1/2026	9/30/2027	365	$	9,219.91
FY28	10/1/2027	9/30/2028	366	$	9,245.17
FY29	10/1/2028	9/30/2029	365	$	9,219.91
FY30	10/1/2029	9/30/2030	365	$	9,219.91
FY31	10/1/2030	7/31/2031	304	$	7,679.05
FY32	10/1/2031	9/30/2032		$	-
FY33	10/1/2032	9/30/2033		$	-
FY34	10/1/2033	9/30/2034		$	-
FY35	10/1/2034	12/23/2034		$	-
			1826	$	46,124.83
FY27	10/1/2026	9/30/2027	365	$	-
FY28	10/1/2027	9/30/2028	366	$	-
FY29	10/1/2028	9/30/2029	365	$	-
FY30	10/1/2029	9/30/2030	365	$	-
FY31	10/1/2030	9/30/2031	365	$	-
FY32	10/1/2031	9/30/2032	366	$	-
FY33	10/1/2032	9/30/2033	365	$	-
FY34	10/1/2033	6/25/2034	268	$	-
			3652	$	-
FY34	10/1/2033	6/25/2034	268	$	-
			3652	$	-

LOGICALIS
Architects of Change

Proposal for Genesee Co: Immutable Storage Request for Proposal #26-487

Genesee County
324 S. Saginaw St. Suite 9A
Flint, MI 48502

Derrick Jones
(810) 257-3030

May 14, 2026

Proposal_GENES6137399

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Cover Letter

2600 West Big Beaver Road
Suite 150
Troy, MI 48084

T: 248.957.5600
us.logicalis.com

May 14, 2026

Derrick Jones, Purchasing Administrator
Genesee County
324 S. Saginaw St.
Suite 9A
Flint, MI 48502

Dear Derrick,

Thank you for the opportunity to earn Genesee County's business in providing an immutable storage solution that is trusted by other Government entities.

In case we are new to you....Logicalis is the 2nd largest IT company in Michigan. If your team attends the Mi-GMIS Conference, you have seen me there – sponsoring the event for more than 10 years. Our GovEd practice provides specialization in Local and State Government. We understand the environment inside the public sector, its unique challenges, opportunities, fiscal responsibility and initiatives.

We are top tier solution providers and engineering support for our customers for some of the world's leading technology companies: Cisco, HPE, IBM, Dell, NetApp, Microsoft, Veeam, VMware & Palo Alto.

Genesee County's goal of strengthening data protection and ransomware resilience aligns directly with the solution we are proposing. Logicalis recommends the ExaGrid EX135, a purpose-built immutable backup appliance designed specifically for Veeam environments.
This solution meets your requirement for 216 TB+ (with 270TB included) of usable immutable storage while delivering strong protection against deletion, modification, or encryption of backup data. Its architecture is designed for both high-speed backup and rapid recovery, ensuring performance over your existing 10Gb infrastructure without compromising security.

The platform integrates seamlessly with your current Veeam environment and supports a scalable, modular approach to growth without requiring disruptive upgrades. It also reflects a more practical approach to immutability compared to traditional object-based solutions, providing layered protection against ransomware while remaining simple to manage and recover from real-world scenarios. Installation is straightforward, and a dedicated Exagrid Level 2 Engineer will assist you throughout the process. Our customers LOVE Exagrid's support – you will too!

We recognize the importance of cost certainty and procurement timelines. Unlike many competing solutions, ExaGrid systems are in stock and ready to ship. This allows us hold pricing firm for the full 120-day validity period required in your RFP. In an environment where delays and pricing fluctuations are common, this provides Genesee County with a level of predictability and assurance that is difficult to match. Please see the ExaGrid Price Protection Guarantee in the Appendices.

I look forward to meeting you and speaking with you regarding this proposal.

Sincerely,

Lisa Nowak, Account Executive, Logicalis, 517-336-1052, lisa.nowak@us.logicalis.com, Troy, MI

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Section 1: Information Required from Proposers

All proposals are firm, binding, and irrevocable for one hundred-twenty (120) days after the opening of the proposal. No proposal will be considered that fails to contain fully completed documents or any other documentation required by the instructions and materials herein. The successful proposer will be required to submit:

Signed Signature Page (Page 15)
See attached in appendices.

Cost Proposal Form (Page 16)
See attached in appendices.

Signed Genesee County Insurance Checklist (Page 18)
See attached in appendices.

Reference Form: (Page 19) Prior experience with similar requests is essential for any firm to provide the services required in this solicitation. This section shall consist of a minimum of three (3) references with project descriptions. The contacts for each reference must be knowledgeable of the offeror's performance on the referenced project and the scope of services performed by the bidder.
See attached Reference Form Completed. Please note – these customers also used the included Implementation Service from Exagrid. Logicalis sold the Exagrid systems to them, like we are proposing for you, but Exagrid handles all the professional services. All of these customers performed their own rack/stack services.

Statement of Exceptions: Furnish a statement on company letterhead giving a complete description of all exceptions to the terms, conditions, and specifications set forth in the Standard Proposed Contract and this RFP.
Please see attached under our Terms and Conditions.

Executive Summary:

Provide an explanation as to why the vendor believes itself to be the best qualified to perform the work along with a commitment to perform the work as requested in this RFP.
Genesee County has clearly defined a need to strengthen data protection, improve ransomware resilience, and transition to a fully immutable backup architecture that integrates seamlessly with its existing Veeam environment. Logicalis has carefully reviewed these requirements and is proposing a solution built around the ExaGrid EX135, a purpose-built tiered backup storage platform designed specifically to address the performance, security, and scalability challenges outlined in this RFP.

ExaGrid is a well-established, mid-market-to-enterprise backup storage vendor with over two decades of focus specifically on backup storage.

Logicalis is uniquely qualified to recommend and deliver an ExaGrid solution based on our extensive experience designing, implementing, and supporting enterprise data protection and backup environments across public sector organizations. As a leading global IT solutions and managed services provider, Logicalis maintains deep expertise in backup technologies, including Veeam and other leading platforms, and has a proven track record of aligning storage architectures to meet stringent requirements for immutability, ransomware protection, and long-term scalability.
Our team has evaluated a wide range of backup storage solutions and consistently recommends ExaGrid where organizations require a purpose-built platform that delivers both performance and security without introducing complexity or long-term cost uncertainty. This recommendation is grounded in real-world deployment experience, not just theoretical analysis, and is supported by our understanding of how ExaGrid integrates within existing environments to improve backup reliability, recovery times, and operational efficiency. Through our partnership ecosystem and hands-on implementation experience, Logicalis is able to ensure that the proposed ExaGrid solution is properly

sized, configured, and supported to meet Genesee County's specific requirements today while providing a scalable path forward for future growth.

The proposed solution directly aligns with the County's technical and operational objectives. ExaGrid provides a unique architecture that separates a high-performance landing zone for backups and restores from a non-network-facing repository tier that securely stores long-term retention data. **This approach ensures that the most recent backups are immediately available in their native format for fast recovery**, while long-term data is stored efficiently as immutable objects protected from deletion or modification.

From a security perspective, the solution is designed specifically to address modern ransomware threats. **ExaGrid's Retention Time-Lock and delayed deletion capabilities ensure that backup data cannot be removed or altered during an attack, while the non-network-facing repository tier creates a true air-gapped layer of protection. Even in scenarios where backup data is encrypted or deletion attempts are made by a threat actor, previously stored backup sets remain intact and recoverable.** This provides Genesee County with a highly practical and proven approach to immutability that goes beyond traditional object storage methods.

The solution is also tightly integrated with Veeam, which is a critical requirement for the County. **ExaGrid includes a native Veeam Accelerated Data Mover and supports Scale-Out Backup Repository (SOBR), enabling automated job management, load balancing, and efficient use of storage resources across the platform.** This integration ensures that existing backup workflows can remain in place while improving performance and simplifying administration.

Performance and operational efficiency are key differentiators of this approach. By avoiding inline deduplication during the backup process and performing optimization in parallel, **ExaGrid delivers faster backup windows and significantly improved restore times.** This is particularly important in the event of a ransomware incident, where rapid recovery directly impacts business continuity. The architecture also eliminates the need for rehydration during restores, allowing systems to be brought back online quickly and with minimal disruption.

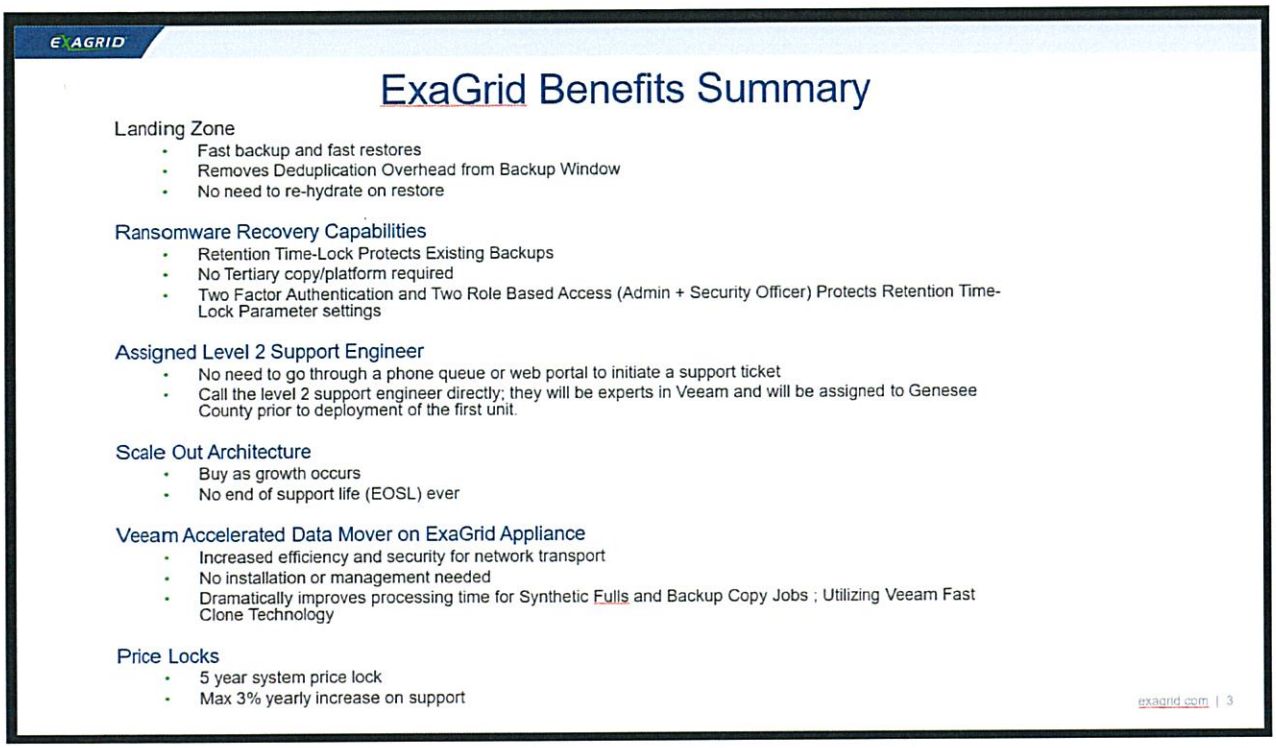
In addition, the proposed EX135 configuration has been sized specifically to meet and exceed Genesee County's environment outlined in the RFP and addendum, including approximately 100 TB full backup size, four weeks of daily retention, and a 10% annual data growth rate over a five-year period. Toatl usable space on the EX135 is 270TB. The platform's scale-out design allows the County to expand capacity incrementally as needed, without costly upgrades or performance degradation over time.

Should the growth accelerate unexpectedly, you can scale easily. All Exagrid systems support up to 32 appliances in a single system and scales to petabyte-level capacity, providing long-term flexibility and predictable growth aligned to organizational needs. You can mix and match the appliances with the EX10, being the smallest at 10TB.
Additionally, ExaGrid offers a **5-year price protection guarantee**, ensuring that expansion nodes can be purchased at the same price as the original system and limiting maintenance increases to no more than 3% annually.

From an installation and ongoing operational standpoint, ExaGrid provides a highly differentiated support model that minimizes administrative burden and ensures rapid resolution of any issues. Each customer is assigned a senior-level2 support engineer who is familiar with their environment, supported by a global team and proactive monitoring capabilities. The dedicated Level2 Engineer will walk you through your implementation and ensure your system is properly configured. Our customers who implement Exagrid for the first time are amazed by the level of support and they feel confident in supporting their system. This approach reduces downtime, simplifies management, and ensures the County has consistent access to knowledgeable resources when needed.

Detailed technical, security, support, and pricing information is provided in the accompanying ExaGrid documentation, including the product description, Veeam integration overview, support and maintenance guide, price protection policy, and competitive comparison materials.

In summary, the proposed ExaGrid solution fully aligns with Genesee County's requirements for secure, immutable storage, scalability, performance, and cost control. It provides a secure and future-ready platform that protects critical data, ensures rapid recovery, and supports the County's operational and financial objectives both today and in the years ahead.Logicalis and Exagrid are committed to delivering this solution with the stated outcomes required.



Section 2: Company Background and Experience

Company Background and Experience: Provide an overview of vendor's organization, history, and core competencies.

Logicalis is a locally US headquartered (Troy, Mi), global IT solutions and managed services provider focused on enabling digital transformation for enterprise and public sector organizations. As part of Datatec Limited, a multinational ICT solutions group, Logicalis operates as a key division delivering integration and managed services on a global scale. The organization combines global reach with localized delivery, supporting clients across North America, Latin America, EMEA, and Asia-Pacific, with the ability to extend services into more than 100 countries through delivery partners. With over 7,000 employees worldwide and more than 10,000 customers, Logicalis brings deep technical expertise and industry experience to organizations across government, education, healthcare, and commercial sectors.

Logicalis is structured as a global technology services organization with regional operating entities aligned to major geographic markets. It leverages a services-led approach to align IT strategy with business outcomes, supported by global Centers of Excellence and a strong ecosystem of strategic technology partners including Cisco, Microsoft, HPE, IBM, Dell, NetApp, ExaGrid, Veeam, VMware, and ServiceNow. This model enables Logicalis to deliver consistent, scalable, and high-quality services while maintaining localized expertise and responsiveness. The company provides end-to-end support across the full technology lifecycle, including advisory, design, implementation, optimization, and ongoing managed services, allowing customers to modernize their environments while maintaining operational continuity.

Logicalis was founded in 1997 in the United Kingdom following the acquisition of Logical Networks plc by Datatec. The company expanded rapidly through strategic acquisitions across Europe, North America, Latin America, and Asia-Pacific, building a broad portfolio of IT integration and services capabilities. In 2001, Logicalis Group was formally established as the holding company for global operations. Over the past two decades, Logicalis has evolved from a value-added reseller focused on networking and infrastructure into a full-scale managed services provider delivering advanced digital transformation solutions. Through continued investment and more than 40 acquisitions, the company has expanded both its geographic footprint and technical capabilities, establishing itself as a trusted partner for organizations navigating complex IT challenges.

Logicalis' core competencies center on delivering end-to-end digital transformation services across modern IT environments. The company provides solutions across key technology domains including hybrid cloud and data center infrastructure, enterprise networking and connectivity, cybersecurity, and modern workplace and collaboration. These capabilities are supported by a comprehensive services portfolio that includes managed services, professional and consulting services, and lifecycle-based delivery models designed to ensure continuous improvement and alignment with business objectives. Logicalis' managed services provide 24x7 monitoring, management, and optimization across cloud, network, and security environments, while its consulting and professional services focus on strategy, architecture, and implementation.

In addition to its technical expertise, Logicalis differentiates itself through its lifecycle services

approach, which aligns, transforms, and scales customer environments over time. The organization focuses on helping clients optimize IT operations, reduce risk, improve security posture, and enable scalable, cloud-enabled architectures that support long-term growth. Logicalis also maintains deep industry expertise and long-standing relationships with leading technology vendors, allowing it to design and deliver integrated, best-of-breed solutions tailored to specific customer requirements.

Overall, Logicalis is a globally recognized managed services provider with more than 25 years of experience helping organizations modernize and secure their IT environments. Backed by the scale and resources of Datatec and supported by a strong partner ecosystem, Logicalis delivers comprehensive technology solutions and services that drive operational efficiency, enhance security, and accelerate digital innovation.

Please take a moment to review our company overview on the following pages.

EXAGRID

About ExaGrid

Company Highlights

- 100% focused on backup storage
- Shipping for over 18 years
- Largest independent vendor in the space
- Only Tiered Backup Storage approach
- High Net Promoter Score of +81
- Winner of the most industry awards
- Double-digit growth
- Cash positive every quarter
- No debt of any kind

Large customer base

- Over 5,000 customers - worldwide
- Appliances certified in over 132 countries
- Installed in 80+ countries
- In-theater customer support worldwide

EXAGRID

Brand Name Customers

Manufacturing Transportation / Retail

AIRBUS

Burlington

NORTHROP GRUMMAN

mobility

new balance

novolex

TEMPUR+SEALY

Healthcare

ABIOMED

DELTA DENTAL

HOLOGIC

KAISER PERMANENTE

Pfizer

University Hospitals Bristol

Banking Insurance / Law

BARCLAYS

BNP PARIBAS

Maybank

Pareto Securities

MINTZ LEVIN

grow financial

Business Services

accenture

BearingPoint

FIS

ingenico GROUP

KPMG

UKG

Government

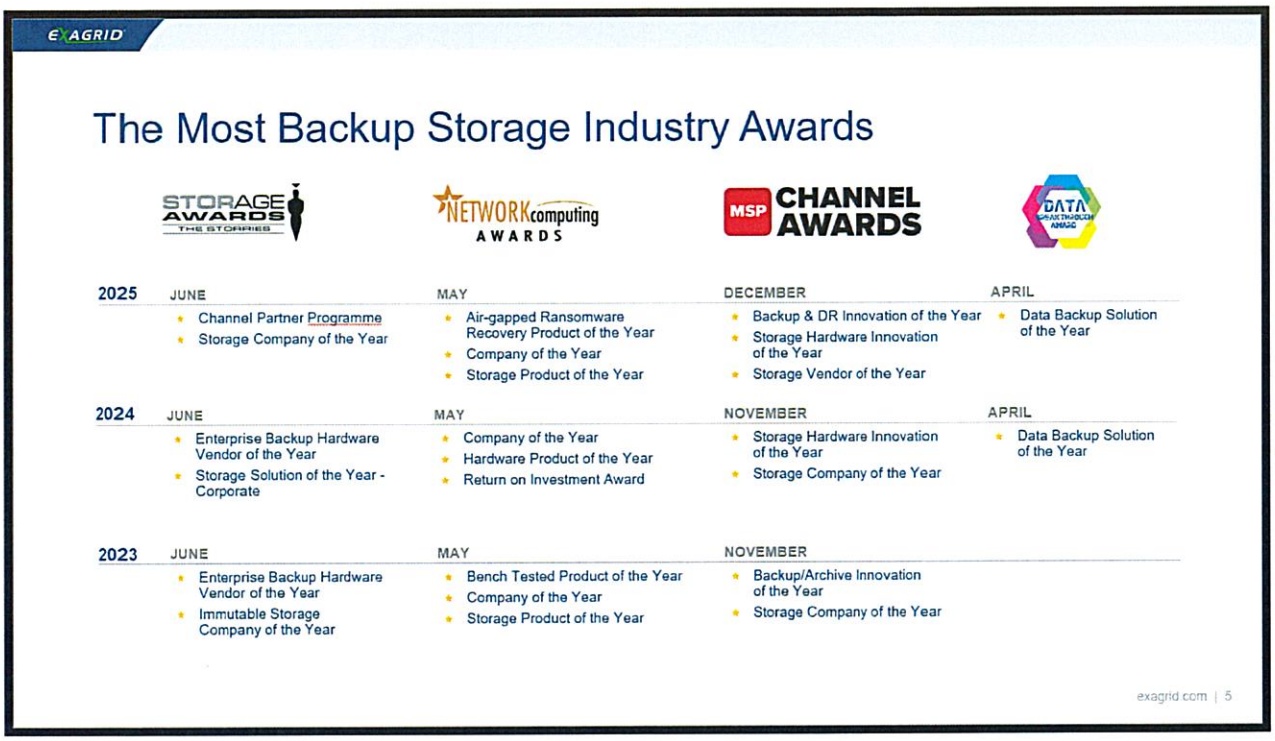
UNITED STATES COURTS

U.S.ARMY

U.S. AIR FORCE

NASA

U.S. SENATE COMMITTEE ON Health, Education Labor & Pensions


EXAGRID
The Most Backup Storage Industry Awards
STORAGE AWARDS
THE STORRIES
NETWORK computing AWARDS
MSP CHANNEL AWARDS
DATA BREAKTHROUGH AWARDS
2025
JUNE
Channel Partner Programme
Storage Company of the Year
MAY
Air-gapped Ransomware Recovery Product of the Year
Company of the Year
Storage Product of the Year
DECEMBER
Backup & DR Innovation of the Year
Storage Hardware Innovation of the Year
Storage Vendor of the Year
APRIL
Data Backup Solution of the Year
2024
JUNE
Enterprise Backup Hardware Vendor of the Year
Storage Solution of the Year - Corporate
MAY
Company of the Year
Hardware Product of the Year
Return on Investment Award
NOVEMBER
Storage Hardware Innovation of the Year
Storage Company of the Year
APRIL
Data Backup Solution of the Year
2023
JUNE
Enterprise Backup Hardware Vendor of the Year
Immutable Storage Company of the Year
MAY
Bench Tested Product of the Year
Company of the Year
Storage Product of the Year
NOVEMBER
Backup/Archive Innovation of the Year
Storage Company of the Year
exagrid.com | 5

Section 3: Case Studies and References

Vendor should also include experience in delivering immutable storage or cyber-resilient backup solutions for clients that are like the County. Provide relevant projects in government, public sector, or similarly regulated environments along with references or case studies demonstrating successful deployments.

LOGICALIS REFERENCE CUSTOMERS AND CASE STUDIES

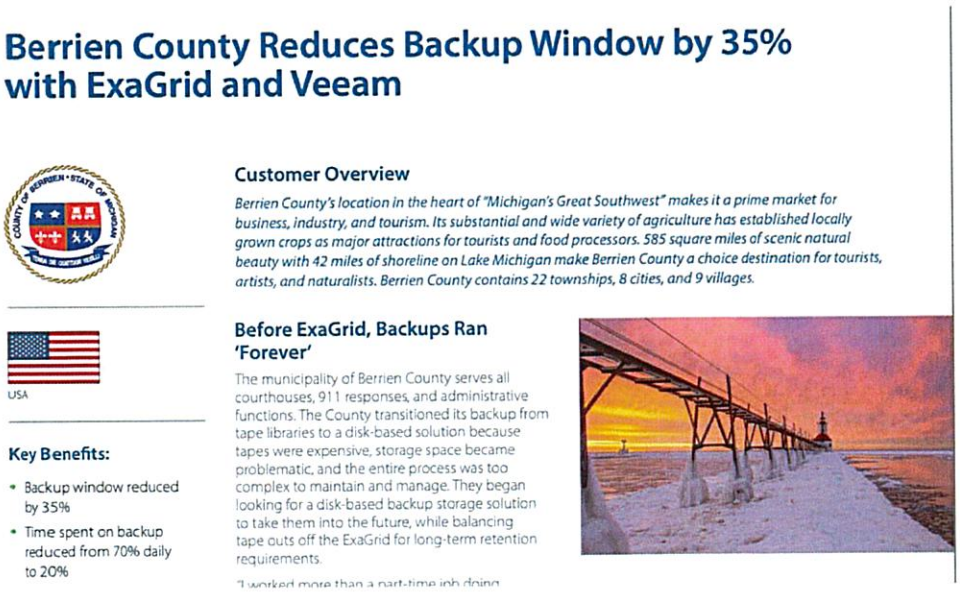
In addition to the three Michigan government references we listed on your reference form—Berrien County, the Michigan Court of Appeals, and the State Court Administrative Office (Michigan Supreme Court and Judicial Information Services), all of which are current customers of mine —Logicalis has a broad base of satisfied ExaGrid clients. We would be happy to provide additional customer references upon request should you wish to speak with other organizations about their experience with Logicalis and ExaGrid.

Scott Reese from the Michigan Supreme Court and Judicial Information Systems had this to say about his ExaGrid Experience:

"SCAO has been using ExaGrid appliances for backup targets for nearly two years. We use Veeam and SQL-native backups and also store archived files for long-term storage such as litigation holds.

We are extremely happy with the technical support from ExaGrid. Having a dedicated technician and not having to submit tickets online or sit in a phone queue is a huge advantage. Our technician responds to e-mail the same day (sometime within an hour) and the few (mostly self-inflicted) issues we have had were quickly resolved.

The appliances are a big technical leap from our 14-year-old DataDomains, and now support direct backup of M365 data through S3 which eliminated a 10TB staging drive for us. Speed is excellent and we are able to perform "instant restores" in Veeam without issue."



Berrien County Reduces Backup Window by 35% with ExaGrid and Veeam

Customer Overview

Berrien County's location in the heart of "Michigan's Great Southwest" makes it a prime market for business, industry, and tourism. Its substantial and wide variety of agriculture has established locally grown crops as major attractions for tourists and food processors. 585 square miles of scenic natural beauty with 42 miles of shoreline on Lake Michigan make Berrien County a choice destination for tourists, artists, and naturalists. Berrien County contains 22 townships, 8 cities, and 9 villages.

USA

Key Benefits:

- Backup window reduced by 35%
- Time spent on backup reduced from 70% daily to 20%

Before ExaGrid, Backups Ran 'Forever'

The municipality of Berrien County serves all courthouses, 911 responses, and administrative functions. The County transitioned its backup from tape libraries to a disk-based solution because tapes were expensive, storage space became problematic, and the entire process was too complex to maintain and manage. They began looking for a disk-based backup storage solution to take them into the future, while balancing tape outs off the ExaGrid for long-term retention requirements.

"I worked more than a part-time job doing

13

https://www.exagrid.com/wp-content/uploads/ExaGrid-Berrien_County_Customer_Success_Story.pdf

EXAGRID CASE STUDY: Dakota County, Minnesota

Dakota County, serving a population of approximately 425,000 residents, required a scalable and efficient backup solution to support a large and growing IT environment consisting of hundreds of virtual machines and significant data volumes.

Challenge:
The County experienced backup windows exceeding operational limits and faced increasing demands on its existing storage infrastructure. Legacy systems were unable to efficiently scale to meet long-term growth requirements.

Solution:
ExaGrid tiered backup storage was deployed in conjunction with Veeam backup software, providing a disk-based, deduplicated architecture designed for performance and scalability.

Results:

- Eliminated backup window constraints and improved backup reliability
- Enabled efficient management of large-scale data growth
- Provided a scalable architecture to accommodate future expansion
- Improved overall data protection and recovery capabilities

EXAGRID CASE STUDY: La Plata County, Colorado

La Plata County implemented ExaGrid to modernize its backup environment and support ongoing data growth while maintaining operational simplicity.

Challenge:
The County required a reliable and easy-to-manage backup solution capable of scaling incrementally without disruption to operations.

Solution:
ExaGrid appliances were deployed with Veeam integration, leveraging a scale-out architecture to enable non-disruptive expansion.

Results:

- Simplified backup administration and reduced operational overhead
- Enabled seamless scalability as storage requirements increased
- Delivered consistent and reliable backup and restore performance
- Provided long-term operational stability

EXAGRID CASE STUDY: City and County of Honolulu, Hawaii

The City and County of Honolulu implemented ExaGrid to replace legacy backup systems and improve operational efficiency across its IT environment.

Challenge:

Backup processes were extending into business hours, and reliance on tape-based systems negatively impacted network and server performance.

Solution:
ExaGrid's disk-based backup storage solution was implemented alongside Commvault backup software, eliminating the need for tape-based workflows.

Results:

- Eliminated backup jobs extending into production hours
- Improved system and network performance
- Reduced reliance on legacy tape infrastructure
- Enhanced scalability for long-term data growth

EXAGRID CASE STUDY: Lee County Tax Collector, Florida

The Lee County Tax Collector's office required improved backup performance and disaster recovery readiness to support critical government operations.

Challenge:
Legacy tape-based backups required extended processing times and introduced inefficiencies, with backup windows exceeding acceptable limits.

Solution:
ExaGrid implemented a dual-site backup architecture, enabling replication and improved data protection across multiple locations.

Results:

- Reduced backup windows and improved operational efficiency
- Eliminated manual tape handling processes
- Enhanced disaster recovery readiness through replication
- Improved reliability and accessibility of backup data

EXAGRID CASE STUDY: City of St. Petersburg, Florida

The City of St. Petersburg deployed ExaGrid to modernize its backup infrastructure and support a rapidly growing virtualized environment.

Challenge:
The City faced backup failures, insufficient capacity, and performance limitations due to legacy systems.

Solution:
ExaGrid was deployed in combination with Veeam to provide a scalable, high-performance backup solution across multiple sites.

Results:

- Reduced backup windows by more than 80 percent
- Improved system reliability and reduced backup failures

- Decreased administrative overhead through simplified management
- Enabled scalable protection of a large, multi-site environment

Section 4: Technical Information

Technical Information: Provide the following information:
- Detailed description of the proposed solution architecture
- Explanation of how immutability is enforced and protected
- Warranty terms, support model, and any exclusions
- Implementation approach and project timeline
- Expected support start date
- Description of any additional features or value-added services that differentiate the solution (e.g., ransomware detection, reporting, automations, monitoring, or analytics)

4.1 Project Summary

Customer Objective
Deploy a fully on-premises, immutable backup storage platform integrated with Veeam that delivers fast backup/restore, ransomware resilience, predictable scaling, and a five-year lifecycle without forced refresh.

Logicalis Recommendation
Logicalis proposes ExaGrid Tiered Backup Storage as the primary Veeam repository, delivering immediate immutability, tiered air-gap protection, delayed deletes, AI-assisted threat detection, and rapid recovery—all with minimal deployment risk.

Business Outcomes

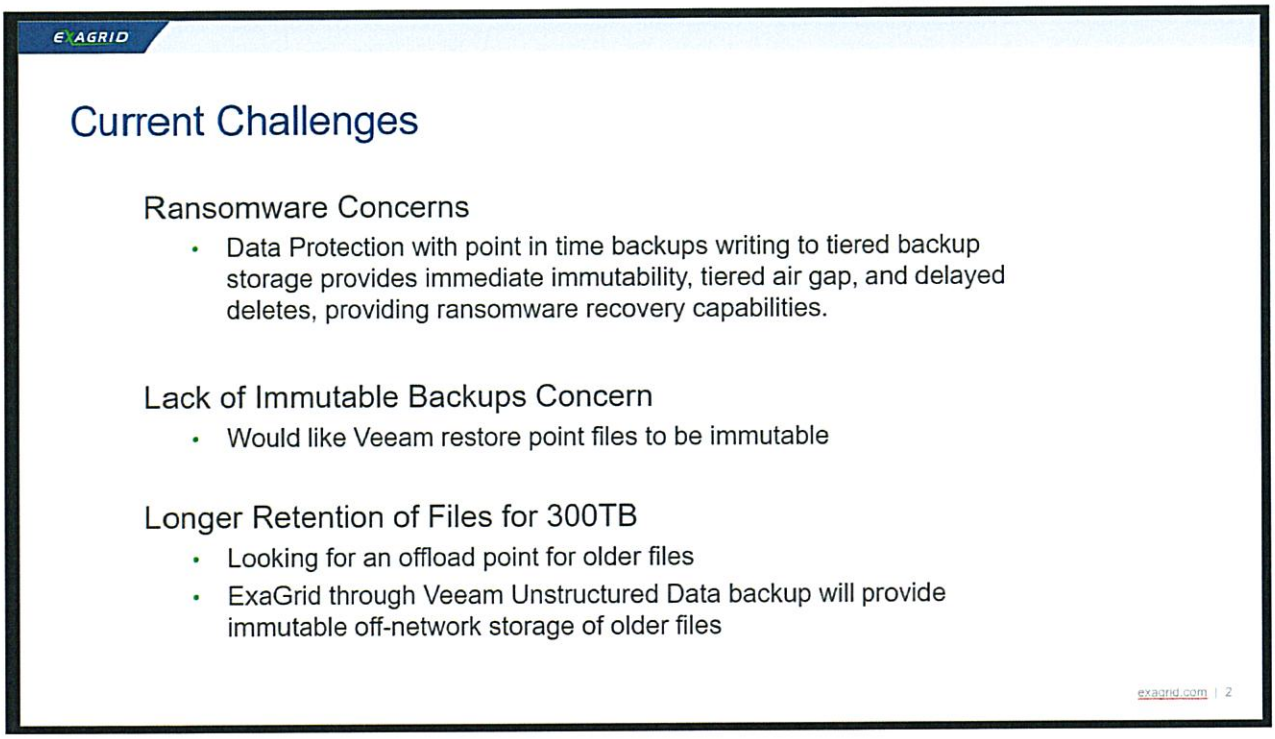
- Immediate ransomware recovery assurance
- Faster restores and synthetic fulls
- Fixed backup windows as data grows
- Reduced operational risk and predictable TCO

4.2 Current State Assessment

- ~100 TB protected data; ~95% VMs
- Veeam Backup & Replication (v12.x)
- Weekly synthetic fulls / daily incrementals
- Overnight backup window
- Current repository lacks immutable protection

Constraints & Drivers

- On-premises only
- No historical data migration
- Minimal professional services
- Five-year lifecycle support**3. Solution Overview (Proposed Technical Solution)**



4.3 Detailed Description of Proposed Solution Architect

Solution Overview

Logicalis proposes a **fully on-premises, immutable backup storage solution** designed specifically to serve as the **primary backup repository for Veeam Backup & Replication** while providing strong ransomware resilience and predictable long-term scalability.
The solution is based on ExaGrid's **Tiered Backup Storage architecture**, which combines high-performance backup ingest and recovery with a protected, immutable retention tier. This architecture ensures fast day-to-day operations while preserving an uncompromised set of backups for recovery in the event of accidental deletion, administrative error, or ransomware attack.

Architectural Design

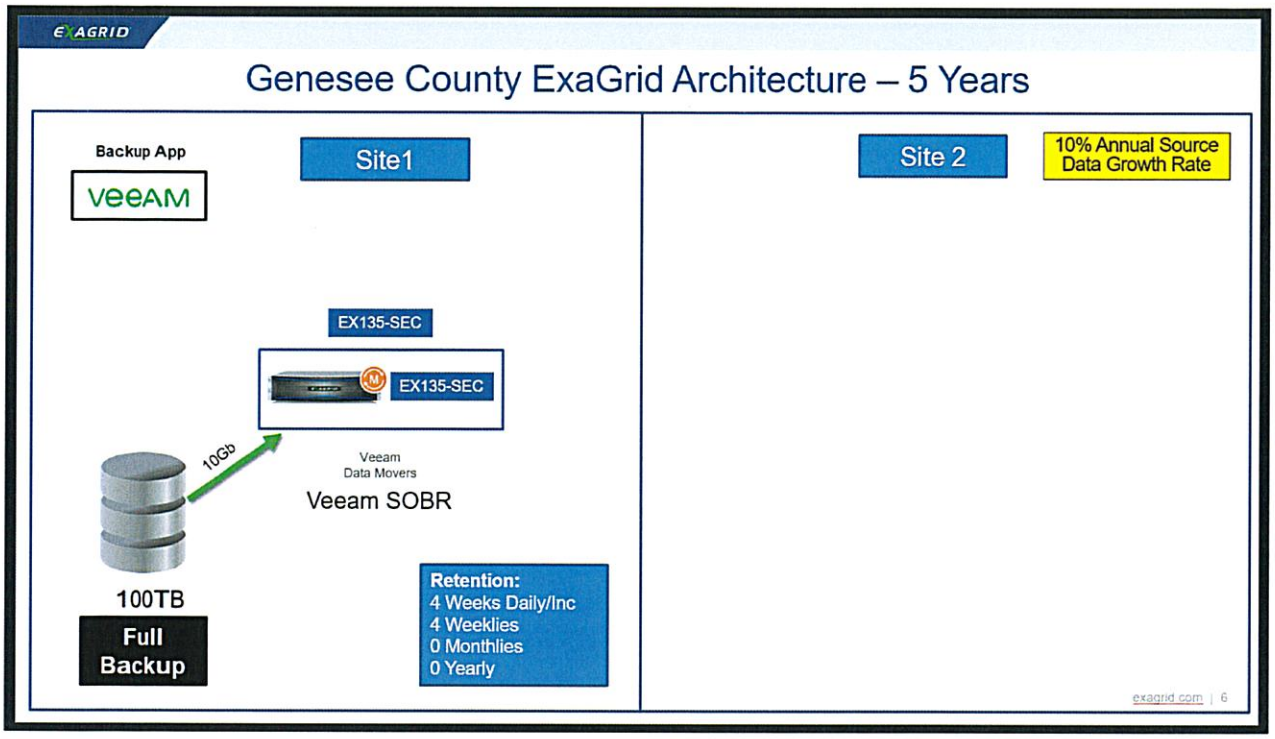
The proposed solution consists of two distinct and complementary storage tiers within a single integrated system:

- **Landing Zone (Backup Ingest Tier)**
- **Repository Tier (Immutable Retention Tier)**

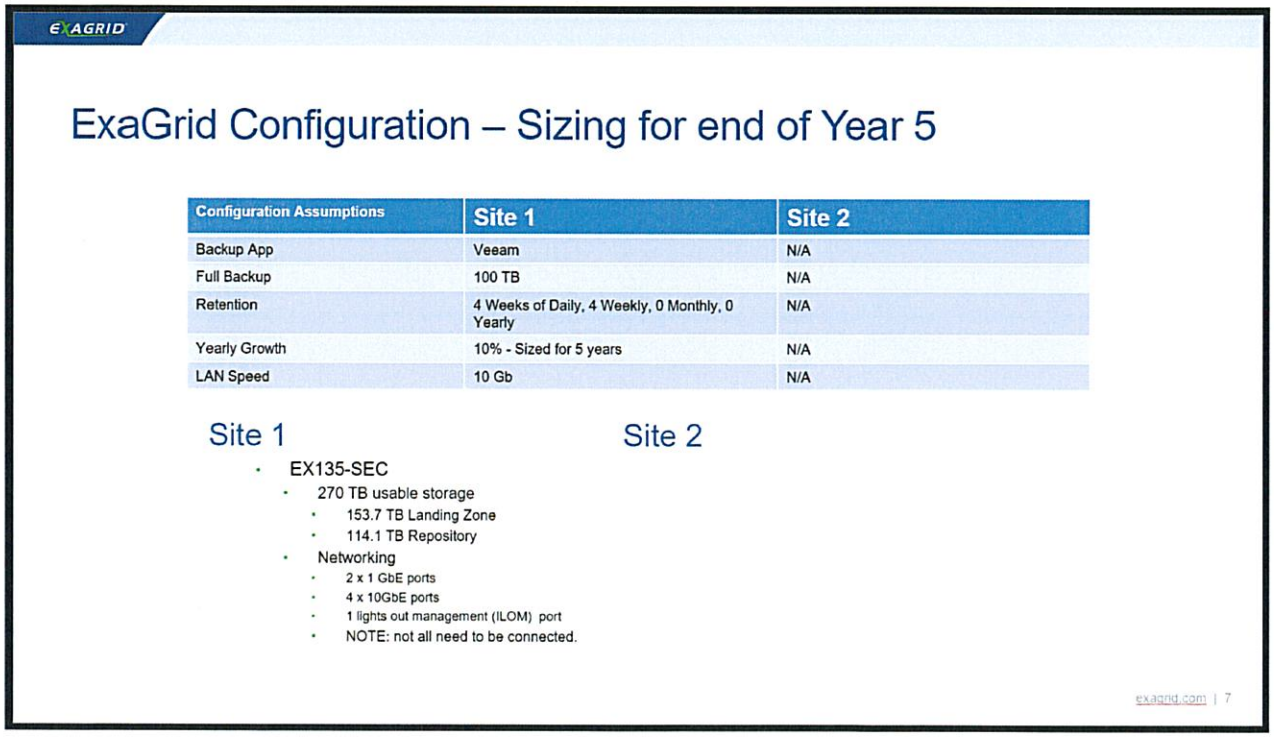
These tiers are delivered as part of a **single ExaGrid appliance-based, scale-out system**, managed through a unified interface and integrated natively with Veeam.

What this means for Genesee County: The County benefits from a single, scalable

system that is easy to manage, grows as data needs increase, and integrates seamlessly with existing Veeam backup operations without added complexity.



Sizing



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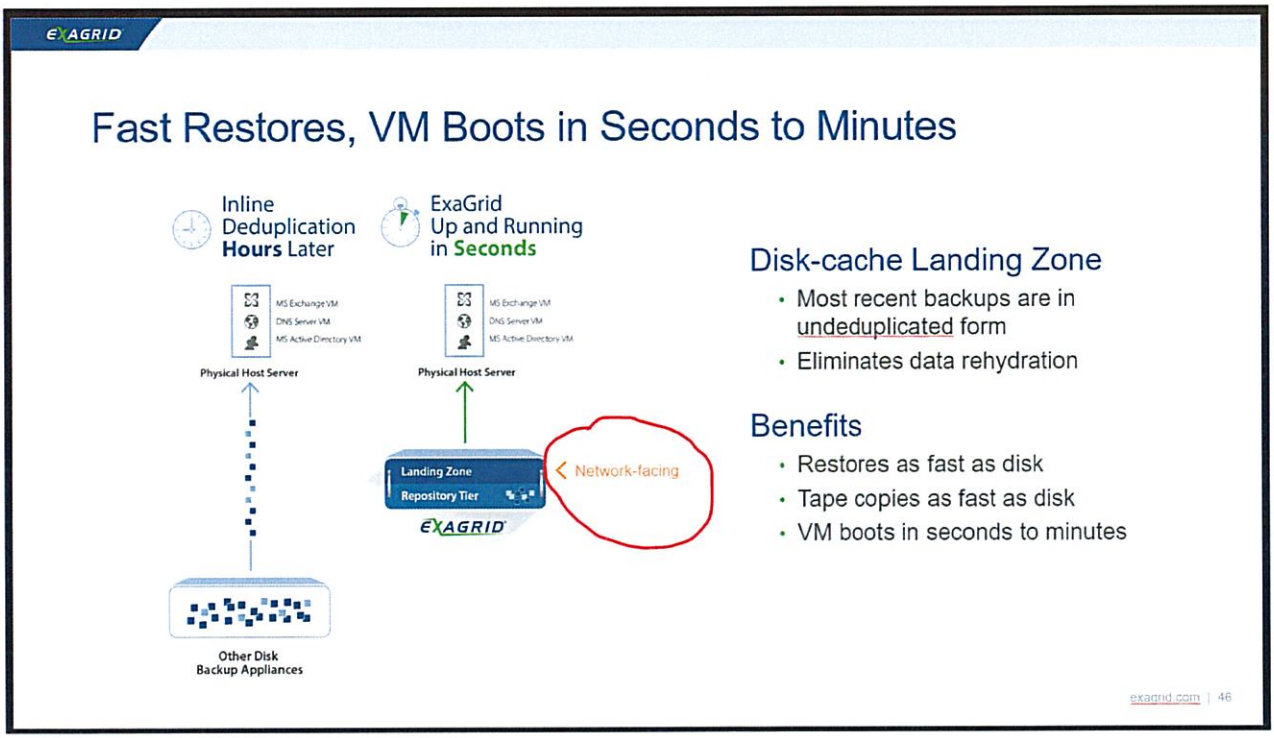
Landing Zone (Backup Ingest and Rapid Recovery Tier)

The **Landing Zone** is a high-performance disk-cache tier optimized for backup ingest and fast recovery operations.

Key characteristics include:

- Backup data is written **directly to disk in full, undeduplicated form**
- No inline deduplication or inline processing occurs during the backup window
- Optimized for:
  - Fast backup completion within overnight windows
  - Fast restores and single-VM recovery
  - Instant VM recovery for recent backups
- Eliminates the need to rehydrate data during restore operations for the most recent backups

What this means for Genesee County: Backups complete faster and, more importantly, systems can be restored quickly in the event of an outage, minimizing downtime and ensuring critical services remain available to staff and constituents.



4.4 Explanation of how immutability is enforced and protected

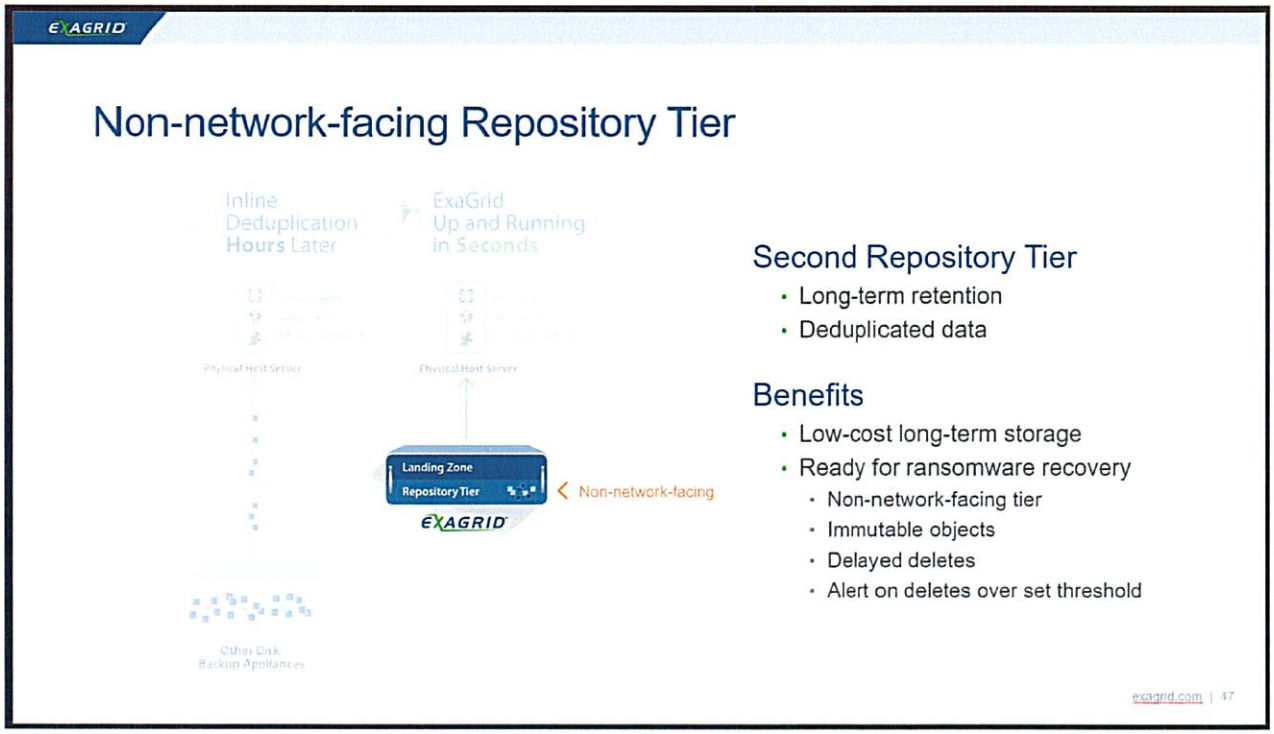
Repository Tier (Immutable Retention and Ransomware Protection)

The **Repository Tier** stores all retained backups in a **deduplicated, immutable format** and is architected to be **non-network-facing**:

- The retention tier is not directly accessible by users, the backup application, or the network
- Access is restricted exclusively to ExaGrid internal processes
- This creates a **tiered air gap**, preventing ransomware or malicious actors from interacting with retained backup data

All historical backups are stored as **immutable deduplication objects** that cannot be modified, overwritten, or deleted.

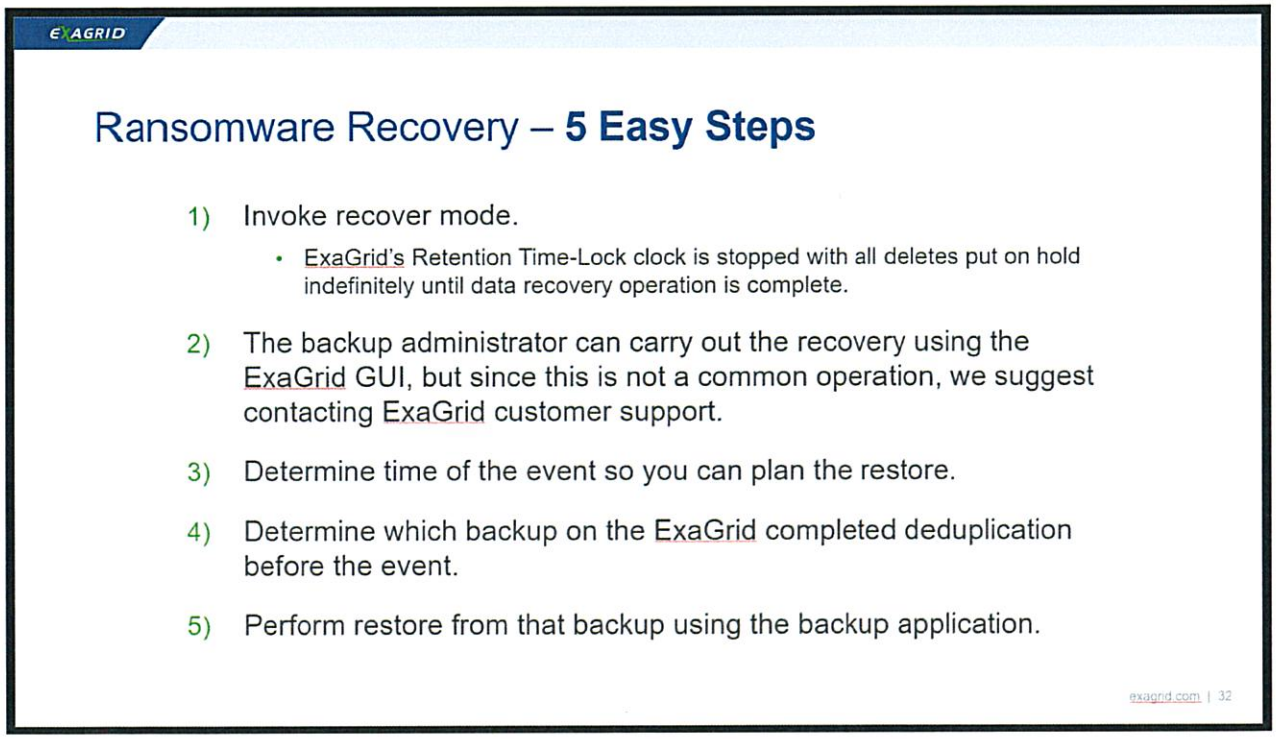
What this means for Genesee County: Older backups are securely protected from ransomware or accidental deletion, ensuring the County always has a clean, reliable copy of data to recover from in the event of a cyberattack or data loss incident.



Ransomware Protection and Data Security Features

- Retention Time-Lock prevents immediate or unauthorized deletion of backup data
- Automated detection identifies abnormal deletion behavior and suspends suspicious activity
- Role-based access control with multi-factor authentication enforces separation of duties
- Encryption protections ensure previously stored backups remain secure even if new data becomes compromised

What this means for Genesee County: Multiple layers of security work together to detect and prevent threats, giving the County confidence that backup data is protected, recoverable, and aligned with modern cybersecurity best practices.



EXAGRID

Retention Time-Lock for Ransomware Recovery

Guard Against Deleted Backups

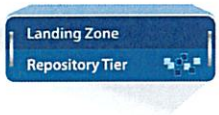
Assume

- Primary data is encrypted
- Backup application or backup storage is hacked
  - All backup data is deleted

Net

- For disk or any deduplication appliance (Dell, HPE, Veritas, etc.)
- All backup data and retention is gone

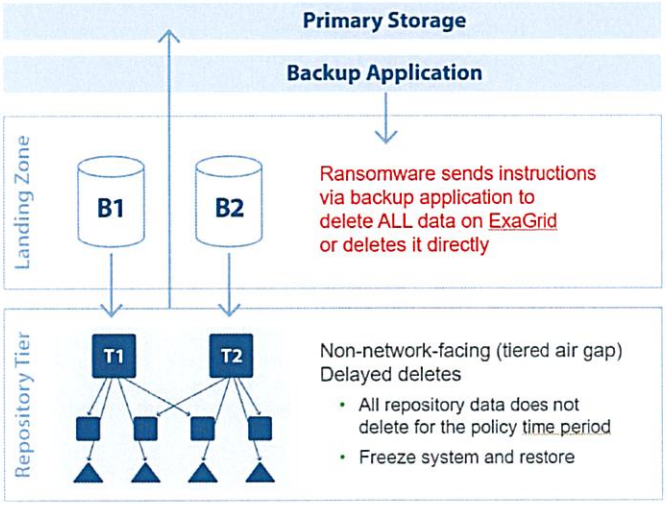
ExaGrid



- Landing Zone tier is deleted
- The non-network-facing retention tier (tiered air gap) is 100% unaffected
  - Controlled only by ExaGrid
  - Delayed delete policy (example: 10 days, in addition to long-term retention)
  - All data is ready for restore

EXAGRID

Deletion Protection of Backup Data on ExaGrid



EXAGRID

Retention Time-Lock for Ransomware Recovery

Guard Against Encrypted Backup Data

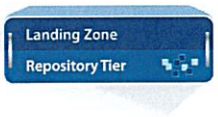
Assume

- Encrypted primary data is written to the backup storage
- Backup data is encrypted directly on the backup storage

Net

- For disk or any deduplication appliance (Dell, HPE, Veritas, etc.)
- All backup data and retention is encrypted

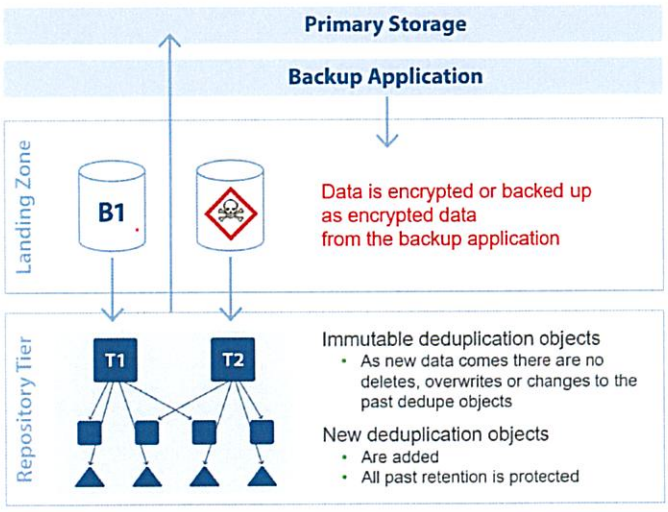
ExaGrid



- Landing Zone tier is encrypted
- Non-network-facing retention tier (immutable deduplication objects)
  - Deduplicates the data from the Landing Zone into the retention tier
  - Immutable deduplication objects (cannot change, modify, or delete)
  - All new data deduplication objects are added, so all past data retention is intact

EXAGRID

Encryption Protection of Backup Data on ExaGrid



Ransomware and Threat Detection Capabilities

Overview

The proposed ExaGrid solution is designed specifically to protect backup data from **ransomware, malicious deletion, administrative error, and insider threats**. Rather than relying on a single control (such as time-based object lock alone), ExaGrid implements a **defense-in-depth security model** that combines architectural isolation, immutable storage, delayed deletion, and behavioral threat detection.
This approach ensures that clean, recoverable backup data remains available even if production systems, backup software, or backup administrators are compromised.

1. Architectural Isolation (Tiered Air Gap)

Non-Network-Facing Retention Tier

ExaGrid enforces ransomware protection at the architecture level by maintaining a **non-network-facing Repository Tier**:

- The retention tier is **not visible or accessible to the network**
- It is not directly accessible by:
  - Users
  - Backup servers
  - Backup applications
- Only ExaGrid internal processes can interact with this tier

Security impact:
Even if ransomware compromises credentials, backup servers, or the backup application itself, threat actors **cannot access or destroy retained backup data**, because the retention tier is physically and logically hidden from the attack surface.

2. Immutable Backup Objects

Enforced Immutability

All backup data stored in the ExaGrid Repository Tier is written as **immutable deduplicated objects**:

- Objects **cannot be modified, overwritten, or deleted**
- Historical backups remain unchanged regardless of new backup activity
- New backups always create new objects rather than altering existing ones

Security impact:
This protects against:

- Backup encryption attacks
- Data corruption
- Malicious overwrite attempts
- Insider modification of retained backups

3. Retention Time-Lock (Delayed Delete Protection)

Protection Against Malicious or Accidental Deletes

ExaGrid implements **Retention Time-Lock (RTL)**, a delayed-delete mechanism that protects backup data even when delete commands are issued:

- Delete requests are **not executed immediately**
- Deletes are delayed for a configurable period (e.g., 10–30 days)

- The delayed-delete timer is **separate from normal backup retention**
- During the delay window:
  - The deletion clock can be stopped
  - All data remains fully recoverable

Security impact:
This protects against:

- Mass delete commands issued by ransomware
- Accidental administrative deletes
- Backup-application-initiated deletes that may be triggered by an attack

4. AI-Powered Threat Detection (Auto Detect & Guard)

Behavioral Delete Analysis

ExaGrid continuously monitors deletion behavior using **AI-based pattern analysis**:

- Normal daily delete patterns are learned over time
- The system detects deviations such as:
  - Abnormal delete volume
  - Unusual timing
  - Non-standard delete patterns
- When an anomaly is detected:
  - All deletes are automatically frozen
  - The delayed-delete window is extended indefinitely
  - IT administrators are alerted to a potential security event

Security impact:
Deletes are automatically blocked **before a threat actor can destroy backups**, even if valid credentials are used.

5. Separation of Duties and Access Controls

Administrative Safeguards

The ExaGrid platform supports **strong separation of duties** for security-sensitive operations:

- Role-based access control (RBAC)
- Separate roles for:
  - Backup administration
  - Security authorization
- Multi-factor authentication (2FA) for critical actions
- Two-person approval required to:
  - Change Retention Time-Lock settings
  - Clear ransomware alerts
  - Resume delayed deletions

Security impact:
This prevents a single compromised account—whether administrative or compromised through phishing—from disabling immutability protections or approving malicious deletes.

6. Protection Against Encrypted Backup Data

Ransomware Encryption Scenarios

If ransomware encrypts:

- Primary production data, or
- Backup data written to the ExaGrid Landing Zone

Then:

- Encrypted data is written as **new deduplicated objects**
- **Previously stored immutable backup objects remain unchanged**
- Historical backups remain readable and restorable
- Deduplication-ratio anomalies can trigger alerts indicating a potential encryption event

Security impact:

Organizations can restore data from an unencrypted backup taken **prior to the attack**, even if newer backups are compromised.

7. Recovery Assurance During a Ransomware Event

End-to-End Recovery Workflow

During a ransomware or destructive attack:

- Abnormal delete or encryption behavior is detected
- Retention Time-Lock suspends deletion activity
- Immutable backup copies are preserved automatically
- IT staff identify the last known good backup
- Recovery is performed using the backup application directly from ExaGrid

Because recent backups exist in full form and retention backups are immutable, recovery does not require data rehydration or reconstruction, enabling faster restoration of services.

8. Comparison to Traditional Immutability Models

Unlike solutions that rely solely on **fixed-period object lock**, ExaGrid:

- Does not permanently lock data for months or years
- Allows organizations to adjust delayed-delete policies
- Avoids unbounded storage growth
- Preserves operational flexibility while maintaining security

This results in stronger ransomware resilience **without compromising manageability or long-term cost control**.

Summary

The proposed ExaGrid solution **meets and exceeds ransomware and threat-detection requirements** through:

- Architectural isolation via a non-network-facing retention tier
- Immutable backup objects that prevent modification or overwrite
- Retention Time-Lock to block destructive deletes
- AI-based detection of abnormal delete behaviour
- Strong separation of duties and multi-factor authorization
- Proven recovery workflows for ransomware scenarios

These capabilities ensure that Genesee County maintains **recoverable, uncompromised backup data** even in the face of advanced ransomware attacks, insider threats, or administrative error.

Enforcement of Immutability Reviewed

ExaGrid enforces immutability using a **multi-layered protection model**, rather than relying solely on time-based object locking.

Immutable Objects

- All data written to the Repository Tier is stored as immutable objects
- Existing backup objects are never altered
- New backups always result in new objects, preserving historical recovery points

Delayed Delete (Retention Time-Lock)

- Delete requests—whether initiated by Veeam, an administrator, or a malicious actor—are not executed immediately
- Deletes are delayed for a configurable time period, independent of backup retention
- During this delay window, deletion can be suspended indefinitely if a security event is detected

This mechanism ensures that backup data remains recoverable even if a delete command is issued as part of a ransomware attack.

AI-Powered Auto Detect & Guard

ExaGrid continuously monitors deletion behavior using AI-based pattern analysis:

- Normal operational delete behavior is learned over time
- Abnormal or mass delete activity is detected
- Upon detection, ExaGrid automatically:
  - Freezes all deletions
  - Preserves all retention data indefinitely
  - Alerts IT staff to a potential ransomware event

Changes to the time-lock or clearing of alerts can be restricted through **role-based access and multi-factor authentication**, ensuring separation of duties between backup administrators and security roles.

Protection Against Encrypted Backup Data

If ransomware encrypts production data and encrypted data is backed up:

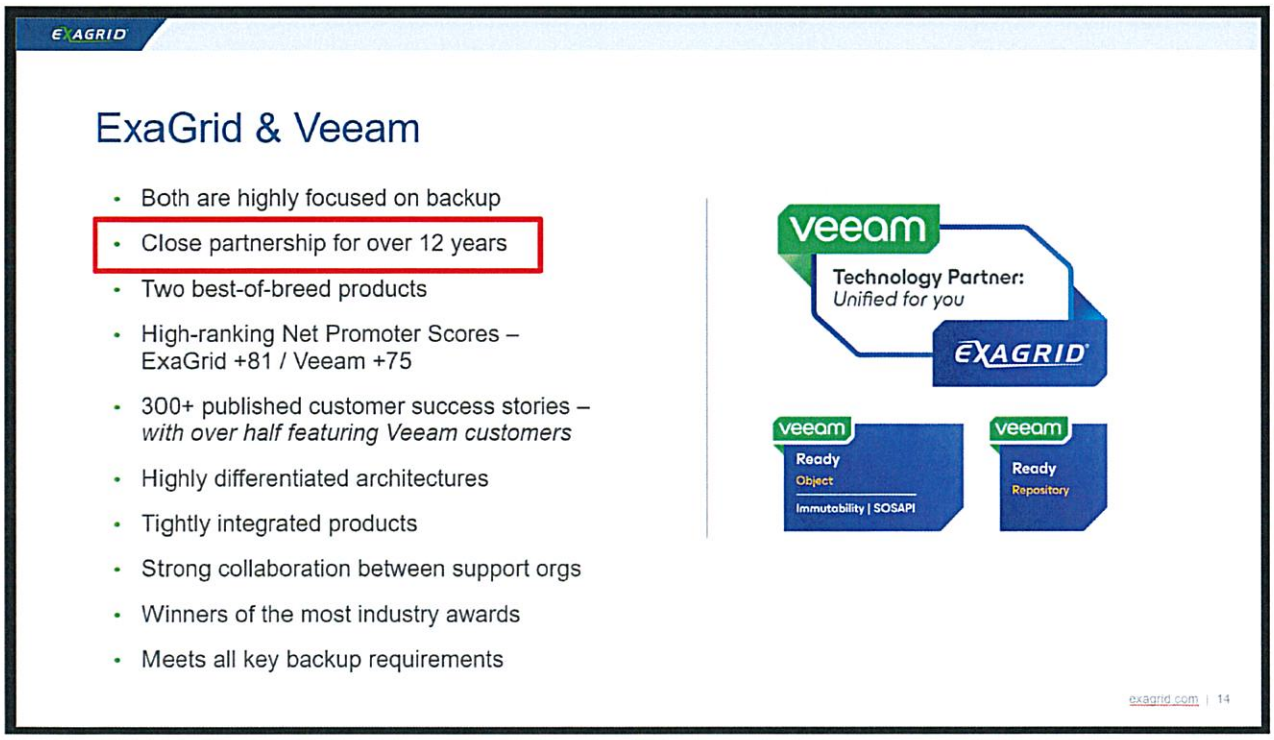
- Encrypted data is written as new deduplicated objects
- **All previously stored immutable backup objects remain intact and readable**
- ExaGrid can detect abnormal changes in deduplication behavior and alert administrators
- Recovery is performed from the last known good backup prior to the attack

Veeam Integration DeepDive

ExaGrid integrates natively with **Veeam Backup & Replication (v12.x)** and is proposed as the **primary backup repository**.
Key integration capabilities include:

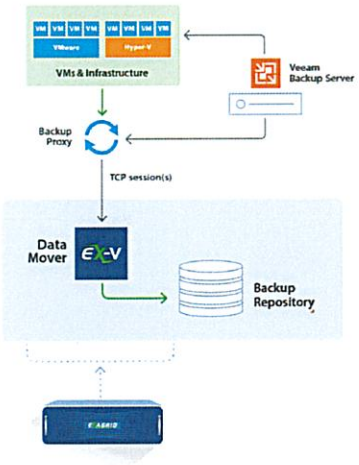
- Veeam Accelerated Data Mover embedded in the ExaGrid appliance
- Support for:
  - Weekly synthetic full backups
  - Daily incremental backups
  - Scale-Out Backup Repository (SOBR)
- Synthetic full operations performed directly on the ExaGrid system to reduce load on backup servers
- No agents required on protected workloads or backup servers

This integration supports high-performance backup ingest and restore operations while maintaining immutable retention.



EXAGRID

Integrated Veeam Data Mover – Faster Backups

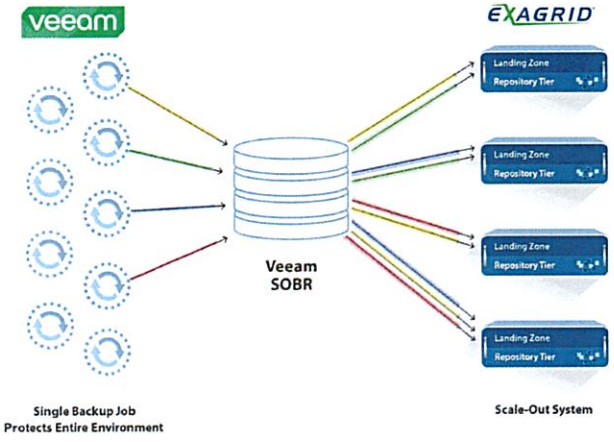


- Veeam-to-Veeam vs Veeam-to-CIFS
- Secure communication
- 30% faster ingest
- Faster VM boots

EXAGRID

End-to-End Scale-Out Backup with ExaGrid and Veeam

Support of Veeam Scale-Out Backup Repository (SOBR)

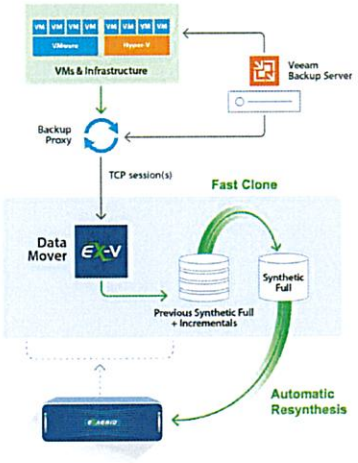


- Automated job management
- Superior performance with SOBR optimizing backup streams
- Future-proof scalability for data growth by simply adding another appliance
- Automatic repository load balancing
- Global deduplication across all repositories
- Failure tolerance with automated job redirect
- 6PB full backup in a single system

EXAGRID

Integrated Veeam Data Mover / Fast Clone

Faster Synthetic Fulls, Resynthesis for Fastest Restores



- Data in Veeam format on the Landing Zone
- ExaGrid has compute in each appliance
- Perform synthetic full on ExaGrid appliances
- Frees up Veeam backup server resources
- **As of V12:** Veeam Fast Clone performing a synthetic full takes minutes (increases to 30X faster)

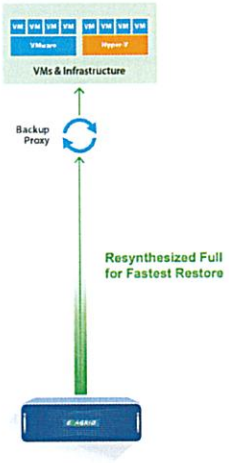
EXCLUSIVE

- Automatic resynthesis of the synthetic fulls into actual full backups takes place in parallel with backups

EXAGRID

Integrated Veeam Data Mover / Fast Clone

Faster Synthetic Fulls, Resynthesis for Fastest Restores



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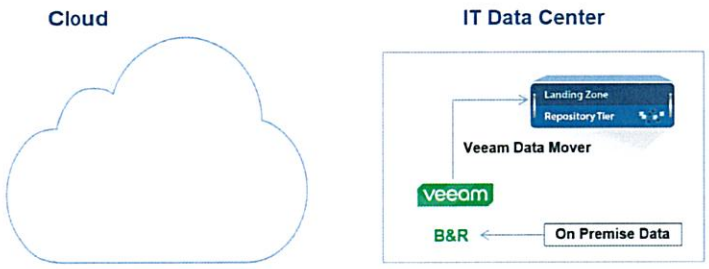
- ExaGrid has compute in each appliance
- Perform synthetic full on ExaGrid appliances
- Frees up Veeam backup server resources
- **As of V12:** Veeam Fast Clone performing a synthetic full takes minutes (increases to 30X faster)

EXCLUSIVE

- Automatic resynthesis of the synthetic fulls into actual full backups takes place in parallel with backups
- Resynthesis of Veeam Fast Clone synthetic fulls into ExaGrid's Landing Zone allows for the fastest restores & VM boots in the industry

EXAGRID

Veeam B&R to ExaGrid



Veeam Data Mover

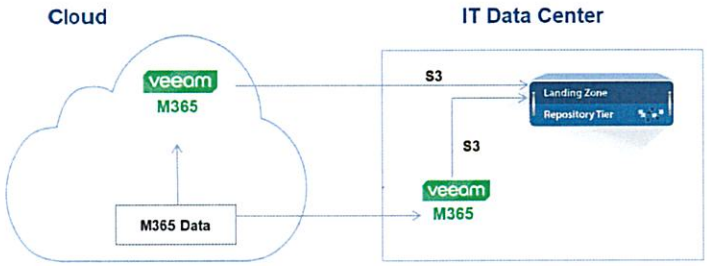
- 20-30% performance increase
- Secure proprietary protocol
- Fast Clone synthetic fulls

ExaGrid Retention Time-Lock in the Repository Tier

- Delayed delete policy
- Immutable data objects

EXAGRID

Veeam M365 to ExaGrid



ExaGrid locks the data for the time period provided by Veeam

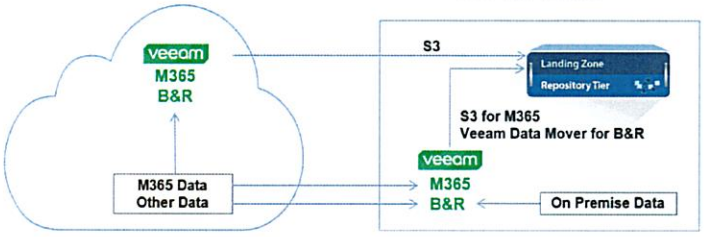
- S3 Locks data in the Landing Zone
- S3 Locks data in the Repository Tier
- ExaGrid RTL - Retention Time-Lock
  - Double locks the repository

ExaGrid supports the S3 API

ExaGrid supports the Veeam S3 Extension (SOS)

EXAGRID

Veeam M365 and B&R to ExaGrid



Chose the best combination of:

- S3
- Veeam Data Mover

EXAGRID

Veeam – ExaGrid Integrations

Synthetic fulls occur on ExaGrid appliances

- 30X faster with Veeam Fast Clone

Veeam Data Mover protocol

- More secure

Veeam Data Mover transport

- 30% faster ingest

Further deduplicate Veeam deduplication

- Take from 2:1 to 14:1

Unique Approach for the Fastest Restores

- ExaGrid resynthesizes Veeam Fast Clone synthetic fulls on Landing Zone

SOBR integration for true scale-out

- Automated management and scalability

Support of S3/M365 backups

- ExaGrid is an object store for Veeam using S3 protocol, support of Veeam Backup for M365 directly to ExaGrid

Scalability and Growth

The proposed solution is based on ExaGrid's **scale-out architecture**:

- Important Differentiator: When you scale out with Exagrid, you can mix/match size When you do – you adds storage capacity **along with CPU, memory, and network bandwidth**

  ExaGrid delivers consistent, predictable performance as capacity scales out by adding full appliances (compute, memory, and disk), maintaining fixed-length backup windows; in contrast, some competitors scale out capacity with a limited number of nodes and that does not add parallel processing resources in the same way, which can impact performance growth at scale.
- With Exagrid, you can have 32 nodes – If you have a small growth need on a tight budget year, you can buy a small incremental appliance and not worry about how it could impact your future because the scale out capability is so large and you can keep it all on one cluster.
- Global deduplication and load balancing across all appliances
- No forklift upgrades or performance degradation as data grows
- Existing and future appliances can coexist in the same system

This design ensures consistent backup windows and predictable performance over the required five-year lifecycle.

EXAGRID

ExaGrid Appliances in a Scale-out System

32 Appliances in a Single System – 6PB Full Backup

ExaGrid Model	Raw Capacity (TB)	Usable Capacity (TB)	Capacity for Weekly Full (TB)	Max Backup Thruput (TB/hr)	Form Factor	Optional Data at Rest Encryption (SEC)
ExaGrid Appliances						
EX36	96	72	36	7.90	2U	√
EX54	162	108	54	5.80	2U	√√
EX81	216	162	81	8.70	2U	√√
EX84	192	168	84	15.25	2U	√√
EX135	324	270	135	14.50	2U	√√
EX189	432	378	189	20.30	2U	√√

In addition, ExaGrid offers these appliance models to accommodate larger organizations that have smaller data center locations worldwide:

ExaGrid Model	Raw Capacity (TB)	Usable Capacity (TB)	Capacity for Weekly Full (TB)	Max Backup Thruput (TB/hr)	Form Factor	Optional Data at Rest Encryption (SEC)
ExaGrid Appliances for larger accounts with smaller data center locations						
EX10	32	20	10	3.90	2U	√
EX20	64	40	20	4.40	2U	√

√√ = Software Updgradeable SEC for Data Encryption at Rest

(Note: available in select 2025 version EX54 models, not available in previous EX54 models)

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Technical Specifications

ExaGrid Model	EX10	EX20	EX36	EX54	EX81	EX84	EX135*	EX189*
Chassis	2U	2U	2U	2U	2U	2U	2U	2U
Chassis Depth	26.8 inches/680 mm					34.65 inches/880 mm		
Full Backup	10TB	20TB	36TB	54TB	81TB	84TB	135TB	189TB
Disks	8	8	12	9	12	24	18	24
Disk Size	4TB	8TB	8TB	18TB	18TB	8TB	18TB	18TB
Memory	16 GiB	32 GiB	64 GiB	64 GiB	128 GiB	128 GiB	192 GiB	256 GiB
CPUs / Cores	1 CPU 6 hyper-threaded cores			1 CPU 16 hyper-threaded cores				
NIC Ports	Two 1GbE; up to two optional 10Gbe or 25GbE ports			Two 1GbE; up to four optional 10Gbe or 25GbE ports				

All Servers: Intel or AMD processors / Enterprise SAS drives / FIPS 140-2 Self-Encrypting SAS drives for all SEC systems / RAID6 with hot spare / Redundant fans / Redundant power supplies / ExaGrid software / 19-inch rack-mount chassis with dedicated IPMI network port

** EX135/EX189 available with optional Cable Management Arm*

4.5 Warranty terms, support model, and any exclusions

Support Model

- Assigned Level-2 support engineer
  - Direct access to senior-level support engineers with expertise in backup applications, eliminating escalation delays
  - Assigned support engineer familiar with the customer's environment and history for continuity of service
- NBD hardware replacement with 8x5 support (24x7 is available for an additional charge)
  - All hardware fully covered and hot-swappable without system downtime
  - Next-business-day shipment of replacement hardware components; all hardware fully covered and hot-swappable without system downtime
- Software updates and security enhancements included
  - Full software maintenance included, covering all updates and new versions at no additional cost
  - Proactive monitoring with automated system alerts, remote diagnosis, and issue resolution often completed without customer intervention

Lifecycle

- Five-year support coverage quoted (paid annually or up front for a savings)
  - Annual maintenance renewals capped to limit cost increases (not exceeding 3% per year)
- No forced mid-term refresh
- Optional capacity expansion

Exclusions

- Historical data migration
- On-site professional services (may be requested for an additional charge)

What this means for Genesee County: Genesee County benefits from a highly responsive, proactive support model that minimizes downtime, reduces the burden on internal IT staff, and ensures predictable long-term costs. With direct access to experienced engineers, automated monitoring, and rapid hardware replacement, issues are identified and resolved quickly—often before they impact operations—providing confidence that critical backup and recovery systems remain continuously available and supported.

Please see the Warranty and Maintenance datasheet in the appendices for additional details.

4.6 Implementation Approach & Project Timeline

Approach
Low-risk, appliance-based deployment with same-day go-live after installation.
Phases

- Pre-implementation planning & validation
- Appliance delivery & rack/stack (by Genesee or add optional services)
- Installation & initialization (30 minutes–3 hours)
- Veeam integration & immutability enablement
- Go-live (no data migration)
- Validation & IT onboarding

Acceptance Milestones

- Appliance installed and reachable
- Backups completing to ExaGrid
- Immutability verified
- Restore test successful
- Software updates and security enhancements included

4.7 Expected support start date

- Genesee County can expect support to begin within a day or two or three at most, after the system order is placed. Because equipment is in stock, we expect Genesee County to receive their Exagrid Appliance within 7-10 days of placing the order. A level 2 technician will be assigned and will help you with deployment. There will be no gap between implementation and ongoing support coverage. Monitoring and assistance are available from day one.

Assumptions, Risks & Mitigations

Assumptions

- Dedicated 10Gb backup network available
- Veeam version support

Risks

- Ransomware impacting backup plane

Mitigations

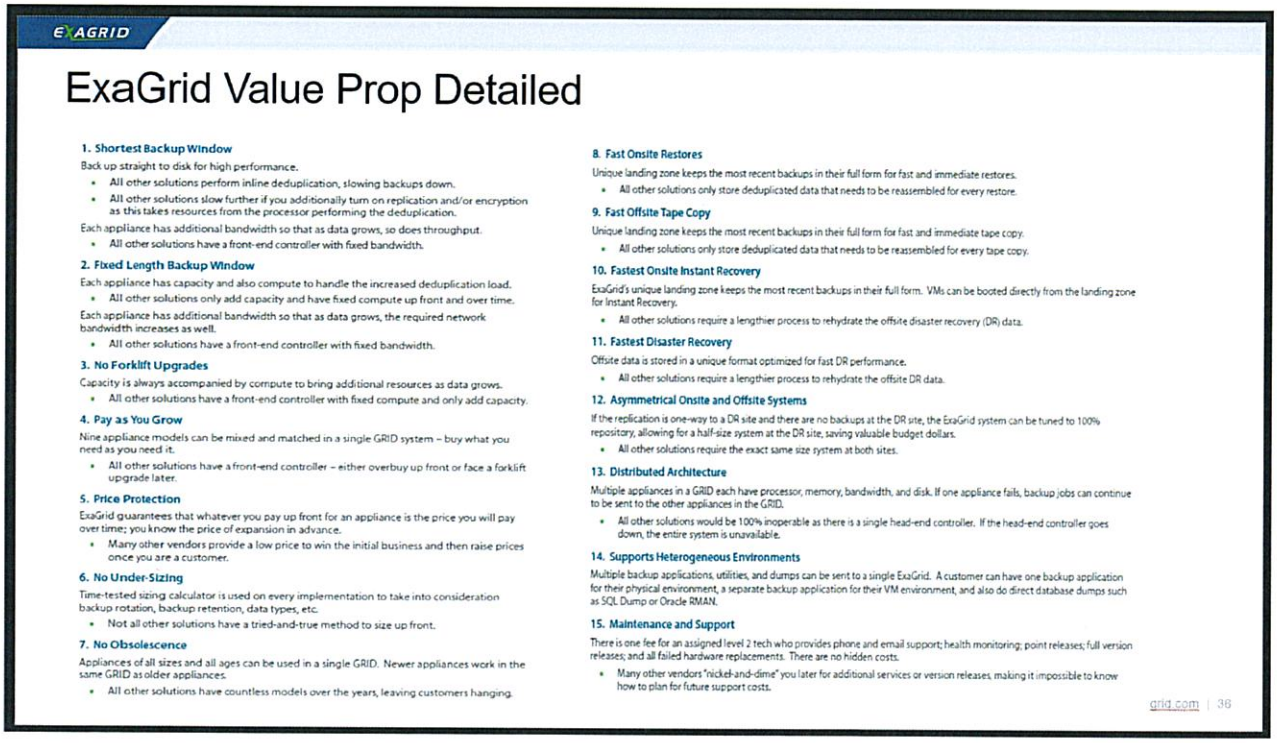
- Non-network-facing repository
- Immutable objects + delayed deletes
- AI threat detection

Commercials & Options (Summary)

- Base system sized to 270 TB usable
- Five-year support included
- Optional scale-out capacity as line items

Conclusion

Logicalis recommends ExaGrid as a best-fit, low-risk immutable backup platform that meets and exceeds technical, security, and lifecycle requirements while aligning with public-sector procurement expectations.



EXAGRID

ExaGrid Value Prop Detailed

1. Shortest Backup Window

Back up straight to disk for high performance.

- All other solutions perform inline deduplication, slowing backups down.
- All other solutions slow further if you additionally turn on replication and/or encryption as this takes resources from the processor performing the deduplication.

Each appliance has additional bandwidth so that as data grows, so does throughput.

- All other solutions have a front-end controller with fixed bandwidth.

2. Fixed Length Backup Window

Each appliance has capacity and also compute to handle the increased deduplication load.

- All other solutions only add capacity and have fixed compute up front and over time.

Each appliance has additional bandwidth so that as data grows, the required network bandwidth increases as well.

- All other solutions have a front-end controller with fixed bandwidth.

3. No Forklift Upgrades

Capacity is always accompanied by compute to bring additional resources as data grows.

- All other solutions have a front-end controller with fixed compute and only add capacity.

4. Pay as You Grow

Nine appliance models can be mixed and matched in a single GRID system – buy what you need as you need it.

- All other solutions have a front-end controller – either overbuy up front or face a forklift upgrade later.

5. Price Protection

ExaGrid guarantees that whatever you pay up front for an appliance is the price you will pay over time; you know the price of expansion in advance.

- Many other vendors provide a low price to win the initial business and then raise prices once you are a customer.

6. No Under-Sizing

Time-tested sizing calculator is used on every implementation to take into consideration backup rotation, backup retention, data types, etc.

- Not all other solutions have a tried-and-true method to size up front.

7. No Obsolescence

Appliances of all sizes and all ages can be used in a single GRID. Newer appliances work in the same GRID as older appliances.

- All other solutions have countless models over the years, leaving customers hanging.

8. Fast Onsite Restores

Unique landing zone keeps the most recent backups in their full form for fast and immediate restores.

- All other solutions only store deduplicated data that needs to be reassembled for every restore.

9. Fast Offsite Tape Copy

Unique landing zone keeps the most recent backups in their full form for fast and immediate tape copy.

- All other solutions only store deduplicated data that needs to be reassembled for every tape copy.

10. Fastest Onsite Instant Recovery

ExaGrid's unique landing zone keeps the most recent backups in their full form. VMs can be booted directly from the landing zone for Instant Recovery.

- All other solutions require a lengthier process to rehydrate the offsite disaster recovery (DR) data.

11. Fastest Disaster Recovery

Offsite data is stored in a unique format optimized for fast DR performance.

- All other solutions require a lengthier process to rehydrate the offsite DR data.

12. Asymmetrical Onsite and Offsite Systems

If the replication is one-way to a DR site and there are no backups at the DR site, the ExaGrid system can be tuned to 100% repository, allowing for a half-size system at the DR site, saving valuable budget dollars.

- All other solutions require the exact same size system at both sites.

13. Distributed Architecture

Multiple appliances in a GRID each have processor, memory, bandwidth, and disk. If one appliance fails, backup jobs can continue to be sent to the other appliances in the GRID.

- All other solutions would be 100% inoperable as there is a single head-end controller. If the head-end controller goes down, the entire system is unavailable.

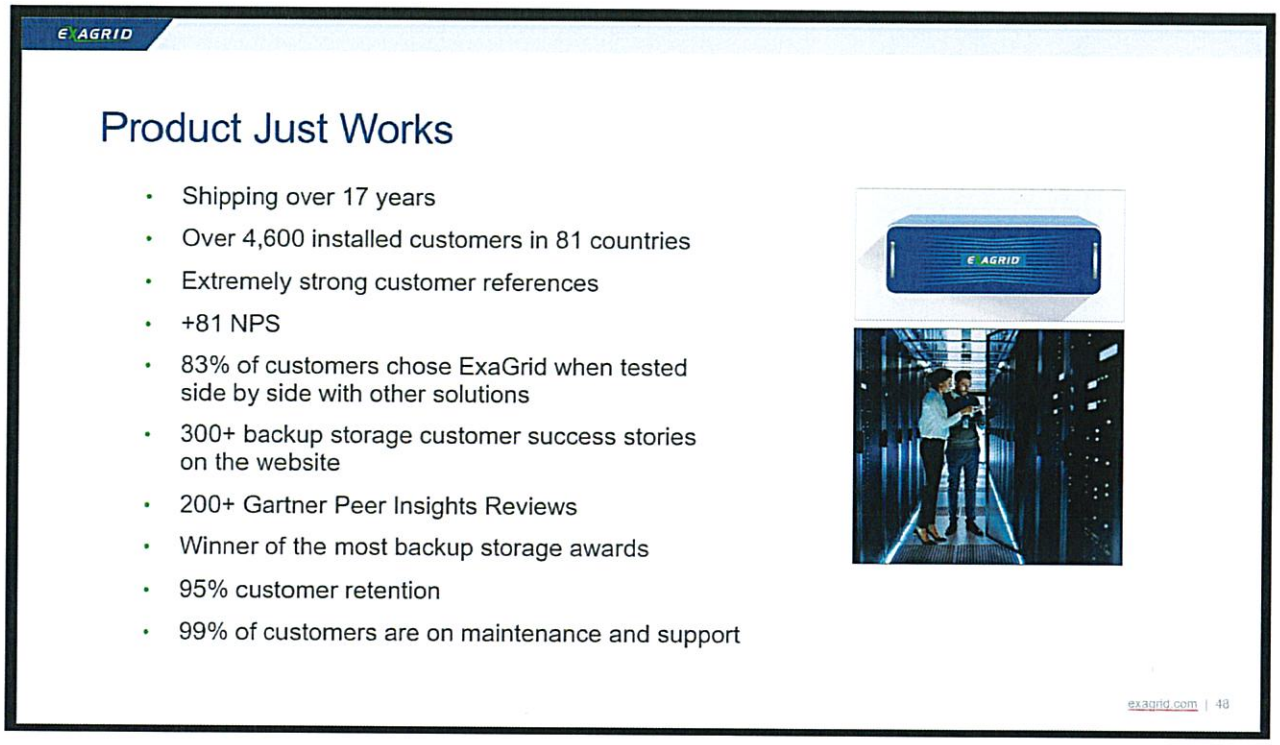
14. Supports Heterogeneous Environments

Multiple backup applications, utilities, and dumps can be sent to a single ExaGrid. A customer can have one backup application for their physical environment, a separate backup application for their VM environment, and also do direct database dumps such as SQL Dump or Oracle RMAN.

15. Maintenance and Support

There is one fee for an assigned level 2 tech who provides phone and email support; health monitoring; point releases; full version releases; and all failed hardware replacements. There are no hidden costs.

- Many other vendors "nickel-and-dime" you later for additional services or version releases, making it impossible to know how to plan for future support costs.



Warranty terms, support model, and any exclusions

Warranty and support for the ExaGrid system shall include hardware replacement, software updates, and vendor-provided technical support for the full contracted term. Support shall commence upon system installation and acceptance. See Datasheet.

Implementation approach and project timeline

Implementation & Project Plan based on Genesee County's criteria

Criteria 1: Fully On-Site, Appliance-Based Deployment

County Requirement

- Solution must be a **fully onsite appliance**
- No cloud dependency
- No facility construction or modification required

ExaGrid Alignment

- Deployment consists of a **self-contained physical appliance** installed in the County's data center
- Requires only standard rack space, power, and network connectivity
- No construction, electrical upgrades, or environmental changes are required
- Appliance is installed behind the existing Veeam environment with no production impact

Criteria 2: Deployment Timeline Acceptability

County Requirement

- Lead time of ~43–55 days considered acceptable
- Rapid post-delivery installation expected

ExaGrid Alignment

- ExaGrid hardware is in stock and ships within 2-3 days of receiving the order. Exagrid is one of the few OEMs that is not having inventory issues that you are hearing about in the industry.
- **Installation and system initialization completed in approximately 30 minutes to 3 hours**
- Backup integration and go-live occur the **same day as installation**, assuming environment readiness

Criteria 3: No Backup Data Migration Required

County Requirement

- No requirement to migrate data from the existing Dell repository
- New solution protects backups written after go-live only

ExaGrid Alignment

- ExaGrid implementation explicitly **does not require historical backup migration**
- Go-live begins with new backup jobs redirected to ExaGrid
- Existing legacy backups may remain in place until naturally aged out

Criteria 4: Limited Professional Services Dependency

County Requirement

- Professional services not required
- Solution must be deployable without extended consulting engagement

ExaGrid Alignment

- Exagrid asigns you a Level 2 Support Engineer when your order is placed. There is no additional cost for this white glove level of support. Your level 2 support engineer will be there with you to guide you through the implementation and set up.
- Installation and configuration can be completed by County staff with Eyour Level 2 Exagrid engineer supporting you through:
  - Phone support
  - WebEx support
  - Guided documentation

Criteria 5: Internal IT Onboarding and Knowledge Transfer

County Requirement

- Onboarding and knowledge transfer to internal IT staff required
- Optional admin training acceptable but not required

ExaGrid Alignment

- Implementation includes:
  - Knowledge transfer covering backup operations, restores, and ransomware recovery
  - Orientation to the ExaGrid management interface
- Optional deeper administrative training may be provided if requested but most customers do not need any additional training.

Criteria 6: Minimal Operational Disruption

County Requirement

- Existing backup windows and workflows must be preserved
- No disruption to overnight backup schedules

ExaGrid Alignment

- Existing Veeam jobs remain unchanged
- Only the backup target is updated to point to ExaGrid
- No production system changes
- No agents installed on workloads
- Cutover occurs with **no backup downtime**

Criteria 7: Immutable Protection Active at Go-Live

County Requirement

- Immutability enforced for all backups written to the new platform
- Protection must be active immediately upon go-live

ExaGrid Alignment

- Retention Time-Lock and immutable object storage are enabled as part of initial configuration
- All backups written after go-live are automatically protected
- No post-deployment reconfiguration required to enable immutability

Criteria 8: Five-Year Lifecycle Support Without Refresh

County Requirement

- 5-year support covering the full lifecycle
- No mid-term appliance refresh required

ExaGrid Alignment

- Appliance is supported for the full five-year term – and for as long as you want to keep it. Exagrid has never end of life'd a product that is in production in a customer environment.
- No forced refresh
- Expansion handled via optional capacity additions
- Support includes hardware, software, monitoring, and updates

Criteria 9: Clear Project Milestones and Completion

County Expectation

- Clear installation and acceptance sequence
- Ability to validate success quickly

Acceptance Criteria 10: Risk Reduction for Public-Sector Deployment

County Expectation

- Low-risk deployment
- Predictable timelines
- Minimal vendor dependency

ExaGrid Alignment

- Appliance-based deployment eliminates integration risk
- No cloud, agent, or workflow dependencies
- Same-day operational readiness
- Direct access to Level-2 support engineers

Expected support start date

Support and maintenance for the ExaGrid system begin upon system installation and activation and continue for the full contracted support term.

Description of any additional features or value-added services that differentiate the solution (e.g., ransomware detection, reporting, automations, monitoring, or analytics)

Current Work Assignments & Contractual Obligations: Indicate current and projected work assignments of key personnel identified in the bid, and for each key personnel, identify current percentage of completion and expected completion date.

ExaGrid manages new customer implementation workload based on the date orders were placed. You can expect a level two implementation and support engineer to be assigned to Genesee County within the week that you place your order.

Demonstration of Financial Stability: Submit with the bid your organization's most recent financial audit, annual compiled financial statements, or annual consolidated financial statements.

Please see our Annual Review for Logicalis' public financial information.
Datatec - Integrated Report 2024 | Logicalis International performance
Logicalis, Inc.'s financial statements are considered confidential information. Upon the parties executing a mutual Non-Disclosure Agreement, Logicalis will provide the independently audited financial statements. However, we are providing the following information in hopes it is sufficient to demonstrate Logicalis' financial stability:

Fiscal Year Ending	Net Revenue
February 2025	$ 368 million
February 2024	$ 393 million
February 2023	$ 388 million
February 2022	$ 355 million
February 2021	$ 343 million
February 2020	$ 424 million
February 2019	$ 410 million
February 2018	$ 389 million
February 2017	$ 452 million
February 2016	$ 465 million
February 2015	$ 386 million
February 2014	$ 385 million
February 2013	$ 422 million
February 2012	$ 384 million
February 2011	$ 358 million
February 2010	$ 338 million

February 2009	$ 410 million
February 2008	$ 419 million
February 2007	$ 415 million
February 2006	$ 343 million

Statement of the Project: State in precise terms your understanding of the project as presented by this RFP. Include in this section a detailed summary of the Vendor's approach to providing services required by this RFP and any value-added features that will benefit the County.
Please see our Executive Summary for our Project Statement.

Litigation: Please describe any lawsuits that were filed against your company in the last five (5) years and the results of those lawsuits. Please describe any mediation or arbitrations your company has been involved with in the last five (5) years and the results of those arbitrations/mediations.
From time to time in the ordinary course of its business, Logicalis may be involved in pending or threatened litigation. The outcomes of legal actions are unpredictable and subject to significant uncertainties, and thus it is inherently difficult to determine the likelihood of Logicalis incurring a material loss or quantification of any such loss. Based upon information currently available, including Logicalis' assessment of the facts underlying each matter and advice of counsel, Logicalis' management does not believe that currently pending litigation, individually or in aggregate, will have a material adverse effect on Logicalis' consolidated financial condition, results of operations, cash flows, or performance of its contractual obligations.

12. One (1) original, one (1) paper copy of the proposal shall be received, and date and time stamped by Fiscal Services prior to proposal closing. No proposal received after Close Deadline shall be considered.
Acknowledged.

Pricing

Description of Services	Insert Pricing for each item (if applicable) under the requested year				
	Year 1	Year 2	Year 3	Year 4	Year 5
Implementation and onboarding	Included*	NA	NA	NA	NA
Hardware and Licensing	$ 83,863.33	0	0	0	0
Testing and validation	Included	NA	NA	NA	NA
Ongoing support and maintenance BONUS: Exagrid GUARANTEES no more than 3% support increases year over year from the original purchse price	$ 12,579.50	$ 12,956.89	$ 13,345.59	$ 13,745.96	$ 14,158.34
Training (if applicable)	Included	HA	NA	NA	NA
Total Amt (per year)	$ 96,442.83	$ 12,956.89	$ 13,345.59	$ 13,745.96	$ 14,158.34
Other cost (please provide a description of the service along with price):`					
Rack/Stack Option	$231/hour				
Estimated Freight	$500				
Savings for 5 years PrePaid Support	$ (20,661.44)				
5-year prepaid investment (Annual Allocation for Planning Purposes Only. 1st year $9,224.95)		$9,224.97	$9,224.97	$9,224.97	$9,224.97
Total price for other cost		$	$	$	$
Total amount for 5 years (If support is paid Annually), includes freight estimate, does not include rack/stack	$ 151,149.60				
Total amount for 5 years (If support is prepaid), includes freight estimate, does not include rack/stack	$ 130,488.16				

Submitted By:
Signature: [signature] Title: Regional Vice President

Business Name: Logicalis, Inc. Contact Email: Lisa.Nowak@us.Logicalis.com

Address: 2600 W Big Beaver Rd Suite 150
Troy, MI 48084 Date: 5-13-26

LOGICALIS
Architects of Change

Genesee Co: Immutable Storage 26-487_1 Year
Quotation # 2026-236841v2

Customer Name & Address	Logicalis Account Executive
Derek Jones Genesee County 324 S. Saginaw St. Suite 9A Flint, MI 48502 810-257-3851 djones@geneseecountymi.gov	Lisa Nowak Logicalis Inc. 2600 W. Big Beaver Rd. Ste150 Troy, MI 48084 +1 5173361052 lisa.nowak@us.logicalis.com
Bill To Address	**Ship to Address**
Genesee County 324 S. Saginaw St. Suite 9A Flint, MI 48502 ATTN: Derek Jones 810-257-3851 djones@geneseecountymi.gov	Genesee County 324 S. Saginaw St. Suite 9A Flint, MI 48502 ATTN: Derek Jones 810-257-3851 djones@geneseecountymi.gov

Quotation expiration date: September 14, 2026

Item	Qty	Part Number	Description	Unit Price	Extended Price
Products					
1	1	EX135-SEC	Disk Capacity: Raw:324TB.Useable: 270TB, 135TB Full Backup. Includes qty 2 10 Gigabit or qty 1 25 Gigabit Add on Cards. Disks are encrypted	$80,833.33	$80,833.33
2	2	EX-10GBE-OPTICAL	10 Gigabit Ethernet Dual Port SFP+ Optical Option for all ExaGrid models. Includes two qualified SFP+ short-range Modules.	$1,515.00	$3,030.00
3	1	EX-1YR-MS-S	One year 5 x 8 Customer Support and product Maintenance	$12,579.50	$12,579.50
				Products Subtotal	$96,442.83

Grand Total	
Products Subtotal:	$96,442.83
Freight Charges (estimated):	$500.00
Grand Total:	**$96,942.83**

Terms and Conditions

Terms Applicable to All Sales

1. In the event Customer chooses to lease the Products and/or Services from a third party leasing company, Customer remains liable for payment to Logicalis for all Products and/or Services purchased until Logicalis receives payment from such leasing company.
2. All items not specifically included in this document are out of scope.
3. Prices are valid for 30 days from date of the document unless otherwise stated.
4. The information in this document is considered proprietary and confidential to Logicalis. By acceptance of this Quotation, Customer agrees to maintain this confidentiality and use such information for internal purposes only.

Terms Applicable for Product Sales

1. Logicalis' Terms and Conditions of Sale, found at us.logicalis.com/tcsales, are incorporated herein by reference.
2. Any variation in quantity or requested delivery may result in price changes.
3. Pricing set forth in this Quotation is based on current pricing from the manufacturer and/or authorized distributor and is subject to change without notice in the event Products' manufacturer/distributor changes the price to Logicalis. Notwithstanding the acceptance of this Quotation by Customer, if any time prior to shipment of the Products, the manufacturer and/or authorized distributor changes its price to Logicalis due to supply chain disruptions, component shortages, currency fluctuations/tariffs, or any other circumstance beyond Logicalis' reasonable control, then Logicalis reserves the right to (a) adjust the price to Customer to reflect the price change; or (b) immediately cancel all or part of an order placed by Customer under this Quotation upon written notice, without penalty or liability. Logicalis will promptly notify Customer upon receiving notice of any manufacturer/distributor price change affecting any Products in this Quotation. If Logicalis adjusts the pricing for the affected Product(s), Customer may choose to proceed at the adjusted price or cancel the order for the affected Product(s) without penalty.
4. Shipping and taxes are added at time of invoice. Shipping charges are subject to handling fe es for specifying carriers and same day shipments.
5. Logicalis collaborates with the OEM/distributor to schedule delivery to Customer's loading dock; inside delivery is available upon request and may increase the cost of delivery.
6. For Cisco Products being resold by Logicalis pursuant to this Quotation, Customer hereby agrees to be bound by the applicable Cisco General Terms (including applicable Offer Descriptions), Buying Programs, Supplemental Terms, and other terms and conditions terms governing the access and use of such Products, which are located at the following link(s) as applicable ("Cisco Terms"): (a) www.cisco.com/c/en/us/about/legal/cloud-and-software/cloud-terms.html for all Product offerings stated therein; and (b) for Products that are packaged Cisco services, https://www.cisco.com/c/dam/en_us/about/doing_business/legal/service_descriptions/docs/Services-Guide.pdf. The Cisco Terms are incorporated herein by reference. For any Cisco Products purchased on a subscription basis, the subscription shall automatically renew for subsequent terms equal in duration to the initial term at Logicalis' then-current prevailing rates in effect at the time of renewal unless Customer, no less than forty-five (45) days prior to the end of the then-current subscription term, either: (a) issues a new purchase order to Logicalis; (b) accepts a Logicalis Quotation for renewal of such Products; or (c) provides written notice of non-renewal to Logicalis.

Quotation Acceptance

By signing below, the undersigned accepts this offer and confirms that he/she is authorized to purchase these items on behalf of Customer. This offer may be accepted by purchase order or other acknowledgement of acceptance, including, without limitation, by signing this document. Any reference to a Customer's Purchase Order or P.O. number does not indicate Logicalis' acceptance of terms and conditions referenced on/attached to any such P.O.

Accepted By: **Genesee County**	Accepted By: **Logicalis, Inc.**
Signature	Signature
Printed Name	Printed Name
Title	Title
Date	Date

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LOGICALIS
Architects of Change

Genesee Co: Immutable Storage 26-487_5 Years
Quotation # 2026-236842v2

Customer Name & Address	Logicalis Account Executive
Derek Jones Genesee County 324 S. Saginaw St. Suite 9A Flint, MI 48502 810-257-3851 djones@geneseecountymi.gov	Lisa Nowak Logicalis Inc. 2600 W. Big Beaver Rd. Ste150 Troy, MI 48084 +1 5173361052 lisa.nowak@us.logicalis.com
Bill To Address	**Ship to Address**
Genesee County 324 S. Saginaw St. Suite 9A Flint, MI 48502 ATTN: Derek Jones 810-257-3851 djones@geneseecountymi.gov	Genesee County 324 S. Saginaw St. Suite 9A Flint, MI 48502 ATTN: Derek Jones 810-257-3851 djones@geneseecountymi.gov

Quotation expiration date: September 14, 2026

Item	Qty	Part Number	Description	Unit Price	Extended Price
Products					
1	1	EX135-SEC	Disk Capacity: Raw:324TB.Useable: 270TB, 135TB Full Backup. Includes qty 2 10 Gigabit or qty 1 25 Gigabit Add on Cards. Disks are encrypted	$80,833.33	$80,833.33
2	2	EX-10GBE-OPTICAL	10 Gigabit Ethernet Dual Port SFP+ Optical Option for all ExaGrid models. Includes two qualified SFP+ short-range Modules.	$1,515.00	$3,030.00
3	1	EX-5YR-MS-S	Five year 5 x 8 Customer Support and product Maintenance	$46,124.83	$46,124.83
				Products Subtotal	$129,988.16

Grand Total	
Products Subtotal:	$129,988.16
Freight Charges (estimated):	$500.00
Grand Total:	**$130,488.16**

Terms and Conditions

Terms Applicable to All Sales

1. In the event Customer chooses to lease the Products and/or Services from a third party leasing company, Customer remains liable for payment to Logicalis for all Products and/or Services purchased until Logicalis receives payment from such leasing company.
2. All items not specifically included in this document are out of scope.
3. Prices are valid for 30 days from date of the document unless otherwise stated.
4. The information in this document is considered proprietary and confidential to Logicalis. By acceptance of this Quotation, Customer agrees to maintain this confidentiality and use such information for internal purposes only.

Terms Applicable for Product Sales

1. Logicalis' Terms and Conditions of Sale, found at us.logicalis.com/tcsales, are incorporated herein by reference.
2. Any variation in quantity or requested delivery may result in price changes.
3. Pricing set forth in this Quotation is based on current pricing from the manufacturer and/or authorized distributor and is subject to change without notice in the event Products' manufacturer/distributor changes the price to Logicalis. Notwithstanding the acceptance of this Quotation by Customer, if any time prior to shipment of the Products, the manufacturer and/or authorized distributor changes its price to Logicalis due to supply chain disruptions, component shortages, currency fluctuations/tariffs, or any other circumstance beyond Logicalis' reasonable control, then Logicalis reserves the right to (a) adjust the price to Customer to reflect the price change; or (b) immediately cancel all or part of an order placed by Customer under this Quotation upon written notice, without penalty or liability. Logicalis will promptly notify Customer upon receiving notice of any manufacturer/distributor price change affecting any Products in this Quotation. If Logicalis adjusts the pricing for the affected Product(s), Customer may choose to proceed at the adjusted price or cancel the order for the affected Product(s) without penalty.
4. Shipping and taxes are added at time of invoice. Shipping charges are subject to handling fe es for specifying carriers and same day shipments.
5. Logicalis collaborates with the OEM/distributor to schedule delivery to Customer's loading dock; inside delivery is available upon request and may increase the cost of delivery.
6. For Cisco Products being resold by Logicalis pursuant to this Quotation, Customer hereby agrees to be bound by the applicable Cisco General Terms (including applicable Offer Descriptions), Buying Programs, Supplemental Terms, and other terms and conditions terms governing the access and use of such Products, which are located at the following link(s) as applicable ("Cisco Terms"): (a) www.cisco.com/c/en/us/about/legal/cloud-and-software/cloud-terms.html for all Product offerings stated therein; and (b) for Products that are packaged Cisco services, https://www.cisco.com/c/dam/en_us/about/doing_business/legal/service_descriptions/docs/Services-Guide.pdf. The Cisco Terms are incorporated herein by reference. For any Cisco Products purchased on a subscription basis, the subscription shall automatically renew for subsequent terms equal in duration to the initial term at Logicalis' then-current prevailing rates in effect at the time of renewal unless Customer, no less than forty-five (45) days prior to the end of the then-current subscription term, either: (a) issues a new purchase order to Logicalis; (b) accepts a Logicalis Quotation for renewal of such Products; or (c) provides written notice of non-renewal to Logicalis.

Quotation Acceptance

By signing below, the undersigned accepts this offer and confirms that he/she is authorized to purchase these items on behalf of Customer. This offer may be accepted by purchase order or other acknowledgement of acceptance, including, without limitation, by signing this document. Any reference to a Customer's Purchase Order or P.O. number does not indicate Logicalis' acceptance of terms and conditions referenced on/attached to any such P.O.

Accepted By: **Genesee County**	Accepted By: **Logicalis, Inc.**
Signature	Signature
Printed Name	Printed Name
Title	Title
Date	Date

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Appendices

Terms & Conditions

Logicalis' proposal will remain valid for 120 days from the date of proposal submission.

Logicalis reserves the right to negotiate terms and conditions with Customer upon being selected as the successful proposer. Additionally, upon selection, Logicalis will develop a Statement of Work for the services to be provided. Signed acceptance of the SOW will be required before resources and delivery of services can be scheduled.

Specific Exceptions/Clarifications
Logicalis is including the following exceptions/clarifications for discussion purposes.

General Information

Document Control

Title	Genesee County - Genesee Co: Immutable Storage 26-487
File Name	Proposal_GENES6137399
Release Date	May 14, 2026

This document is issued as draft and subject to final agreement of terms and conditions intended to be ratified during the process of contract negotiation. Until such time as this process is complete, the sole purpose of this document is to provide information, protected by copyright and confidentiality. This document neither in whole or part forms any binding contract for the services described. The contents of a final Quotation/Statement of Work and final contractual terms are subject to due diligence and successful contract negotiation.

Logicalis US Details

We welcome any inquiries regarding this document, its content, structure or scope. These should be directed to:

Title	Account Executive
Name	Lisa Nowak
Telephone	(517) 336-1052
Email	Lisa.Nowak@us.logicalis.com

Copyright Information

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Freedom of Information

Many of Logicalis' customers are in the public sector and Logicalis is well aware of the obligations imposed on its public sector customers by the United States Freedom of Information Act ('FOIA'). Logicalis' policy is to co-operate with its public sector customers to assist them in meeting their obligations under the FOIA.

Logicalis considers that the following sections of this Response are confidential or commercially sensitive and that disclosure of all or part of the information contained in these sections may harm Logicalis' commercial interests:

Solution Design: The solution has been derived from the intellectual effort, knowhow and expertise of Logicalis staff and consultants and may contain proposals that are original or innovative. The disclosure of this information to Logicalis' competitors may give them an unfair advantage in competing with

Logicalis in future similar projects.

Costs Section: Disclosure of Logicalis' costs to competitors is likely to give those competitors an unfair advantage in competing against Logicalis in future bids and may reduce the competitiveness of future tenders.

Customer References: Information relating to customers is frequently protected by confidentiality obligations where disclosure is permitted only for specified purposes, such as providing details to potential new customers. Disclosure of this information to others may be in breach of these confidentiality obligations and disclosure of this information to competitors may harm Logicalis' commercial interests by assisting competitors to compete for business from those customers.

LOGICALIS
Architects of Change

2600 W. Big Beaver Rd.
Suite 150
Troy, MI 48084

T 248.957.5600
F 248.957.5601
www.us.logicalis.com

Genesee County ("the County")
RFP #26-487 IMMUTABLE STORAGE ("RFP")
Due Date: May 14, 2026

EXCEPTIONS

Logicalis, Inc., ("Logicalis" or "Proposer") submits its Response to the RFP contingent upon the exceptions identified herein, which are incorporated by reference into its Response. Logicalis takes general exception to this RFP and reserves the right to negotiate an appropriate agreement with the County upon successful award. Additionally, Logicalis takes specific exceptions to the terms and conditions of the RFP as stated below and proposes that for any contractual terms not addressed in the RFP, Logicalis' Terms and Conditions of Sale found at https://www.us.logicalis.com/tcsales which are incorporated herein by reference, shall apply. These exceptions are incorporated by reference into Logicalis' response and this document shall be considered part of any resulting contract. In the event the County does not agree to any of the Exceptions, Logicalis is willing to negotiate such terms upon successful award. Acceptance of a Quotation and/or Statement of Work issued pursuant to the mutually agreeable resulting contract will be required before resources and delivery of products or services can be scheduled.

SPECIFIC EXCEPTION TO RFP #26-487 IMMUTABLE STORAGE

1. **SECTION 9 - INSURANCE REQUIRED FROM PROPOSERS**: Logicalis reserves the right to discuss its deductibles/SIRs and the equivalent ISO endorsement forms upon successful award. All required insurance total amounts on your insurance checklist are standard insurance coverage we can provide. Logicalis's insurer could not return the signed form in time for this submission because they require attorney review before signing any documents. In lieu of this, they have provided the Certificate of Liablity Insurance.

2. **SECTION 9 - INSURANCE REQUIRED FROM PROPOSERS – 1.2 Indemnification**: Logicalis takes exception to this clause. Logicalis cannot agree to indemnify, defend, and hold harmless the County from any and all claims, damages, or liability. Logicalis proposes the following:

   > Logicalis shall indemnify and hold harmless the County, its officials, officers, agents, and employees from and against third-party claims only, to the extent arising out of bodily injury or tangible property damage caused by the negligent acts or omissions of Logicalis or those for whom Logicalis is legally responsible. Logicalis shall have no obligation to indemnify the County for claims arising from the County's own negligence or willful misconduct. Logicalis' indemnification obligations shall not be expanded beyond the scope of coverage required to be maintained under the Contract.

Logicalis would like to make a point of clarification regarding the Warranty Offered in this RFP:

LOGICALIS
Architects of Change

2600 W. Big Beaver Rd.
Suite 150
Troy, MI 48084

T 248.957.5600
F 248.957.5601
www.us.logicalis.com

3. **SECTION 6- SCOPE OF WORK - Warranty & Support**: Logicalis is a reseller of products and does not manufacture the products. The warranty being purchased is provided by Exagrid Systems, Inc.
    a. **Product Returns and Warranty Assistance.**
        i. The County acknowledges that Logicalis is reselling all products purchased by the County and that products are manufactured and/or delivered by third parties.
        ii. To the extent available, Logicalis shall pass through to the County the manufacturer's warranties applicable to each product and agrees to reasonably facilitate the manufacturer's return and warranty processes. In no event will Logicalis provide return rights or warranty coverage beyond that provided by the manufacturer. Products accepted for return are subject to the manufacturer's applicable restocking fees.
        iii. The County acknowledges that the terms and conditions governing the use of products are governed by the applicable manufacturer's license agreements and are exclusively between the County and the manufacturer of such products.

Required Forms

REFERENCES

List 3 references of similar projects

Company/Client:	Contacts:
Michigan Court of Appeals Contacts:	Name: Chris Poletti
	Title: Infrastructure System Manager
	Phone: (517) 373-9492
Dates of Service:	Email: cpoletti@courts.mi.gov
June 2024 - Current	Address: Hall of Justice, 925 W Ottawa St
	City, State: Lansing, MI 48915-1741

Company/Client:	Contacts:
Berrien County Contacts:	Name: Chris Swihart
	Title: Information Systems Director
	Phone: 269.983.7111 Ext. 8473
Dates of Service:	Email: cswihart@berriencounty.org
2012 - Current	Address: 701 Main St
	City, State: Saint Joseph, MI 49085-1316

Company/Client:	Contacts:
Michigan Supreme Court, Judicial Information Services Contacts	Name: Scott Reese
	Title: Server & Storage Manager
	Phone: (517) 373-5506
Dates of Service:	Email: reeses@courts.mi.gov
July 2024 - Current	Address: : 925 W. Ottawa
	City, State: Lansing, MI 48915-1741

Description of Services	Insert Pricing for each item (If applicable) under the requested year				
	Year 1	Year 2	Year 3	Year 4	Year 5
Implementation and onboarding	Included*	NA	NA	NA	NA
Hardware and Licensing	$ 83,863.33	0	0	0	0
Testing and validation	Included	NA	NA	NA	NA
Ongoing support and maintenance BONUS: Exagrid GUARANTEES no more than 3% support increases year over year from the original purchse price	$ 12,579.50	$ 12,956.89	$ 13,345.59	$ 13,745.96	$ 14,158.34
Training (if applicable)	Included	HA	NA	NA	NA
Total Amt (per year)	$ 96,442.83	$ 12,956.89	$ 13,345.59	$ 13,745.96	$ 14,158.34
Other cost (please provide a description of the service along with price):					
Rack/Stack Option	$231/hour				
Estimated Freight	$500				
Savings for 5 years PrePaid Support	$ (20,661.44)				
5-year prepaid investment (Annual Allocation for Planning Purposes Only. 1st year $9,224.95)		$9,224.97	$9,224.97	$9,224.97	$9,224.97
Total price for other cost		$	$	$	$
Total amount for 5 years (If support is paid Annually), includes freight estimate, does not include rack/stack	$ 151,149.60				
Total amount for 5 years (If support is prepaid), includes freight estimate, does not include rack/stack	**$ 130,488.16**				

Submitted By:
Signature: _____ Title: Regional Vice President

Business Name: Logicalis, Inc. Contact Email: Lisa.Nowak@us.Logicalis.com

Address: 2600 W Big Beaver Rd Suite 150
Troy, MI 48084 Date: 5-13-26

SIGNATURE PAGE
GENESEE COUNTY RFP # 26-487
Immutable Storage

The undersigned represents that he or she:

1. is duly authorized to make binding offers on behalf of the company,
2. has read and understands all information, terms, and conditions in the RFP,
3. has not engaged in any collusive actions with any other potential proposers for this RFP,
4. hereby offers to enter into a binding contract with Genesee County for the products and services herein offered, if selected by Genesee County within 120 days from proposal due date,
5. certify that it, its principals, and its key employees are not "Iran linked businesses," as that term is described in the Iran Economic Sanctions Act, P.A. 2012, No. 517, codified as MCL 129.311, et seq.
6. acknowledges the following addenda 1 issued as part of the RFP:

Conflict of Interest:

x To the best of our knowledge, the undersigned firm has no potential conflict of interest due to any other County contracts, or property interest for this proposal.

OR

___ The undersigned firm by attachment to this form, submits information which may be a potential conflict of interest due to other County contracts, or property interest for this Proposal.

Exceptions to Solicitation and/or Standard Contract: NO_____ YES__x__ (include attached statement)

Name (typed): Peter Levy

Signature: _____ Title: Director of Area Sales, Cleveland

Date: 5-13-26

Company: Logicalis, Inc.

Federal Employee Identification Number (FEIN): 13-4000122

DUNS Number: 807643150

Contact Person of company representative for matters regarding this RFP

Lisa Nowak		Account Executive	
CONTACT NAME		POSITION	
2600 W. Big Beaver Rd Troy, MI 48084			
MAILING ADDRESS	CITY	STATE	ZIP CODE
517-336-1052		Lisa.Nowak@US.Logicalis.com	
PHONE	FAX	E-MAIL	

CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)
05/14/2026

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:	
Aon Risk Services Central, Inc. 3000 Town Center Suite 2750 - 27th Floor Southfield MI 48075 USA	PHONE (A/C. No. Ext): (866) 283-7122	FAX (A/C. No.): (800) 363-0105
	E-MAIL ADDRESS:	

INSURED	INSURER(S) AFFORDING COVERAGE		NAIC #
Logicalis, Inc. 2600 W Big Beaver Road Suite 150 Troy MI 48084 USA	INSURER A:	Great Northern Insurance Co.	20303
	INSURER B:	Pacific Indemnity Co	20346
	INSURER C:	Federal Insurance Company	20281
	INSURER D:	ACE American Insurance Company	22667
	INSURER E:		
	INSURER F:		

COVERAGES **CERTIFICATE NUMBER:** 570119958356 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS. **Limits shown are as requested**

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT X LOC OTHER:			35933780	08/01/2025	08/01/2026	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$1,000,000 $1,000,000 $10,000 $1,000,000 $2,000,000 $2,000,000
A	AUTOMOBILE LIABILITY X ANY AUTO OWNED AUTOS ONLY HIRED AUTOS ONLY SCHEDULED AUTOS NON-OWNED AUTOS ONLY X Comp Ded:$1,000 X Coll Ded: $1,000			7358-48-78	08/01/2025	08/01/2026	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$1,000,000
C	UMBRELLA LIAB X OCCUR X EXCESS LIAB CLAIMS-MADE DED RETENTION			79899639	08/01/2025	08/01/2026	EACH OCCURRENCE AGGREGATE	$4,000,000 $4,000,000
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		2671736517	08/01/2025	08/01/2026	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE-EA EMPLOYEE E.L. DISEASE-POLICY LIMIT	$1,000,000 $1,000,000 $1,000,000
D	E&O - Professional Liability - Primary			D02372988 Claims Made SIR applies per policy terms & conditions	08/01/2025	08/01/2026	E&O Aggregate Cyber Aggregate	$3,000,000 $3,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Re: RFP: 26-487 - Immutable Storage. Genesee County is included as Additional Insured in accordance with the policy provisions of the General Liability and Automobile Liability policies. The General Liability and Automobile Liability policies evidenced herein is Primary and Non-Contributory to other insurance available to an Additional Insured, but only in accordance with the policy's provisions. The above-referenced General Liability and Workers Compensation policies have no deductible/SIR. There is $0 deductible for owned vehicles on the above-referenced Automobile Liability policy. For Hired or Borrowed Vehicles Deductibles: Comprehensive $1,000 deductible for each covered auto for loss caused by theft or mischief or vandalism. Collision: $1,000 deductible for each covered auto.

CERTIFICATE HOLDER

Genesee County
Attn: Risk Management
324 S Saginaw Street
Suite 9A
Flint MI 48502 USA

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Aon Risk Services Central, Inc.

Holder Identifier : CDB

Certificate No : 570119958356

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CHUBB®

Liability Insurance

Endorsement

Policy Period	AUGUST 1, 2025 TO AUGUST 1, 2026
Effective Date	AUGUST 1, 2025
Policy Number	3593-37-80 GAB
Insured	LOGICALIS US HOLDINGS, INC.
Name of Company	GREAT NORTHERN INSURANCE COMPANY
Date Issued	AUGUST 4, 2025

This Endorsement applies to the following forms:

GENERAL LIABILITY

Under Who Is An Insured, the following provision is added.

Who Is An Insured

Additional Insured - Scheduled Person Or Organization

Persons or organizations shown in the Schedule are **insureds**; but they are **insureds** only if you are obligated pursuant to a contract or agreement to provide them with such insurance as is afforded by this policy.

However, the person or organization is an **insured** only:

- if and then only to the extent the person or organization is described in the Schedule;
- to the extent such contract or agreement requires the person or organization to be afforded status as an **insured**;
- for activities that did not occur, in whole or in part, before the execution of the contract or agreement; and
- with respect to damages, loss, cost or expense for injury or damage to which this insurance applies.

No person or organization is an **insured** under this provision:

- that is more specifically identified under any other provision of the Who Is An Insured section (regardless of any limitation applicable thereto).
- with respect to any assumption of liability (of another person or organization) by them in a contract or agreement. This limitation does not apply to the liability for damages, loss, cost or expense for injury or damage, to which this insurance applies, that the person or organization would have in the absence of such contract or agreement.

CHUBB®

Liability Endorsement
(continued)

Under Conditions, the following provision is added to the condition titled Other Insurance.

Conditions

Other Insurance – Primary, Noncontributory Insurance – Scheduled Person Or Organization

If you are obligated, pursuant to a contract or agreement, to provide the person or organization shown in the Schedule with primary insurance such as is afforded by this policy, then in such case this insurance is primary and we will not seek contribution from insurance available to such person or organization.

Schedule

Persons or organizations that you are obligated, pursuant to a contract or agreement, to provide with such insurance as is afforded by this policy.

All other terms and conditions remain unchanged.

Authorized Representative

Who Is An Insured
(continued)

Volunteers

Persons who are volunteer workers for you are **insureds**; but they are **insureds** only for acts within the scope of their activities for you and at your direction.

Real Estate Managers

Persons (other than your **employees**) or organizations acting as your real estate managers are **insureds**; but they are **insureds** only with respect to their duties as your real estate managers.

Permissive Users Of Mobile Equipment

With respect to **mobile equipment** registered in your name under a motor vehicle registration law:

A. persons driving such equipment on a public road with your permission are **insureds**; and

B. persons or organizations responsible for the conduct of such persons described in subparagraph A. above are **insureds**; but they are **insureds** only with respect to the operation of the equipment and only if no other insurance of any kind is available to them.

However, no person or organization is an **insured** with respect to:

- **bodily injury** to any co-**employee** of the person driving the equipment; or
- **property damage** to any property owned or occupied by or loaned or rented to you, or in your charge or the charge of the employer of any person who is an **insured** under this provision.

Vendors

Persons or organizations who are vendors of **your products** are **insureds**; but they are **insureds** only with respect to their liability for damages for **bodily injury** or **property damage** resulting from the distribution or sale of **your products** in the regular course of their business and only if this insurance applies to the **products-completed operations hazard**.

However, no such person or organization is an **insured** with respect to any:

- assumption of liability by them in a contract or agreement. This limitation does not apply to the liability for damages for **bodily injury** or **property damage** that such vendor would have in the absence of such contract or agreement;
- representation or warranty unauthorized by you;
- physical or chemical change in **your products** made intentionally by the vendor;
- repackaging, unless unpacked solely for the purpose of inspection, demonstration or testing, or the substitution of parts under instruction from the manufacturer and then repacked in the original container;
- failure to make such inspections, adjustments, tests or servicing as the vendor has agreed to make or normally undertakes to make in the usual course of business in connection with the distribution or sale of **your products**;
- demonstration, installation, servicing or repair operations, except such operations performed at the vendor's premises in connection with the sale of **your products**; or
- of **your products** which, after distribution or sale by you, have been labeled or relabeled or used as a container, ingredient or part of any other thing or substance by or for the vendor.

Who Is An Insured

Vendors (continued)

Further, no person or organization from whom you have acquired **your products**, or any container, ingredient or part entering into, accompanying or containing **your products**, is an **insured** under this provision.

Lessors Of Equipment

Persons or organizations from whom you lease equipment are **insureds**; but they are **insureds** only with respect to the maintenance or use by you of such equipment and only if you are contractually obligated to provide them with such insurance as is afforded by this contract.

However, no such person or organization is an **insured** with respect to any:

- damages arising out of their sole negligence; or
- **occurrence** that occurs, or offense that is committed, after the equipment lease ends.

Lessors Of Premises

Persons or organizations from whom you lease premises are **insureds**; but they are **insureds** only with respect to the ownership, maintenance or use of that particular part of such premises leased to you and only if you are contractually obligated to provide them with such insurance as is afforded by this contract.

However, no such person or organization is an **insured** with respect to any:

- damages arising out of their sole negligence;
- **occurrence** that occurs, or offense that is committed, after you cease to be a tenant in the premises; or
- structural alteration, new construction or demolition operations performed by or on behalf of them.

Subsidiary Or Newly Acquired Or Formed Organizations

If there is no other insurance available, the following organizations will qualify as named **insureds**:

- a subsidiary organization of the first named **insured** shown in the Declarations of which, at the beginning of the policy period and at the time of loss, such first named **insured** controls, either directly or indirectly, more than fifty (50) percent of the interests entitled to vote generally in the election of the governing body of such organization; or
- a subsidiary organization of the first named **insured** shown in the Declarations that such first named **insured** acquires or forms during the policy period, if at the time of loss such first named **insured** controls, either directly or indirectly, more than fifty (50) percent of the interests entitled to vote generally in the election of the governing body of such organization.

Limitations On Who Is An Insured

A. Except to the extent provided under the Subsidiary Or Newly Acquired Or Formed Organizations provision above, no person or organization is an **insured** with respect to the conduct of any person or organization that is not shown as a named **insured** in the Declarations.

B. No person or organization is an **insured** with respect to the:

1. ownership, maintenance or use of any assets; or
2. conduct of any person or organization whose assets, business or organization;

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

COMMERCIAL AUTOMOBILE BROAD FORM ENDORSEMENT

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM

To the extent that the provisions of this endorsement provide broader benefits to the "insured" than other provisions of the Business Auto Coverage Form, the provisions of this endorsement apply.

1. EXTENDED CANCELLATION CONDITION

Paragraph A.2.b. – CANCELLATION of the COMMON POLICY CONDITIONS form IL 00 17 is deleted and replaced with the following:

b. 60 days before the effective date of cancellation if we cancel for any other reason.

2. BROAD FORM INSURED

A. Subsidiaries and Newly Acquired or Formed Organizations As Insureds

The Named Insured shown in the Declarations is amended to include:

(1) Any legally incorporated subsidiary in which you own more than 50% of the voting stock on the effective date of the Coverage Form. However, the Named Insured does not include any subsidiary that is an "insured" under any other automobile policy or would be an "insured" under such a policy but for its termination or the exhaustion of its Limit of Insurance.

(2) Any organization that is acquired or formed by you and over which you maintain majority ownership. However, the Named Insured does not include any newly formed or acquired organization:

(a) That is a partnership, joint venture or limited liability company;

(b) That is an "insured" under any other automobile policy;

(c) That has exhausted its Limit of Insurance under any other policy; or

(d) 180 days or more after its acquisition or formation by you, unless you have given us notice of the acquisition or formation.

Coverage does not apply to "bodily injury" or "property damage" that results from an "accident" that occurred before you formed or acquired the organization.

B. Employees as Insureds

Paragraph A.1. – WHO IS AN INSURED – of SECTION II – COVERED AUTOS LIABILITY COVERAGE is amended to add the following:

d. Any "employee" of yours while using a covered "auto" you don't own, hire or borrow in your business or your personal affairs.

C. Lessors as Insureds

Paragraph A.1. – WHO IS AN INSURED – of SECTION II – COVERED AUTOS LIABILITY COVERAGE is amended to add the following:

e. The lessor of a covered "auto" while the "auto" is leased to you under a written agreement if:

(1) The agreement requires you to provide direct primary insurance for the lessor; and

(2) The "auto" is leased without a driver.

Such leased "auto" will be considered a covered "auto" you own and not a covered "auto" you hire.

D. Persons And Organizations As Insureds Under A Written Insured Contract

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Paragraph A.1 – WHO IS AN INSURED – of SECTION II – COVERED AUTOS LIABILITY COVERAGE is amended to add the following:

f. Any person or organization with respect to the operation, maintenance or use of a covered "auto", provided that you and such person or organization have agreed under an express provision in a written "insured contract", written agreement or a written permit issued to you by a governmental or public authority to add such person or organization to this policy as an "insured".

However, such person or organization is an "insured" only:

(1) with respect to the operation, maintenance or use of a covered "auto"; and

(2) for "bodily injury" or "property damage" caused by an "accident" which takes place after:

(a) You executed the "insured contract" or written agreement; or

(b) The permit has been issued to you.

If you have agreed in a written contract or written agreement that this insurance is primary and non-contributory with the additional insured's own insurance, this insurance is primary and we will not seek contribution from that other insurance.

This provision does not apply to other insurance to which the additional insured has also been added as an additional insured.

3. SUPPLEMENTARY PAYMENTS – INCREASED LIMITS

Under SECTION II – COVERED AUTOS LIABILITY COVERAGE, subsection A. Coverage, paragraph 2. Coverage Extensions, subparagraph a. Supplementary Payments, subparagraphs (2) and (4) are deleted and replaced by the following:

(2) Up to $5,000 for cost of bail bonds (including bonds for related traffic law violations) required because of an "accident" we cover. We do not have to furnish these bonds.

(4) All reasonable expenses incurred by the "insured" at our request, including actual loss of earnings, up to $1,000 a day because of time off from work.

4. AMENDED FELLOW EMPLOYEE EXCLUSION

EXCLUSION 5. – FELLOW EMPLOYEE – of SECTION II – COVERED AUTOS LIABILITY COVERAGE is amended to add the following:

However, this exclusion only applies if the fellow "employee" is entitled to benefits under any of the following: workers' compensation, unemployment compensation or disability benefits law, or any similar law.

5. PHYSICAL DAMAGE – ADDITIONAL TEMPORARY TRANSPORTATION EXPENSE COVERAGE

Paragraph A.4.a. – TRANSPORTATION EXPENSES – of SECTION III – PHYSICAL DAMAGE COVERAGE is amended to provide a limit of $60 per day, subject to a maximum limit of $1,800.

6. AUTO LOAN/LEASE GAP COVERAGE

Paragraph A.4. – COVERAGE EXTENSIONS – of SECTION III – PHYSICAL DAMAGE COVERAGE is amended to add the following:

c. **Unpaid Loan or Lease Amounts**

In the event of a total "loss" to a covered "auto", we will pay any unpaid amount due on the loan or lease for a covered "auto" minus:

1. The amount paid under the Physical Damage Coverage Section of the policy; and

2. Any:

a. Overdue loan/lease payments at the time of the "loss";

b. Financial penalties imposed under a lease for excessive use, abnormal wear and tear or high mileage;

c. Security deposits not returned by the lessor;

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d. Costs for extended warranties, Credit Life Insurance, Health, Accident or Disability Insurance Purchased with the loan or lease: and

e. Carry-over balances from previous loans or leases.

We will pay for any unpaid amount due on the loan or lease if caused by:

(1) Other than collision only if the Declarations indicate that Comprehensive Coverage is provided for any covered "auto";

(2) Specified Causes of Loss only if the Declarations indicate that Specified Causes of Loss Coverage is provided for any covered "auto"; or

(3) Collision only if the Declarations indicate that Collision Coverage is provided for any covered "auto".

The Auto Loan/Lease Gap Coverage insurance provided by this endorsement is excess over any other collectible insurance including but not limited to any coverage provided by or purchased from the lessor.

7. VEHICLE VINYL WRAP COVERAGE

Paragraph A.4. – COVERAGE EXTENSIONS – of SECTION III – PHYSICAL DAMAGE COVERAGE is amended to add the following:

d. **Vehicle Vinyl Wrap Coverage**

In the event of a total "loss" to an "auto" for which Comprehensive, Specified Causes of Loss, or Collision coverages are provided under this Coverage Form, then such Physical Damage Coverages are amended to add the following:

In addition to the actual cash value of the "auto", we will pay up to $1,000 for vinyl vehicle wraps which are displayed on the covered "auto" at the time of loss. Regardless of the number of "autos" deemed a total "loss", the most we will pay under this Coverage for any one "loss" is $2,000.

For purposes of this coverage, signs or other graphics painted or magnetically affixed to the vehicle are not considered vehicle wraps.

8. PERSONAL PROPERTY COVERAGE

Paragraph A.4. – COVERAGE EXTENSIONS – of SECTION III – PHYSICAL DAMAGE COVERAGE is amended to add the following:

e. **Personal Property Coverage**

We will pay up to $1,000 for "loss" to wearing apparel and other personal effects which are:

(1) Owned by an "insured"; and

(2) In or on your covered "auto".

This Coverage applies only:

(1) In the event of total theft of your covered "auto;" and

(2) If such wearing apparel or other personal effects cannot be recovered.

This Coverage is not subject to a deductible.

The limit shown above applies in addition to any other insurance for personal property provided elsewhere in this policy.

This coverage only applies to "autos" for which Comprehensive or Specified Causes of Loss coverages are provided under this Coverage Form.

9. REPLACEMENT WITH A HYBRID OR ALTERNATIVE FUEL SOURCE AUTO

Paragraph A.4. – COVERAGE EXTENSIONS – of SECTION III – PHYSICAL DAMAGE COVERAGE is amended to add the following:

f. **Replacement Of A Private Passenger Auto With A Hybrid Or Alternative Fuel Source Auto**

In the event of a total "loss" to an "auto" for which Comprehensive, Specified Causes of Loss, or Collision coverages are provided under this Coverage Form, we will pay the actual cash value, plus an additional 10%

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(up to a maximum of $2,500), if the replacement vehicle is a hybrid vehicle or alternative fuel source vehicle.

10. RENTAL AGENCY EXPENSE

Paragraph A.4. – COVERAGE EXTENSIONS – of SECTION III – PHYSICAL DAMAGE COVERAGE is amended to add the following:

g. Rental Expense

We will pay the following expenses that you or any of your "employees" are legally obligated to pay because of a written contract or agreement entered into for use of a rental vehicle in the conduct of your business:

MAXIMUM WE WILL PAY FOR ANY ONE CONTRACT OR AGREEMENT:

(1) $2,500 for loss of income incurred by the rental agency during the period of time that vehicle is out of use because of actual damage to, or "loss" of, that vehicle, including income lost due to absence of that vehicle for use as a replacement;

(2) $2,500 for decrease in trade-in value of the rental vehicle because of actual damage to that vehicle arising out of a covered "loss"; and

(3) $2,500 for administrative expenses incurred by the rental agency, as stated in the contract or agreement.

(4) $7,500.00 maximum total amount for paragraphs a., b. and c. combined.

11. EXTRA EXPENSE – BROADENED COVERAGE

Paragraph A.4. – COVERAGE EXTENSIONS – of SECTION III – PHYSICAL DAMAGE COVERAGE is amended to add the following:

h. Recovery Expense

We will pay for the expense of returning a stolen covered "auto" to you.

12. AIRBAG COVERAGE

Paragraph B.3.a. – EXCLUSIONS – of SECTION III – PHYSICAL DAMAGE COVERAGE does not apply to the accidental or unintended discharge of an airbag. Coverage is excess over any other collectible insurance or warranty specifically designed to provide this coverage.

13. SOUND RECEIVING AND TRANSMITTING EQUIPMENT – BROADENED COVERAGE

Paragraph a. under the statement "Exclusions 4.c. and 4.d. do not apply" under EXCLUSIONS – of SECTION III – PHYSICAL DAMAGE COVERAGE is deleted and replaced with the following:

a. Equipment designed solely for receiving or transmitting sound and accessories used with such equipment, provided such equipment is permanently installed in the covered "auto" at the time of the "loss" or such equipment is removable from the housing unit which is permanently installed in the covered "auto" at the time of the "loss", and such equipment is designed to be operated solely by use of the power from the "auto's" electrical system, in or upon the covered "auto"; or

14. GLASS REPAIR – WAIVER OF DEDUCTIBLE

Under Paragraph D. – DEDUCTIBLE – of SECTION III – PHYSICAL DAMAGE COVERAGE the following is added:

No deductible applies to glass damage if the glass is repaired rather than replaced.

15. TWO OR MORE DEDUCTIBLES

Paragraph D. – DEDUCTIBLE – of SECTION III – PHYSICAL DAMAGE COVERAGE is amended to add the following:

If this Coverage Form and any other Coverage Form or policy issued to you by us that is not an automobile policy or Coverage Form applies to the same "accident", the following applies:

(1) If the deductible under this Business Auto Coverage Form is the smaller (or smallest) deductible, it will be waived; or

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(2) If the deductible under this Business Auto Coverage Form is not the smaller (or smallest) deductible, it will be reduced by the amount of the smaller (or smallest) deductible.

16. AMENDED DUTIES IN THE EVENT OF ACCIDENT, CLAIM, SUIT OR LOSS

Paragraph A.2.a. – DUTIES IN THE EVENT OF AN ACCIDENT, CLAIM, SUIT OR LOSS of SECTION IV – BUSINESS AUTO CONDITIONS is deleted and replaced with the following:

a. In the event of "accident", claim, "suit" or "loss", you must promptly notify us when the "accident" is known to:

1. You or your authorized representative, if you are an individual;
2. A partner, or any authorized representative; if you are a partnership;
3. A member, if you are a limited liability company; or
4. An executive officer, insurance manager, or authorized representative, if you are an organization other than a partnership or limited liability company.

Knowledge of an "accident", claim, "suit" or "loss" by other persons does not imply that the persons listed above have such knowledge.

Notice to us should include:

1. How, when and where the "accident" or "loss" occurred;
2. The insured's name and address; and
3. To the extent possible, the names and addresses of any injured persons or witnesses.

17. WAIVER OF SUBROGATION

Paragraph A.5. – TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US of SECTION IV – BUSINESS AUTO CONDITIONS is deleted and replaced with the following:

5. We will waive the right of recovery we would otherwise have against another person or organization for "loss" to which this insurance applies, provided the "insured" has waived their rights of recovery against such person or organization in a written contract or agreement that is executed before such "loss".

To the extent that the "insured's" rights to recover damages for all or part of any payment made under this insurance has not been waived, those rights are transferred to us. That person or organization must do everything necessary to secure our rights and must do nothing after "accident" or "loss" to impair them. At our request, the insured will bring suit or transfer those rights to us and help us enforce them.

18. UNINTENTIONAL FAILURE TO DISCLOSE HAZARDS

Paragraph B.2. – CONCEALMENT, MISREPRESENTATION or FRAUD of SECTION IV – BUSINESS AUTO CONDITIONS – is deleted and replaced with the following:

If you unintentionally fail to disclose any hazards existing at the inception date of your policy, we will not void coverage under this Coverage Form because of such failure.

19. AUTOS RENTED BY EMPLOYEES

Paragraph 5.b. – OTHER INSURANCE of SECTION IV – BUSINESS AUTO CONDITIONS – is deleted and replaced with the following:

e. Any "auto" hired or rented by your "employee" on your behalf and at your direction will be considered an "auto" you hire. If an "employee's" personal insurance also applies on an excess basis to a covered "auto" hired or rented by your "employee" on your behalf and at your direction, this insurance will be primary to the "employee's" personal insurance.

20. HIRED AUTO – COVERAGE TERRITORY

Paragraph B.7.e. (1) – POLICY PERIOD, COVERAGE TERRITORY of SECTION IV – BUSINESS AUTO CONDITIONS is deleted and replaced with the following:

(1) A covered "auto" of the private passenger type is leased, hired, rented or borrowed without a driver for a period of 60 days or less; and

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21. RESULTANT MENTAL ANGUISH COVERAGE

Paragraph C. of – SECTION V – DEFINITIONS is deleted and replaced by the following:

"Bodily injury" means bodily injury, sickness or disease sustained by any person, including mental anguish or death resulting from any of these.

All other terms and conditions remain unchanged.

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Data Sheets

★★★★★

ExaGrid Tiered Backup Storage

Fastest Backups

Fastest Recoveries

Unparalleled, Cost-effective Scale-out

Comprehensive Security and Ransomware Recovery

ExaGrid

Price Protection Guarantee

ExaGrid is confident in its product, its systems sizing tools, and approach to pricing.

Vendors often offer a very low price to gain a customer's business but when the customer orders subsequent appliances or systems, the price will be higher. This is a common practice for many large industry vendors.

In order to shield you against these practices, ExaGrid has the following written policy and guarantee:

> **Whatever price you pay for a particular ExaGrid model today, ExaGrid will guarantee, for 60 months, that the price will not be increased (subject to exchange rate fluctuations) for any purchases of that same model. In addition, yearly maintenance and support as well as Cloud Tier subscription pricing will not be increased by more than 3% per year. The price guarantee stays in place for 60 months from date of the initial purchase of that model.**

For example, if you purchase one or several EX84 appliance models today, then you can purchase additional EX84 appliance models at the same price for the next 60 months.

If a vendor will not give you this type of guarantee in writing, then there is clearly a chance they will charge you more for the same product in the future. This is a hidden future cost that impacts your budget. ExaGrid's guarantee is in writing. If other vendors offer similar programs, it is recommended that you ask them to put the guarantee in writing.

On top of the above guarantee, ExaGrid's scale-out architecture is built to allow seamless scalability that avoids hidden future costs of expansion. ExaGrid's architecture scales by adding full servers (processor, memory, bandwidth, and disk) and guards against the forklift upgrade points of a front-end server architecture and disk shelves. With the front-end server approach, as data grows, the front-end server with additional disk shelves cannot keep up with the growth. As a result, you will need to replace the front-end server, the most costly component. The front-end server with disk shelf approach is a hidden future cost that impacts your budget.

With ExaGrid, future costs are known. This makes future budget planning simple and straightforward.

- No future forklift upgrades
- No price increases for 60 months for appliance models purchased today
- Yearly maintenance and support will not be increased by more than 3% per year
- Cloud Tier subscription pricing will not be increased by more than 3% per year
- ExaGrid quotes and invoices in US dollars and is not responsible for currency fluctuation

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EXAGRID

★★★★★

ExaGrid Tiered Backup Storage

Fastest Backups

Fastest Recoveries

Unparalleled, Cost-effective Scale-out

Comprehensive Security and Ransomware Recovery

veeam Ready Object Immutability | SOSAPI

veeam Ready Repository

Veeam with ExaGrid Tiered Backup Storage

Veeam Customers Can Add ExaGrid to Improve Performance, Security, and the Storage Economics of Their Backup Environments

ExaGrid Tiered Backup Storage integrated with Veeam. Together, Veeam and ExaGrid backup storage provide a cost-effective backup solution that scales to meet the needs of demanding enterprise environments.

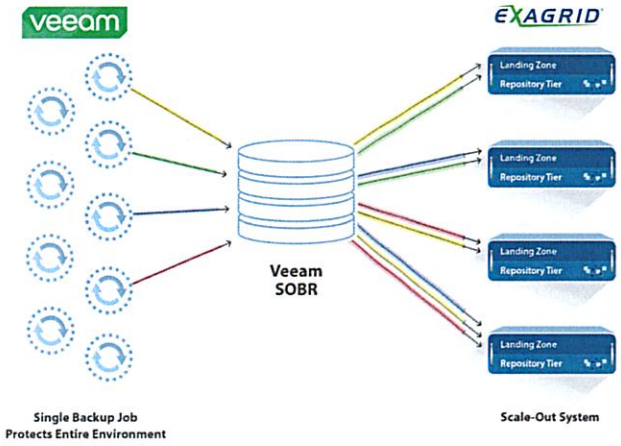
ExaGrid is changing the economics of Veeam backup. ExaGrid's cost-effective scale-out growth model has a lower cost up front and a lower cost over time compared to standard disk solutions and traditional deduplication storage solutions.

ExaGrid supports Veeam's Scale-Out Backup Repository (SOBR). This allows backup administrators using Veeam to direct all jobs to a single repository made up of ExaGrid appliances in a single scale-out system, automating backup job management. ExaGrid's support of SOBR also automates the addition of appliances into an existing ExaGrid system as data grows by simply adding the new appliances to a Veeam repository group.

The combination of Veeam SOBR and ExaGrid's appliances in a scale-out system creates a tightly integrated end-to-end backup solution that allows backup administrators to leverage the advantages of a scale-out approach in both the backup application as well as the backup storage.

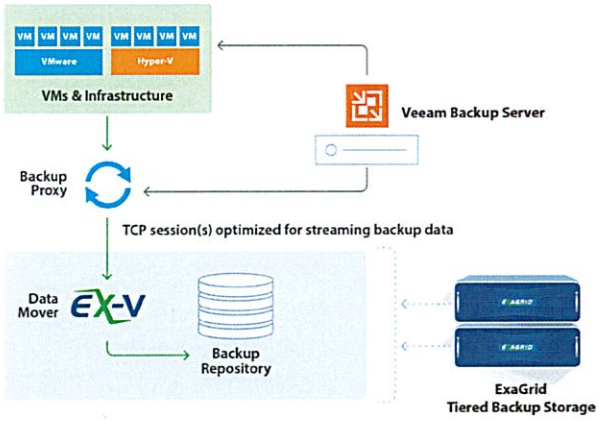
ExaGrid's unique non-network-facing Repository Tier (tiered air gap) along with delayed deletes and immutable data objects ensure that data is ready to be recovered after a ransomware attack.

The combination of Veeam backups to the ExaGrid Landing Zone, the integrated ExaGrid-Veeam Accelerated Data Mover, and ExaGrid's support of Veeam SOBR is the most tightly integrated solution on the market for a scale-out backup application to scale-out backup storage.



ExaGrid appliances are fully integrated with the Veeam Data Mover. Most of Veeam's unique features such as Sure Backup, Virtual Lab, Instant VM Recovery, Copy and Replicate, and other advanced features require an undeduplicated backup copy on disk. Only ExaGrid provides this backup copy due to its unique disk-cache "Landing Zone." ExaGrid includes an integrated Veeam Data Mover that runs on each ExaGrid appliance.

This improves all backup and restore processes and also allows a synthetic full to be created directly on the ExaGrid system for increased performance. ExaGrid can create and restore a synthetic full faster than any other solution.

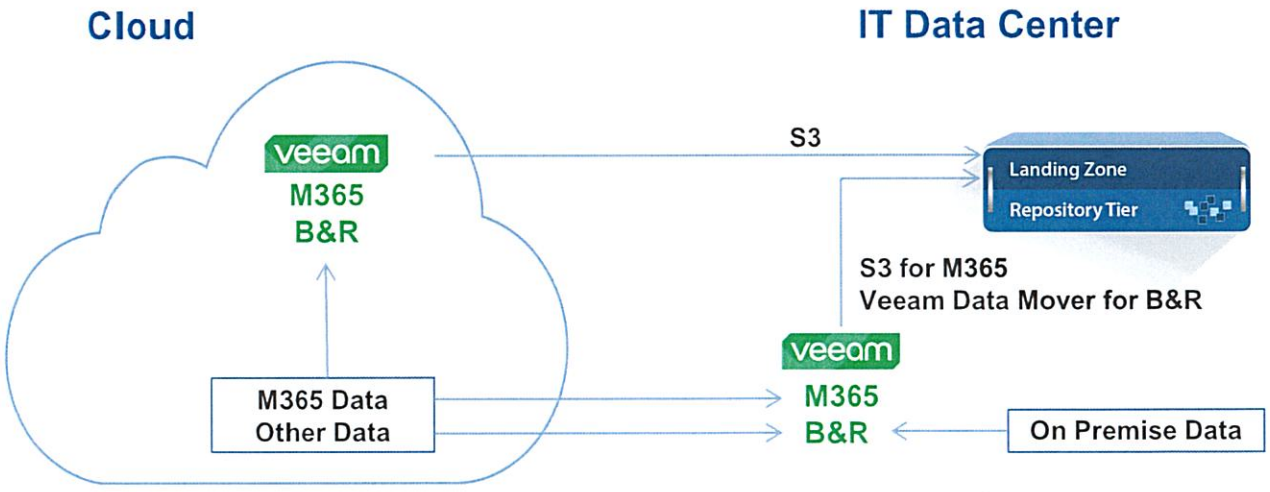


- Automatic resynthesis of the synthetic fulls into actual full backups takes place in parallel with backups
- Resynthesis of Veeam Fast Clone synthetic fulls into ExaGrid's Landing Zone allows for the fastest restores & VM boots in the industry

ExaGrid supports Veeam writing to ExaGrid Tiered Backup Storage as an object store target using the the S3 protocol, as well as supporting Veeam Backup for Microsoft 365 directly to ExaGrid.

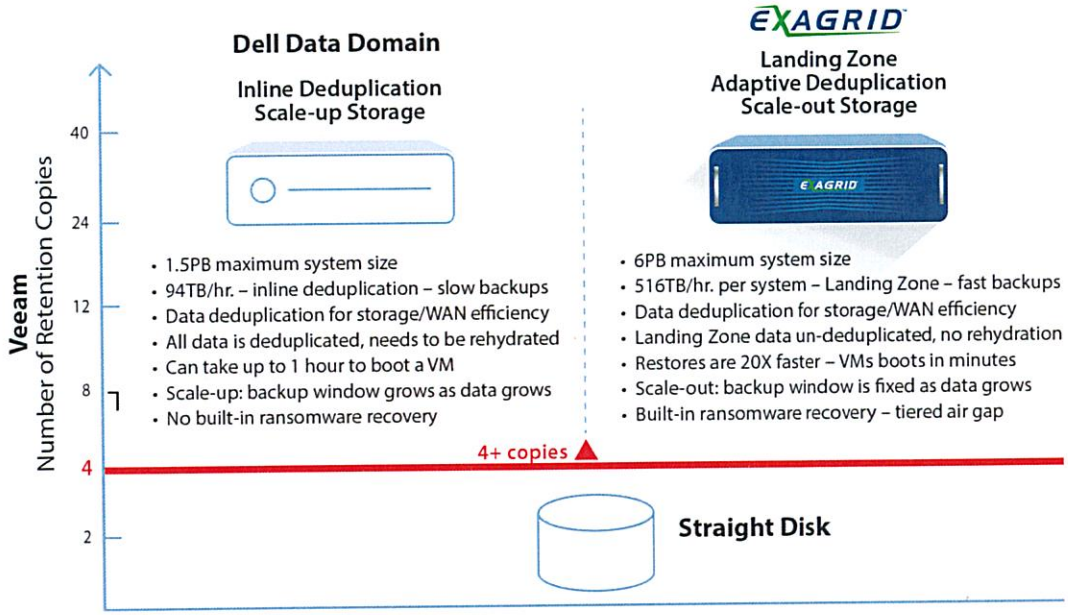
ExaGrid locks the data for the time period provided by Veeam:

- S3 Locks data in the Landing Zone
- S3 Locks data in the Repository Tier
- ExaGrid RTL - Retention Time-Lock
  - Double locks the repository
- ExaGrid supports the S3 API
- ExaGrid supports the Veeam S3 Extension (SOSAPI) when used with Veeam Backup and Replication



When to Use Standard Disk vs. Dedicated Backup Appliance with Veeam

Veeam backs up to disk and uses changed block tracking, which will achieve a 2:1 deduplication ratio. For low retention requirements (less than four copies), standard disk is the least expensive. However, when an organization requires four copies or more of retention, standard disk solutions become cost prohibitive. ExaGrid appliances provide deduplication of up to 20:1, dramatically reducing storage requirements. With its scale-out architecture, ExaGrid is the only solution able to globally deduplicate data across all appliances within an organization – up to 6PB of full backups.



Is storage the only consideration? No – performance matters.

ExaGrid Tiered Backup Storage avoids the typical downfalls associated with deduplication solutions: backup, restore, and replication performance issues. Because backups and restores are performed on the Landing Zone, inline processing and rehydration are avoided, and the highest possible performance is ensured. ExaGrid is 3X faster for backup and up to 20X faster for restores than any inline deduplication appliance.

How does ExaGrid achieve the fastest backups, shortest backup window, and offsite replication to meet RPOs?

ExaGrid enables organizations to meet their backup windows and ensures that critical data is replicated offsite within the Recovery Point Objective (RPO) using "Adaptive Deduplication Machine Learning Technology" and the Landing Zone. Data deduplication is highly compute intensive, so when performed during the backup window, it slows down ingest performance, lengthening the backup window and delaying replication. The result: missed RPOs.

ExaGrid's disk-cache Landing Zone enables backups to be written directly to disk so that the data deduplication process doesn't impact backup ingestion. Because ExaGrid provides not just storage, but also compute, memory, and replication management technology, during ingestion, Adaptive Deduplication is able to monitor ingest rates and resource consumption. Adaptive Deduplication identifies when to perform deduplication processing and data replication during the backup cycle; it will deduplicate and replicate data to the disaster recovery (DR) site during the backup window (in parallel with the backups) but not inline between the backup application and the disk. Should a new backup or in-progress backup require additional compute or memory, Adaptive Deduplication will adjust deduplication and replication processing to dynamically meet the highest priority needs of the environment.

What about Restore Performance?

ExaGrid is the only solution with deduplication that performs as well for restores as straight disk solutions. How do we achieve this? With the ExaGrid disk-cache Landing Zone. ExaGrid stores the most recent backup copies in native Veeam format, undeduplicated in the Landing Zone. This allows restores to be fast and VM boots to occur in seconds to single-digit minutes versus hours for solutions that only store deduplicated data.

How does ExaGrid achieve the industry's fastest restores, VM boots, and offsite tape copies?

Ninety-five percent or more of restores, VM boots, and offsite tape copies come from the most recent backup, so keeping the most recent backup in only deduplicated form will require a compute-intensive, time-consuming data "rehydration" process that will slow down restores. VM boots can take hours from deduplicated data. Since ExaGrid writes directly to the disk-cache Landing Zone, the most recent backups are kept in their full, undeduplicated, native form. All restores, VM boots, and offsite tape copies are disk-read fast as the overhead of the data rehydration process is avoided.

ExaGrid provides the data for a VM boot in seconds to single-digit minutes versus the hours it takes for inline data deduplication backup storage appliances that only store deduplicated data. ExaGrid maintains all long-term retention in a deduplicated format in a repository, the retention tier, for storage efficiency.

ExaGrid provides the best of both worlds by offering low-cost disk for the fastest backup and restore performance along with a tiered deduplicated data repository for the lowest cost retention storage. The scale-out storage architecture provides a fixed-length backup window and low cost up front and over time. ExaGrid is the only solution that offers deduplication as well as with these combined benefits in a single product.

What about data growth? Will ExaGrid customers need a forklift upgrade?

No forklift upgrades or abandoned storage here. ExaGrid appliances are simply added to a scale-out system for easy backup storage growth as data grows. Since each appliance includes all compute, networking and storage, resources are extended with each added appliance — as data grows, the backup window stays fixed length.

Traditional deduplication storage appliances utilize a "scale-up" storage approach with a fixed resource front-end controller and disk shelves. As data grows, they only add storage capacity. Because the compute, processor, and memory are all fixed, as data grows, so does the time it takes to deduplicate the growing data until the backup window is so long that the front-end controller has to be upgraded (called a "forklift" upgrade) to a larger/faster controller which is disruptive and costly. With ExaGrid, expensive forklift upgrades are avoided, and the aggravation of chasing a growing backup window is eliminated.

With ExaGrid and Veeam, you can:

- Boot a VM from the backup storage system when the primary VM environment is offline; boot VMs on the backup system to test patch, configuration, and other updates before rolling out to the production environment
- Perform audits or Sure Backups to prove to an internal or external audit team that VMs can be booted or restored in the case of a failure and take advantage of Virtual Lab for testing
- Create a synthetic full on a regular basis in order to ensure reliable full backup restores; integration of the ExaGrid-Veeam Accelerated Data Mover and Veeam Fast Clone with ExaGrid's Landing Zone provides synthetic fulls that are 30X faster
- Maximize ExaGrid's full support of SOBR
- Write to ExaGrid as an object store target using the S3 protocol, and use Veeam Backup for Microsoft 365 directly to ExaGrid

United States 100 Campus Drive / Marlborough, MA 01752 / (800) 868-6985
United Kingdom 200 Brook Drive / Green Park, Reading, Berkshire RG2 6UB / +44 (0) 1189 497 051
Singapore 1 Raffles Place, #20-61 / One Raffles Place Tower 2 / 048616 / +65 6808 5574

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☆☆☆☆☆

ExaGrid Tiered Backup Storage

Fastest Backups

Fastest Recoveries

Unparalleled, Cost-effective Scale-out

Comprehensive Security and AI-Powered Ransomware Recovery

ExaGrid Program Overview

Customer Support and Maintenance

ExaGrid offers a complete set of technical support services to help you derive the greatest value from your ExaGrid Tiered Backup Storage system and get fast resolution to any technical issues when you need assistance. ExaGrid's global technical support team is dedicated to backup and provides the industry's best support experience for disk backup with deduplication.

With other IT vendors, you may have encountered frustrating problems with technical support that wastes your time and diverts your attention from other pressing priorities.

ExaGrid has eliminated these frustrations with a comprehensive, unique, all-in-one support and maintenance model.

ExaGrid Worldwide Support

ExaGrid supports over 5,000 organizations worldwide in over 80 countries. ExaGrid Customer Support is unique as all of our support engineers are ExaGrid employees, and we have support engineers located in each region (Americas, EMEA, and Asia Pacific) that speak the local languages.

ExaGrid's appliances are certified in over 100 countries. ExaGrid has over 15 spares depots worldwide to allow for quick replacement of failed system components such as disk drives, power supplies, and more. ExaGrid systems include RAID 6 with a spare drive and dual power supplies in each appliance so that if a component fails, the system continues to operate. All replacement components are hot-swappable while the system is live in production.

Other Support Models	ExaGrid Support
Installation typically requires vendor's staff onsite for several hours, with associated inconvenience to you or your IT staff	Fast, easy installation by phone and over the web, typically in under two hours
Junior-level, first-line support staff are often unable to resolve your problems quickly	Senior-level, second-line support staff quickly resolve your problems
Assign different junior-level representatives to you with each call, making you explain your problem and situation multiple times	Assigned senior-level engineer to your company who knows the history of your problem and situation
Support staff lack deep knowledge of leading backup applications and complexities of backup environments	Support staff are specialists in specific backup applications and are assigned based on having expertise with your backup application
Replacement of failed components typically requires that vendor comes onsite	Hot-swappable components ship via next-day business air and are easily installed by the system administrator
Route calls overseas, with associated frustrations such as long hold times, poor quality connections, or language barriers	Calls handled by call centers in North America, Latin America, EMEA, and APAC
No notification of potential problems until after a failure has occurred and the system is unavailable	Automated health check emails from the system sent to ExaGrid to proactively alert about capacity issues, hardware diagnostics, or other problems

Highlights of ExaGrid's Technical Support and Maintenance

All-in-One Model – ExaGrid Maintenance and Support fees are a percentage of the price paid for the system, rather than a percentage of the list price. Email support and phone support are included in the single fee.

System Monitoring and Proactive Support

- Systems send alerts when pre-defined thresholds are crossed
- Remote analysis, diagnosis, and problem resolution

Software Support

- Point releases and full version releases

Location of Support Engineers

- We have support engineers located worldwide to cover business hours in all time zones

Hours of Operation

- ExaGrid offers 5 x 8 and 7 x 24 support to fit your needs

Support and Maintenance

Annual Fee ..... Yearly options based on a percentage of the actual purchase price of the system; maintenance renewals for the second year and subsequent years will not increase more than 3% per year.

Coverage ..... All hardware, software, and support coverage listed below.

Support Response

Requirement..... Current annual customer maintenance and support renewal.

Support Hours ..... 8:00 a.m. to 5:00 p.m. (Eastern standard time), Monday – Friday (optional 7x24 support available for an additional fee).

Methods..... Phone or email support.

Response Time..... 80% of phone calls and emails will be responded to in less than one hour.

Installation

Service ..... Service installation is done via phone and Webex session. ExaGrid has installed thousands of customers and systems worldwide using this approach.

Self Monitoring, Automatic Notification, and Remote Support

Requirement..... Current annual customer maintenance and support renewal. Valid remote access from an ExaGrid service center to the ExaGrid system.

Service ..... Monitor any alerts including pre-defined thresholds; remotely analyze and diagnose problems.

Reconciliation ..... Many problems are quickly resolved without customer intervention.

Hardware Maintenance

Requirement..... Current annual customer maintenance and support renewal.

Program ..... Any failed hardware components are shipped next-day business air and are replaced by the customer; 100% of the hardware is covered – disk drive, power supply, server, included network components. For Asia Pacific countries: replacement parts will ship in 1 to 3 business days due to local processes in certain APAC region countries.

Software Maintenance

Requirement..... Current annual customer maintenance and support renewal.

Program ..... All versions (point and full) included at no charge; no hidden charges

Availability

Countries ..... ExaGrid supports all countries in North America, Latin America, EMEA, and APAC.

Contact Information

Support Email Address .... support@exagrid.com

Support Phone Numbers... www.exagrid.com/tech-support

United States 100 Campus Drive / Marlborough, MA 01752 / (800) 868-6985
United Kingdom 200 Brook Drive / Green Park, Reading, Berkshire RG2 6UB / +44 (0) 1189 497 051
Singapore 1 Raffles Place, #20-61 / One Raffles Place Tower 2 / 048616 / +65 6808 5574

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Bid Results

RFP # 26-487
Project Name: Immutable Storage

Vendor's Name:	**Bid Price Submitted**	
Logicalis	$	130,488.16
45 Drives USA	$	69,365.72
Pomeroy	$	137,750.54
SHI	$	171,600.66
Meredith Digital	$	176,508.54
Dallas Digital Services	$	192,454.00
Data Storage Science	$	213,450.00
People Drive Technology	$	222,725.00
Hypertec USA	$	340,911.23

Genesee County

Staff Report

Genesee County
Administration Building
324 S. Saginaw St.
Flint, MI 48502

File #: RES-2026-0781 **Agenda Date:** 7/15/2026 **Agenda #:** 3.

To: Brian K. Flewelling, Public Works Committee Chairperson

From: Michael Dawisha, CIO

RE: Approval of a purchase order to Crayon Software Experts LLC for the fiscal year ending 2026, at a cost not to exceed $7,239.60, to provide for additional Microsoft licenses; the cost of this purchase order will be paid from the accounts listed

BOARD ACTION REQUESTED:

Approval to add additional Microsoft licenses through Crayon Software Experts LLC at a cost not to exceed $7,239.60

BACKGROUND:

Crayon Software Experts LLC were the lowest bidder under RFP 25-463 beginning March 1, 2026, to provide the Microsoft licenses, this was a 3-year agreement.

DISCUSSION:

The request is to add 20 additional Microsoft licenses and 1 Power Automate Premium license to the County's existing Microsoft agreement. As departments add positions, additional licenses are needed to ensure staff have access to the required Microsoft applications and services. Adding these licenses will help maintain continuity of operations and support employees with the tools needed to perform their daily work.

IMPACT ON HUMAN RESOURCES:

There is no impact on Human Resources.

IMPACT ON BUDGET:

The cost to add additional licenses is a total not to exceed $7,239.60. The costs are pro-rated to align with our main subscription ending on February 28, 2027. Using July 27, 2026 as a starting date and to be paid out of the following accounts - 1010-228.01-933.001 - $2,201.91 and pre-paid account 1010-000.00-123.000 - $5,037.69.

IMPACT ON FACILITIES:

There is no impact on Facilities.

IMPACT ON TECHNOLOGY:

Reviewed by IT.

CONFORMITY TO COUNTY PRIORITIES:

The request conforms to the County priority of Long-Term Stability by entering into a multi-year agreement that provides pricing stability and predictable annual costs.

TO THE HONORABLE CHAIRPERSON AND MEMBERS OF THE GENESEE COUNTY BOARD OF COMMISSIONERS, GENESEE COUNTY, MICHIGAN

LADIES AND GENTLEMEN:

BE IT RESOLVED, by this Board of County Commissioners of Genesee County, Michigan, that the request by the Chief Information Officer to authorize the purchase of additional Microsoft licenses through Crayon Software Experts, LLC, at a total cost not to exceed $7,239.60 to be paid from accounts 1010-228.01-933.001 ($2,201.91) and 1010-000.00-123.00 ($5,037.69), is approved (a copy of the memorandum request and supporting documentation being on file with the official records of the July 15, 2026 meeting of the Public Works Committee of the Board), and the Chairperson of the Board is authorize to execute the necessary contract documents on behalf of Genesee County.

Instructions

1. On the "Split" tab; Update Cell E4 to be the period ending in which costs need to be sepa
2. Enter the start and end dates of the item that needs to be separated in Cells C8 (start) ar
3. Enter the amount to be split in cell H4.
4. The template will calculate a proper split for the time frame and amount in question intc

Tips:

Information should only be entered into yellow cells.

Using this file and attaching it or a PDF of it to any split inoivce for prepaid or year end ansv

If you have any questions or issues with this template please contact fiscal services.

arated.
nd E8 (end) respectively.

o Cells H8 and H10

wers a lot of questions in advance.

Fiscal Year End	9/30/2026	Total Amount	$ 7,239.60
Old Fiscal	New Fiscal	Allocation	
7/27/2026	2/28/2027	Old Fiscal Year-Allocation	$ 2,201.91
30%	70%		
100%		New Fiscal Year Allocation	$ 5,037.69

Current FY

Pre-paid

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 01/27/2026

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Relation Insurance Services Sleeper Sewell Ins. Services 12400 Coit Road, #1100 Dallas TX 75251	**CONTACT NAME:** Kim Vasquez **PHONE (A/C, No, Ext):** (972) 419-7500 **FAX (A/C, No):** **E-MAIL ADDRESS:** Kim.Vasquez@RelationInsurance.com
INSURED Crayon Software Experts LLC 12221 Merit Dr. Ste 800 Dallas TX 75251	**INSURER(S) AFFORDING COVERAGE** — **NAIC #** **INSURER A :** Massachusetts Bay Ins Co — 22306 **INSURER B :** Hanover Insurance Company — 22292 **INSURER C :** **INSURER D :** **INSURER E :** **INSURER F :**

COVERAGES **CERTIFICATE NUMBER:** 25/26 Master w 26/27 WC **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	[X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR [X] Incl Hired & Non-Owned Auto Liab [ ] GEN'L AGGREGATE LIMIT APPLIES PER: [ ] POLICY [X] PRO-JECT [ ] LOC [ ] OTHER:			ZDDH71383804	08/04/2025	08/04/2026	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG Hired & NO Auto Liab	$ 1,000,000 $ 100,000 $ 10,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $ 1,000,000
	AUTOMOBILE LIABILITY [ ] ANY AUTO [ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS [ ] HIRED AUTOS ONLY [ ] NON-OWNED AUTOS ONLY [ ] [ ]						COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) 	$ $ $ $ $
B	[ ] UMBRELLA LIAB [X] OCCUR [ ] EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [ ] RETENTION $			UHDH71383904	08/04/2025	08/04/2026	EACH OCCURRENCE AGGREGATE 	$ 25,000,000 $ 25,000,000 $
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y / N: Y If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		WDDJ61037002	01/01/2026	01/01/2027	[X] PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
B	Technology Liability Professional Liability			LHDH71383704	08/04/2025	08/04/2026	Each "Claim" limit of ins Aggregate Limit	$10,000,000 $10,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Certificate holder is completed to read: Genesee County, its officials, employees and agent, all boards, commissions and/or authorities and board members, including employees and volunteers thereof. General Liability: Certificate Holder is named as Additional Insured in regards to the operations of the Named Insured per form(s). General Liability: This insurance is primary and noncontibutory per form (s). General Liability and Workers Compensation: A Waiver of Subrogation is issued in favor of the Certificate Holder per form(s). 30 Day NOC to Certificate Holder Applies per form. All forms apply only in the presence of a written contract.

CERTIFICATE HOLDER

Genesee County Attn Risk Management
324 S Saginaw St 9th Floor
Flint MI 48502

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Jon Cooper

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THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

COMMERCIAL GENERAL LIABILITY BROADENING ENDORSEMENT

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SUMMARY OF COVERAGES

1.	Additional Insured by Contract, Agreement or Permit	Included
2.	Additional Insured – Primary and Non-Contributory	Included
3.	Blanket Waiver of Subrogation	Included
4.	Bodily Injury Redefined	Included
5.	Broad Form Property Damage – Borrowed Equipment, Customers Goods & Use of Elevators	Included
6.	Knowledge of Occurrence	Included
7.	Liberalization Clause	Included
8.	Medical Payments – Extended Reporting Period	Included
9.	Newly Acquired or Formed Organizations - Covered until end of policy period	Included
10.	Non-owned Watercraft	51 ft.
11.	Supplementary Payments Increased Limits	
	- Bail Bonds	$2,500
	- Loss of Earnings	$1000
12.	Unintentional Failure to Disclose Hazards	Included
13.	Unintentional Failure to Notify	Included

This endorsement amends coverages provided under the Commercial General Liability Coverage Part through new coverages, higher limits and broader coverage grants.

1. Additional Insured by Contract, Agreement or Permit

The following is added to **SECTION II – WHO IS AN INSURED**:

Additional Insured by Contract, Agreement or Permit

a. Any person or organization with whom you agreed in a written contract, written agreement or permit that such person or organization to add an additional insured on your policy is an additional insured only with respect to liability for "bodily injury", "property damage", or "personal and advertising injury" caused, in whole or in part, by your acts or omissions, or the acts or omissions of those acting on your behalf, but only with respect to:

(1) "Your work" for the additional insured(s) designated in the contract, agreement or permit;

(2) Premises you own, rent, lease or occupy; or

(3) Your maintenance, operation or use of equipment leased to you.

b. The insurance afforded to such additional insured described above:

(1) Only applies to the extent permitted by law; and

(2) Will not be broader than the insurance which you are required by the contract, agreement or permit to provide for such additional insured.

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(3) Applies on a primary basis if that is required by the written contract, written agreement or permit.

(4) Will not be broader than coverage provided to any other insured.

(5) Does not apply if the “bodily injury”, “property damage” or “personal and advertising injury” is otherwise excluded from coverage under this Coverage Part, including any endorsements thereto.

c. This provision does not apply:

(1) Unless the written contract or written agreement was executed or permit was issued prior to the "bodily injury”, “property damage", or "personal injury and advertising injury".

(2) To any person or organization included as an insured by another endorsement issued by us and made part of this Coverage Part.

(3) To any lessor of equipment:

(a) After the equipment lease expires; or

(b) If the “bodily injury”, “property damage”, “personal and advertising injury” arises out of sole negligence of the lessor

(4) To any:

(a) Owners or other interests from. whom land has been leased which takes place after the lease for the land expires; or

(b) Managers or lessors of premises if:

(i) The occurrence takes place after you cease to be a tenant in that premises; or

(ii) The "bodily injury", "property damage", "personal injury" or "advertising injury" arises out of structural alterations, new construction or demolition operations performed by or on behalf of the manager or lessor.

(5) To “bodily injury”, “property damage” or “personal and advertising injury” arising out of the rendering of or the failure to render any professional services.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the “occurrence” which caused the “bodily injury” or “property damage” or the offense which caused the “personal and advertising injury” involved the rendering of or failure to render any professional services by or for you.

d. With respect to the insurance afforded to these additional insureds, the following is added to **SECTION III – LIMITS OF INSURANCE**:

The most we will pay on behalf of the additional insured for a covered claim is the lesser of the amount of insurance:

1. Required by the contract, agreement or permit described in Paragraph **a.;** or

2. Available under the applicable Limits of Insurance shown in the Declarations.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

2. Additional Insured – Primary and Non-Contributory

The following is added to **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS,** Paragraph **4. Other insurance:**

Additional Insured – Primary and Non-Contributory

If you agree in a written contract, written agreement or permit that the insurance provided to any person or organization included as an Additional Insured under **SECTION II – WHO IS AN INSURED**, is primary and non-contributory, the following applies:

If other valid and collectible insurance is available to the Additional Insured for a loss covered under Coverages **A** or **B** of this Coverage Part, our obligations are limited as follows:

a. Primary Insurance

This insurance is primary to other insurance that is available to the Additional Insured which covers the

Additional Insured as a Named Insured. We will not seek contribution from any other insurance available to the Additional Insured except:

(1) For the sole negligence of the Additional Insured;

(2) When the Additional Insured is an Additional Insured under another primary liability policy; or

(3) when **b.** below applies.

If this insurance is primary, our obligations are not affected unless any of the other insurance is also primary. Then, we will share with all that other insurance by the method described in **c.** below.

b. Excess Insurance

(1) This insurance is excess over any of the other insurance, whether primary, excess, contingent or on any other basis:

(a) That is Fire, Extended Coverage, Builder's Risk, Installation Risk or similar coverage for "your work";

(b) That is Fire insurance for premises rented to the Additional Insured or temporarily occupied by the Additional Insured with permission of the owner;

(c) That is insurance purchased by the Additional Insured to cover the Additional Insured's liability as a tenant for "property damage" to premises rented to the Additional Insured or temporarily occupied by the Additional with permission of the owner; or

(d) If the loss arises out of the maintenance or use of aircraft, "autos" or watercraft to the extent not subject to Exclusion **g.** of **SECTION I – COVERAGE A – BODILY INURY AND PROPERTY DAMAGE LIABILITY**.

(2) When this insurance is excess, we will have no duty under Coverages **A** or **B** to defend the insured against any "suit" if any other insurer has a duty to defend the insured against that "suit". If no other insurer defends, we will undertake to do so, but we will be entitled to the insured's rights against all those other insurers.

(3) When this insurance is excess over other Insurance, we will pay only our share of the amount of the loss, if any, that exceeds the sum of:

(a) The total amount that all such other insurance would pay for the loss in the absence of this insurance; and

(b) The total of all deductible and self insured amounts under all that other insurance.

We will share the remaining loss, if any, with any other insurance that is not described in this Excess Insurance provision and was not bought specifically to apply in excess of the Limits of Insurance shown in the Declarations of this Coverage Part.

c. Method Of Sharing

If all of the other insurance permits contribution by equal shares, we will follow this method also. Under this approach each insurer contributes equal amounts until it has paid its applicable limit of insurance or none of the loss remains, whichever comes first. If any of the other insurance does not permit contribution by equal shares, we will contribute by limits. Under this method, each insurer's share is based on the ratio of its applicable limit of insurance to the total applicable limits of insurance of all insurers

3. Blanket Waiver of Subrogation

The following is added to **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS,** Paragraph **8. Transfer Of Rights Of Recovery Against Others To Us**:

We waive any right of recovery we may have against any person or organization with whom you have a written contract that requires such waiver because of payments we make for damage under this coverage form. The damage must arise out of your activities under a written contract with that person or organization. This waiver applies only to the extent that subrogation is waived under a written contract executed prior to the "occurrence" or offense giving rise to such payments.

4. Bodily Injury Redefined

SECTION V – DEFINITIONS, Definition **3.** "bodily injury" is replaced by the following:

3. "Bodily injury" means bodily injury, sickness or disease sustained by a person including death resulting from any of these at any time. "Bodily injury" includes mental anguish or other mental injury resulting from "bodily injury".

5. Broad Form Property Damage – Borrowed Equipment, Customers Goods, Use of Elevators

a. SECTION I – COVERAGES, COVERAGE A – BODILIY INJURY AND PROPERTY DAMAGE LIABILITY, Paragraph **2. Exclusions** subparagraph **j.** is amended as follows:

Paragraph **(4)** does not apply to "property damage" to borrowed equipment while at a jobsite and not being used to perform operations.

Paragraphs **(3), (4)** and **(6)** do not apply to "property damage" to "customers goods" while on your premises nor do they apply to the use of elevators at premises you own, rent, lease or occupy.

b. The following is added to **SECTION V – DEFINTIONS:**

24. "Customers goods" means property of your customer on your premises for the purpose of being:

a. worked on; or

b. used in your manufacturing process.

c. The insurance afforded under this provision is excess over any other valid and collectible property insurance (including deductible) available to the insured whether primary, excess, contingent

6. Knowledge of Occurrence

The following is added to **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS,** Paragraph **2. Duties in the Event of Occurrence, Offense, Claim or Suit:**

e. Notice of an "occurrence", offense, claim or "suit" will be considered knowledge of the insured if reported to an individual named insured, partner, executive officer or an "employee" designated by you to give us such a notice.

7. Liberalization Clause

The following is added to **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS:**

Liberalization Clause

If we adopt any revision that would broaden the coverage under this Coverage Form without additional premium, within 45 days prior to or during the policy period, the broadened coverage will immediately apply to this Coverage Part.

8. Medical Payments – Extended Reporting Period

a. SECTION I – COVERAGES, COVERAGE C – MEDICAL PAYMENTS, Paragraph **1. Insuring Agreement,** subparagraph **a.(3)(b)** is replaced by the following:

(b) The expenses are incurred and reported to us within three years of the date of the accident; and

b. This coverage does not apply if **COVERAGE C – MEDICAL PAYMENTS** is excluded either by the provisions of the Coverage Part or by endorsement.

9. Newly Acquired Or Formed Organizations

SECTION II – WHO IS AN INSURED, Paragraph **3.a.** is replaced by the following:

a. Coverage under this provision is afforded until the end of the policy period.

10. Non-Owned Watercraft

SECTION I – COVERAGES, COVERAGE A BODILY INJURY AND PROPERTY DAMAGE LIABILITY, Paragraph **2. Exclusions,** subparagraph **g.(2)** is replaced by the following:

g. Aircraft, Auto Or Watercraft

(2) A watercraft you do not own that is:

(a) Less than 51 feet long; and

(b) Not being used to carry persons or property for a charge;

This provision applies to any person who, with your consent, either uses or is responsible for the use of a watercraft.

11. Supplementary Payments Increased Limits

SECTION I – SUPPLEMENTARY PAYMENTS COVERAGES A AND B, Paragraphs **1.b.** and **1.d.** are replaced by the following:

1.b. Up to $2,500 for cost of bail bonds required because of accidents or traffic law violations arising out of the use of any vehicle to which the Bodily Injury Liability Coverage applies. We do not have to furnish these bonds.

1.d. All reasonable expenses incurred by the insured at our request to assist us in the investigation or defense of the claim or “suit", including actual loss of earnings up to $1000 a day because of time off from work.

12. Unintentional Failure to Disclose Hazards

The following is added to **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS,** Paragraph **6. Representations:**

We will not disclaim coverage under this Coverage Part if you fail to disclose all hazards existing as of the inception date of the policy provided such failure is not intentional.

13. Unintentional Failure to Notify

The following is added to **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS,** Paragraph **2. Duties in the Event of Occurrence, Offense, Claim or Suit:**

Your rights afforded under this policy shall not be prejudiced if you fail to give us notice of an "occurrence", offense, claim or "suit", solely due to your reasonable and documented belief that the "bodily injury" or "property damage" is not covered under this policy.

ALL OTHER TERMS, CONDITIONS, AND EXCLUSIONS REMAIN UNCHANGED.

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THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

NOTICE OF CANCELLATION to designated ENTITy(s)

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
HANOVER COMMERCIAL FOLLOW FORM EXCESS AND UMBRELLA POLICY
COMMERCIAL PROPERTY COVERAGE PART
BUSINESS AUTO COVERAGE FORM
BUSINESSOWNERS COVERAGE FORM

SCHEDULE

Name of Designated Entity	Mailing Address or Email Address	Number Days Notice
Blanket	Blanket	30

(Information required to complete this Schedule, if not shown above, will be shown in the Declarations.)

If we cancel this policy for any reason other than nonpayment of premium, we will give written notice of such cancellation to the Designated Entity(s) shown in the Schedule. Such notice may be delivered or sent by any means of our choosing. The notice to the Designated Entity(s) will state the effective date of cancellation.

Unless otherwise noted in the Schedule above, such notice will be provided to the Designated Entity(s) no more than the number of days in advance of the effective date of cancellation that we are required to provide to the Named Insured for such cancellation.
Such notice of cancellation is solely for the purpose of informing the Designated Entity(s) of the effective date of cancellation and does not grant, alter, or extend any rights or obligations under this policy.

ALL OTHER TERMS AND CONDITIONS OF THIS POLICY REMAIN UNCHANGED.

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TEXAS WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

This endorsement applies only to the insurance provided by the policy because Texas is shown in Item 3.A. of the Information Page.

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule, but this waiver applies only with respect to bodily injury arising out of the operations described in the Schedule where you are required by a written contract to obtain this waiver from us.

This endorsement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

The premium for this endorsement is shown in the Schedule.

Schedule

1. ( ) Specific Waiver
   Name of person or organization

   (X) Blanket Waiver

   Any person or organization for whom the Named Insured has agreed by written contract to furnish this waiver.
2. Operations:

   A L L T E X A S O P E R A T I O N S

3. Premium:
   The premium charge for this endorsement shall be 2 percent of the premium developed on payroll in connection with work performed for the above person(s) or organization(s) arising out of the operations described.
4. Advance Premium:

This endorsement changes the policy to which it is attached and is effective on the date issued unless otherwise stated.

(The information below is required only when this endorsement is issued subsequent to preparation of the policy.)

Endorsement Effective Policy No. Endorsement No.
Insured Premium

Insurance Company Countersigned by _____

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WORKERS COMPENSATION AND EMPLOYERS LIABILITY INSURANCE POLICY **WC 42 06 01**

(Ed. 1-94)

TEXAS NOTICE OF MATERIAL CHANGE ENDORSEMENT

This endorsement applies only to the insurance provided by the policy because Texas is shown in Item 3.A. of the Information Page.

In the event of cancelation or other material change of the policy, we will mail advance notice to the person or organization named in the Schedule. The number of days advance notice is shown in the Schedule.

This endorsement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

Schedule

1. Number of days advance notice:

   30

2. Notice will be mailed to:

   BLANKET PER WRITTEN CONTRACT.
   .
   .

This endorsement changes the policy to which it is attached and is effective on the date issued unless otherwise stated.

(The information below is required only when this endorsement is issued subsequent to preparation of the policy.)

Endorsement Effective Policy No. Endorsement No.
Insured Premium:

Insurance Company Countersigned by _____

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THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

NOTICE OF CANCELLATION to designated ENTITy(s)

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
HANOVER COMMERCIAL FOLLOW FORM EXCESS AND UMBRELLA POLICY
COMMERCIAL PROPERTY COVERAGE PART
BUSINESS AUTO COVERAGE FORM
BUSINESSOWNERS COVERAGE FORM

SCHEDULE

Name of Designated Entity	Mailing Address or Email Address	Number Days Notice
Blanket 30 Day NOC	Blanket 30 Day NOC	30

(Information required to complete this Schedule, if not shown above, will be shown in the Declarations.)

If we cancel this policy for any reason other than nonpayment of premium, we will give written notice of such cancellation to the Designated Entity(s) shown in the Schedule. Such notice may be delivered or sent by any means of our choosing. The notice to the Designated Entity(s) will state the effective date of cancellation.

Unless otherwise noted in the Schedule above, such notice will be provided to the Designated Entity(s) no more than the number of days in advance of the effective date of cancellation that we are required to provide to the Named Insured for such cancellation.
Such notice of cancellation is solely for the purpose of informing the Designated Entity(s) of the effective date of cancellation and does not grant, alter, or extend any rights or obligations under this policy.

ALL OTHER TERMS AND CONDITIONS OF THIS POLICY REMAIN UNCHANGED.

Includes copyrighted material of Insurance Services Office, Inc., with its permission.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

EARLIER NOTICE OF CANCELLATION PROVIDED BY US – TECHNOLOGY PROFESSIONAL AND CYBER ADVANTAGE

This endorsement modifies insurance provided under the following:

TECHNOLOGY PROFESSIONAL AND CYBER ADVANTAGE COVERAGE PART

SCHEDULE

Number of Days' Notice 30

For any statutorily permitted reason other than nonpayment of premium, the number of days required for notice of cancellation, as provided in **SECTION V – CONDITIONS**, **4. Cancellation and Nonrenewal**, subparagraph **b.(2)** or as amended by an applicable state amendatory endorsement, is increased to the number of days shown in the **SCHEDULE** above.

ALL OTHER TERMS, CONDITIONS, AND EXCLUSIONS REMAIN UNCHANGED.

Quote

Invoice address
Genesee County
324 S Saginaw Street, Suite 9A
Flint, Michigan 48502
United States of America

Customer contact
Donald Stockley
(810) 257-3030
dstockley@geneseecountymi.gov

Delivery address
Genesee County
324 S Saginaw StreetAttn: Information Technology
Flint, Michigan 48502
United States of America

Quote date
06-17-2026

Quote number
3909270444-2

Customer account
20178

Customer sales tax number
38-6004849

Customer payment term
30 days net

Customer reference
EA 69897444 - M365 G5

Expiration date
08-01-2026

Account manager
Matt Wierman
Matt.Wierman@crayon.com
+1 469 699 8099

Crayon contact
Greg Landry
469-329-0290
SLED.us@crayon.com

	Publisher SKU	Description	Quantity	Unit price	Sales tax %	Sales tax	Amount
1.	AAL-45735	M365 G5 GCC Sub Per User ***Publisher:*** *Microsoft,* ***Program:*** *Enterprise GCC,* ***License agreement type:*** *Government,* ***Country:*** *United States of America,* ***Start date:*** *07-15-2026,* ***End date:*** *02-28-2027,* ***Additional info:*** *7 months to EA anniversary,*	20.00	361.98 USD	-		7,239.60 USD

Quote

Public Sector General Terms & Conditions
** All items included in this RFQ are new, unused, not refurbished, with original manufacturer warranty.**
** Pass-Through Warranty and Other Rights.**

As a reseller, end-user warranties and liabilities (with respect to any third-party software products provided by Crayon Software Experts) shall be provided as a pass-through from the manufacturer of such products.

All software products are subject to the license agreement of the applicable software supplier, as provided with the software packaging or in the software at time of shipment
1. Pricing and availability on quotes subject to change without notice.
2. This is preliminary Sales tax, final Sales tax & delivery charges will be calculated on the invoice.
3. Errors & Omissions Excluded.
4. Changes to a quote are subject to written acceptance by Crayon Software Experts.
5. Signature on the quote is not required if a PO is provided.

Date(s)	Signature(s)	Name(s) (print)	Title(s)	Customer PO Number
_____	_____	_____	_____	_____

Net amount:	7,239.60 USD
Total estimated sales tax:	- USD
Quote amount:	7,239.60 USD

Crayon Software Experts, LLC
12221 Merit Drive Suite 1400
Dallas, Texas 75251
United States of America

Phone: 469-329-0290
Email: SLED.us@crayon.com

Business ID: 47-2237420
Sales tax ID:

Genesee County

Staff Report

Genesee County
Administration Building
324 S. Saginaw St.
Flint, MI 48502

File #: RES-2026-0785 **Agenda Date:** 7/15/2026 **Agenda #:** 4.

To: Brian K. Flewelling, Public Works Committee Chairperson

From: Michael Dawisha, CIO

RE: Approval of a request by Genesee County's IT Department to increase a purchase order, in an amount not to exceed $140,000.00 for a revised total of $250,000.00, to provide for the purchase of computer-related items; the cost of this increase will be paid from the accounts listed

BOARD ACTION REQUESTED:

Approval to increase vendor spending from $110,000 to $250,000 to purchase computer-related items from CDW-G and Dell on behalf of County Departments, for fiscal year ending 2026

BACKGROUND:

The IT Department has a need to purchase various computer-related items in a timely manner for Genesee County departments. These purchases are made through OMNIA, Sourcewell, or other approved cooperative purchasing agreements, and the procurement of goods and services through a cooperative purchasing program is considered an open and fair process. Under Resolution 2025-2745, approval was given to increase vendor spending with CDW-G and Dell to $110,000.00.

DISCUSSION:

Under the recently approved Information Technology Procurement Review and Approval Policy, Resolution 2026-0292, all computer-related items are to be ordered and approved through the IT Department. With this new policy in place, IT has identified that CDW-G and Dell are expected to reach their previously approved vendor amounts within the next few weeks. Several items still need to be renewed or ordered, and new department requests continue to be submitted on a regular basis. This increase would also include the renewal of Adobe Acrobat Pro licenses, which is billed to the appropriate departments. The intent of this increase is to allow IT to continue processing department purchases that do not exceed $7,500 in aggregate spending with the vendors listed. The total vendor increase request is not to exceed $250,000.

IMPACT ON HUMAN RESOURCES:

There is no impact on Human Resources.

IMPACT ON BUDGET:

The total request is not to exceed $250,000 between CDW-G and Dell. Purchases would be subject to the requesting department having available budget funds for the purchase. This resolution would be utilized by the IT Department for department purchases that do not exceed $7,500 in aggregate

spending with the vendors mentioned.

IMPACT ON FACILITIES:

There is no impact on Facilities.

IMPACT ON TECHNOLOGY:

Reviewed by IT.

CONFORMITY TO COUNTY PRIORITIES:

The purchase conforms to the County's Long-Term Financial priority by utilizing cooperative buying agreements for computer-related items, which helps secure competitive pricing and control ongoing costs.

TO THE HONORABLE CHAIRPERSON AND MEMBERS OF THE GENESEE COUNTY BOARD OF COMMISSIONERS, GENESEE COUNTY, MICHIGAN

LADIES AND GENTLEMEN:

BE IT RESOLVED, by this Board of County Commissioners of Genesee County, Michigan, that the request by the Chief Information Officer to authorize increasing vendor spending from $110,000.00 to $250,000.00 to purchase various computer-related items through CDW-G and Dell via purchase orders through the OMNIA, Sourcewell, or other cooperative agreements, subject to the requesting department having the available budget, is approved (a copy of the memorandum request and supporting documents being on file with the official records of the July 15, 2026 meeting of the Public Works Committee of this Board).

Genesee County

Staff Report

Genesee County
Administration Building
324 S. Saginaw St.
Flint, MI 48502

File #: RES-2026-0798 **Agenda Date:** 7/15/2026 **Agenda #:** 5.

To: Delrico J. Loyd, Governmental Operations Committee Chairperson

From: Ken Koleda, GIS Director

RE: Approval to amend a Professional Services Contract between Genesee County and Meridian Land Surveying, Inc., in an amount not to exceed $39,790.00, to extend surveying services for the County for the 2026 Genesee County Remonumentation Grant, for the period commencing January 1, 2026 through December 31, 2026; to be paid from account 2970-245.00-801.004

BOARD ACTION REQUESTED:

Approval of contract extension for 2026 Remonumentation Grant

BACKGROUND:

The remonumentation program has been ongoing since 1992. There are over 3,150 survey corners in the county which are either directly or indirectly located by physical monuments in the ground. The work in this contract consists of the research of and installation of these monuments. All parcels in the county reference these monuments.

DISCUSSION:

This surveying firm has performed well for many years. This is the first extension of this contract.

IMPACT ON HUMAN RESOURCES:

None

IMPACT ON BUDGET:

None, cost of contract is paid by remonumentation grant funds to be paid from account 2970-245.00-801.004

IMPACT ON FACILITIES:

None, contract work performed offsite

IMPACT ON TECHNOLOGY:

Minimal, modest amount of digital data is received from surveyors.

CONFORMITY TO COUNTY PRIORITIES:

This best fits into county priorities under long term financial stability in that it is grant funded and under community growth in that ultimately the work contributes to having the best possible parcel

information for citizens and business owners.

TO THE HONORABLE CHAIRPERSON AND MEMBERS OF THE GENESEE COUNTY BOARD OF COMMISSIONERS, GENESEE COUNTY, MICHIGAN

LADIES AND GENTLEMEN:

BE IT RESOLVED, by this Board of County Commissioners of Genesee County, Michigan, that the request by the County Surveyor to authorize amending the Professional Services Contract between Genesee County and Meridian Land Surveying, Inc., said amendment being necessary to extend surveying services for the County for the 2026 Genesee County Remonumentation Grant, for the period commencing January 1, 2026, through December 31, 2026, in an amount not to exceed $39,790.00 to be paid from account 2970-245.00-801.004, is approved (a copy of the memorandum request, supporting documents, and contract amendments being on file with the official records of the July 15, 2026 meeting of the Public Works Committee of this Board), and the Chairperson of this Board is authorized to execute the contract amendment on behalf of Genesee County.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 6/3/2026

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Assurance Risk Managers, Inc.
10651 East Bethany Drive
Suite 300
Aurora CO 80014-2688

CONTACT NAME: Maribeth Sugg
PHONE (A/C, No, Ext): (303)454-9562 FAX (A/C, No): (303)454-9564
E-MAIL ADDRESS: maribeth.sugg@arm-i.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : RLI Insurance Co	13056
INSURER B : Hanover Insurance Company	22292
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

INSURED
Meridian Land Surveying, Inc.
940 S. Grand Traverse Street
Flint MI 48502

COVERAGES **CERTIFICATE NUMBER:** 26-27 G A W EX 25-26 EO **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS		
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT LOC OTHER:			PSB0006858	2/5/2026	2/5/2027	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ $ $ $ $ $	1,000,000 1,000,000 10,000 1,000,000 2,000,000 2,000,000
A	AUTOMOBILE LIABILITY X ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS HIRED AUTOS NON-OWNED AUTOS			PSA0002316	2/5/2026	2/5/2027	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ $ $ $	1,000,000
A	UMBRELLA LIAB X OCCUR X EXCESS LIAB CLAIMS-MADE DED RETENTION $			PSE0002946	2/5/2026	2/5/2027	EACH OCCURRENCE AGGREGATE	$ $	5,000,000 5,000,000
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		PSW0003848	2/5/2026	2/5/2027	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ $ $	1,000,000 1,000,000 1,000,000
B	Professional Liability			LH49709421 13	10/8/2025	10/8/2026	Each Claim/Aggregate		1,000,000
	Pollution Liability			NY25ECPX02009NC	12/2/2025	12/02/2026	Each Claim/Aggregate		1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER
kkoleda@geneseecountymi.gov
Genesee County
324 S Saginaw St Ste 8A
Flint, MI 48502

CANCELLATION
SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE
Lisa Isom/MARI

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AMENDMENT TO Meridian Remonumentation Services Contract

This Amendment is effective January 1, 2026, and is between Genesee County, Michigan, a Michigan municipal corporation whose principal place of business is located at 324 S. Saginaw St, Flint, Michigan 48502 (the "County"), and Meridian Land Surveying, Inc., a Michigan Corporation, whose principal place of business is located at 940 S. Grand Traverse, Flint, MI 48502 (the "Contractor") (the Contractor and the County together, the "Parties").

WHEREAS, the Parties executed a Remonumentation Contract effective 9/25/2025 (the "Agreement"), pursuant to which the Contractor would perform remonumentation services; and

WHEREAS, the Genesee County Board of Commissioners authorized the original Meridian Remonumentation Services Contract by Resolution # RES-2025-2235; and

WHEREAS, the Parties wish to amend the Agreement to include a new set of corners and associated fees for the 2026 Grant.

NOW THEREFORE, the Parties agree as follows:

1. The agreement shall be extended for the period of January 1, 2026 through December 31, 2026.

2. The following 23 corners are to be surveyed and monumented in calendar year 2026:

   Flushing Township, T7N-R5E

   (T8N-R5E, B-2), (T8N-R5E, D-2), (T8N-R5E, F-2), (T8N-R5E, H-2), (T8N-R5E, J-2), (T8N-R5E, L-2), (T8N-R5E, B-4), (T8N-R5E, F-4), (T8N-R5E, H-4), (T8N-R5E, J-4), (T8N-R5E, L-4), (T8N-R5E, B-6), (T8N-R5E, F-6), (T8N-R5E, H-6), (T8N-R5E, J-6), (T8N-R5E, L-6), (T8N-R5E, B-8), (T8N-R5E, F-8), (T8N-R5E, H-8), (T8N-R5E, J-8), (T8N-R5E, L-8) (T8N-R5E, B-10), (T8N-R5E, D-10)
   ..... 23 **Corners**

3. The total fee will be $39,790.

4. The remaining terms of the agreement remain unchanged and in full effect.

5. Execution of this Amendment is authorized by Resolution #2026-0727 issued by the Genesee County Board of Commissioners.

MERIDIAN LAND SURVEYING, INC

By:_____
Greg M. McArdle, PS
Owner

Date:_____

COUNTY OF GENESEE

By:_____
Dale Weighill, Chairperson
Board of Commissioners

Date:_____

GENESEE COUNTY
OFFICE OF FISCAL SERVICES
Purchasing Department
324 S Saginaw St, Ste. 9A Flint, Michigan 48502
Phone: (810) 257-3040 Fax (810) 257-3560

PROFESSIONAL SERVICES CONTRACT

This Contract for Professional Services (the "Contract") is by and between the County of Genesee, a Michigan Municipal Corporation, whose principal place of business is located at 324 S. Saginaw Street, Flint, Michigan 48502 (the "County"), and Meridian Land Surveying, Inc., a Michigan Corporation, whose principal place of business is located at 940 S. Grand Traverse, Flint MI 48502 (the "Contractor") (the County and the Contractor together, the "Parties").

1. Term

1.1 Initial Term

The initial term of this Contract commences on signature and shall be effective through 12/31/2025 (the "Initial Term").

1.2 Extension Terms

The County has the option to extend this Contract for up to three (3) additional one-year terms (the "Extension Terms").

2. Scope of Work

The Contractor agrees to perform the services described on Exhibit A (the "Services").

3. Compensation

Unit Rate. For the performance of the Services, the Contractor shall be paid a flat fee of $1,700 per interior corner and $1,400 per non-interior corner and an additional $30 recording fee for each LCRC. The total amount paid to the Contractor for the Initial Term shall not exceed $43,250. The Contractor must provide to the County monthly invoices in a form acceptable to the County, along with any necessary supporting documentation such as time sheets. The County will pay the Contractor within sixty (60) days of the County's acceptance of the invoice and supporting documentation.

4. **Taxes.** The County is a Michigan Municipal Corporation. The Contractor acknowledges that the County is exempt from Federal Excise Tax and Michigan Sales Tax.

5. **Contract Administrator**

The contract administrator for this Contract is Kim Carlson, County Surveyor (the "Contract Administrator"). The Contractor acknowledges that the Contract Administrator is the primary County contact for notices and instructions related to this Contract. The Contractor agrees to provide a copy of all notices related to this Contract to the Contract Administrator.

6. **Warranties**

The Contractor warrants that:

6.1 The Services will be performed in a good and workmanlike manner and in accordance with generally acceptable practices in the industry.

6.2 The Contractor will comply with all federal, state, and local laws in the performance of the Services.

6.3 The Contractor will comply with the requirements of any federal or state grants used to fund or support this Contract.

6.4 The Contractor will obtain and maintain all applicable licenses and permits necessary to provide the Services for the entire term of this Contract.

6.5 The Contractor will obtain and maintain all applicable licenses and permits necessary to provide the Services for the entire term of this Contract.

The Contractor agrees to indemnify, defend, and hold harmless the County, its officials, officers, agents, and employees from any and all claims, damages, or liability, including defense costs, arising out of the Contractor's breach of these warranties.

7. **Suspension of Work**

7.1 Order to Suspend Performance

Upon written order of the Contract Administrator, the Contractor agrees to immediately suspend performance of the Services. The Contractor shall not be entitled to compensation for any Services performed during any period in which the Contract Administrator has directed that the Services be suspended.

7.2 Necessary Actions Before Suspension

If immediate suspension of the Services would cause harm, injury, or damage to persons or property, the Contractor must immediately notify the Contract Administrator of the nature of such harm, injury, or damage, and obtain written authorization from the Contract Administrator to take such necessary action as to prevent or minimize such harm, injury or damage. Actions authorized by the Contract Administrator pursuant to this paragraph are compensable.

8. Termination

8.1 Termination for Cause

If the Contractor is in breach of any provision of this Contract, and such breach continues for fourteen (14) days after written notice is issued to the Contractor by the County of the breach, the County may terminate this Contract. Such termination for cause is effective upon receipt of the notice of termination by the Contractor.

In addition to any other remedies provided by law or this Contract, the Contractor shall be responsible for all costs incurred by the County as a result of the Contractor's breach and termination, including any costs to obtain substitute performance.

8.2 Immediate Termination

If the County, in its discretion, determines that the Contractor's breach of this Contract constitutes a threat to public health, safety, or welfare, the County may terminate this Contract immediately upon notice to the Contractor.

In addition to any other remedies provided by law or this Contract, the Contractor shall be responsible for all costs incurred by the County as a result of the Contractor's breach and termination, including any costs to obtain substitute performance.

8.3 Termination for Convenience

If the County determines that it is in the County's best interests, the County may terminate this Contract upon thirty (30) days written notice to the Contractor.

The County shall pay for all work properly performed up to the effective date of the notice of termination.

8.4 Termination for Lack of Funding

If this Contract is funded by public funds or a grant from a public or private entity, and the funds are not appropriated or the grant is discontinued, the County may terminate this Contract by written notice specifying the date of termination.

The County shall pay for all work properly performed up to the effective date of the notice of termination.

9. Nondiscrimination

The Contractor covenants that it will not discriminate against an employee or applicant of employment with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of race, color, religion, national origin, age, sex, height, weight, marital status or a disability that is unrelated to the individual's ability to perform the duties of a particular job or position, and that it will require the same non-discrimination assurances from any subcontractor who may be used to carry out duties described in this contract. Contractor covenants that it will not discriminate against businesses that are owned by women, minorities or persons with disabilities in providing services covered by this Contract, and that it shall require the same assurances from subcontractors. Breach of this covenant shall be regarded as a material breach of this contract.

10. Freedom of Information Act

This Contract and all attachments, as well as any other information submitted by the Contractor to the County, are subject to disclosure under the provisions of MCL 15.231, *et seq.*, known as the "Freedom of Information Act".

11. Intellectual Property

Any intellectual property created by the Contractor in the performance of the Services shall be considered a work made for hire, and any and all rights in such intellectual property shall belong solely to the County. Upon the County's request, the Contractor agrees to execute any documents necessary to convey ownership of such intellectual property to the County.

12. Audit Rights

12.1 Certification of Accurate Information

Contractor certifies that all information provided to the County by the Contractor relating to the award or modification of this Contract, or any payment or dispute related to this Contract, is true and correct. The Contractor further certifies that its accounting system conforms to generally accepted accounting principles.

12.2 Inspection

The Contractor agrees that the County may inspect the Contractor's plant, place of business, or worksite to ensure compliance with the terms of this Contract. If this Contract is funded or supported with any state or federal grant funds, the state or federal agencies responsible for administering the applicable grants may examine the Contractor's plant, place of business, or worksite to ensure compliance with the terms of this Contract and the terms of the applicable grant.

12.3 Audit

The Contractor agrees that the County may examine the Contractor's records to ensure compliance with the terms of this Contract. If this Contract is funded or supported with any state or federal grant funds, the state or federal agencies responsible for administering the applicable grants may examine the Contractor's records to ensure compliance with the terms of this Contract and the terms of the applicable grant.

12.4 Records Retention

The Contractor agrees to maintain any business records related to this Contract or the Contractor's performance under this Contract for a period of at least three (3) years after final payment.

13. Identity Theft Prevention

13.1 In the event that the Contractor will obtain identifying information during the performance of the Services, the Contractor must take reasonable precautions to ensure that such identifying information is protected from unauthorized disclosure and is used only for the purpose of performing the Services.

13.2 For the purposes of this Paragraph, "identifying information" means any name or number that may be used, alone or in conjunction with any other information, to identify a specific person, including but not limited to name, address, telephone number, social security number, date of birth, driver's license number taxpayer identification number, or routing code.

14. Insurance Requirements and Indemnification

The Contractor shall at all times maintain in full force and effect for duration of the term of this agreement the following insurance coverages. All coverage shall be with insurance companies licensed and admitted to do business in the State of Michigan, having an AM Best rating of at least A- and acceptable to Genesee County. *In addition, the County reserves the right to modify or waive at any time any applicable insurance requirements based on the scope of services provided*

at the discretion of the County's Risk Manager or other authorized representative of the County.

Commercial General Liability Insurance on an "occurrence basis" with minimum limits of $1,000,000 per occurrence and a $2,000,000 aggregate limit. The policy shall name Genesee County, including all employees, elected and appointed officials and volunteers, all boards, commissions, and/or authorities, and their board members, employees, and volunteers as additional insureds. Coverage shall be primary and non-contributory, including a waiver of subrogation in favor of the County.

Workers' Compensation Insurance – as required by and in accordance with all applicable statutes of the State of Michigan, including Employers' Liability Coverage.

Automobile Liability – Including Michigan No-Fault coverages, with limits of liability not less than $1,000,000 per occurrence combined single limit for bodily injury and property damage. Coverage shall include all owned, non-owned, and hired vehicles. Limits may be satisfied using primary and excess/umbrella liability policies. -. The policy shall name Genesee County, including all employees, elected and appointed officials and volunteers, all boards, commissions, and/or authorities, and their board members, employees, and volunteers as additional insureds.

Professional Liability Insurance – in an amount not less than $1,000,000 per occurrence and $1,000,0000 aggregate. If this policy is a claims made form, the Contractor shall be required to keep said policy in force, or purchase "tail" coverage for a minimum of three (3) years after the termination of this contract. A licensee or its insurance broker shall notify the County of any cancellation or reduction in coverage within seven (7) days of receipt of insurer's notification to that effect. The contractor, licensee, permittee, or lessee shall forthwith obtain and submit proof of substitute insurance to the County Risk Manager within five (5) business days in the event of expiration or cancellation of coverage.

1.1 Insurance Certificate and Additional Insured Coverage

1. **Certificate of Insurance** – The contractor must provide a Certificate of Insurance evidencing the required insurance set forth above. The Certificate Holder should be listed as follows:

Genesee County
Attn: Risk Management
324 S. Saginaw St, Flint, MI 48502

2. **Endorsements** In addition, the contractor must provide the following endorsements, including but not limited to:

a. An additional insured endorsement (equivalent in coverage to ISO form CG 20 10 and CG 20 37) naming the "Genesee County, its officials, employees and agents, all boards, commissions and/or authorities and board members, including employees and volunteers thereof" as additional insureds under the general liability policy. No person or department should be identified as the additional insured. Coverage afforded shall be considered primary and any other insurance or self-insurance, maintained by or available to the County shall be considered secondary and/or excess.

b. An endorsement to each policy stating that such policy shall not be cancelled or reduced in coverage except after thirty (30) days prior written notice to County. Cancellation, material restriction, nonrenewal or lapse of any of the required policies shall be grounds for immediate termination of the Agreement by the County. If any of the required coverages expire during the term of the contract, the vendor shall deliver renewal certificates, endorsements, and/or policies to County at least ten (10) days prior to the expiration date.

In lieu of required endorsements, a copy of the policy sections, where coverage is provided for additional insured and cancellation notice, may be acceptable. Copies of all policies mentioned above shall be furnished, if so requested.

1.2 Indemnification

The Contractor agrees to indemnify, defend, and hold harmless the County, its officials, officers, agents, and employees from any and all claims, damages, or liability, including defense costs, arising out of the Contractor's performance of the Services or presence on the County's property or worksite. Contractor agrees that the insurance requirements specified in the contract do not reduce the liability Contractor has assumed in the indemnification/hold harmless section of the Contract.

15. Independent Contractor

The Contractor and its agents and employees are independent contractors and are not the employees of the County.

16. General Provisions

16.1 Entire Contract

This Contract, consisting of the following documents and Exhibits, embodies the entire Contract between the Parties.

16.1.1. The Contract – This Professional Services Contract

16.1.2. Exhibit A – The Scope of Work

16.1.3. Exhibit B – The Insurance Checklist

There are no promises, terms, conditions, or obligations relating to the Services other than those contained herein. In the event of a conflict between this Contract and any Exhibit, the terms of this Contract shall control.

16.2 No Assignment

The Contractor may not assign or subcontract this Contract without the express written consent of the County.

16.3 Modification

This Contract may be modified only in writing executed with the same formalities as this Contract.

16.4 Binding Effect

The provisions of this Contract shall apply to and bind the heirs, executors, administrators, and assigns all of the parties hereto.

16.5 Headings

The paragraph headings in this Contract are used only for ease of reference, and do not limit, modify, construe, and or interpret any provision of this Contract.

16.6 Governing Law and Venue

This Contract is entered into under the laws of the State of Michigan. Any litigation between the Parties arising out of this Contract must be initiated within two years of the cause of action accruing and must be brought in a court of competent jurisdiction in Genesee County, Michigan.

16.7 Subpoena Power

The Contractor acknowledges and understands that the Chairperson of the Genesee County Board of Commissioners, pursuant to MCL 46.3(5), as amended, has the power to administer oaths, issue subpoenas, and compel a person's attendance in the same manner as a court of law. The Contractor agrees to submit to this power with respect to this Contract.

16.8 Severability and Survival

In the event that any provision of this Contract is deemed by any court of competent jurisdiction to be legally ineffective, such decision shall have no effect on the remaining provisions of this Contract.

16.9 Interpretation

Each Party has had opportunity to have this Contract reviewed by legal counsel and has had equal opportunity to contribute to its contents. In the event of any dispute concerning the interpretation of this Contract, there shall be no presumption in favor of any interpretation solely because the form of this Contract was prepared by the County.

16.10 Remedies

All remedies specified in this Contract are non-exclusive. The County reserves the right to seek any and all remedies available under this Contract and applicable law in the event that the Contractor fails to abide by the terms of this Contract.

IN WITNESS WHEREOF, the Parties have caused this Contract to be executed by their duly authorized agents.

MERIDIAN LAND SURVEYING, INC.	COUNTY OF GENESEE
By: Greg M McArdle	By: Delrico J. Loyd Delrico J. Loyd (Sep 25, 2025 08:40:58 EDT)
Greg M. McArdle, PS Owner	Delrico J. Loyd, Chairperson Board of County Commissioners
Date: 25/09/2025	Date: 25/09/2025

EXHIBIT A

Scope of Work

For the following set of Section Corners:

VIENNA TOWNSHIP, T9N-R6E

B-2, D-2, F-2, H-2, J-2, L-2, B-4, D-4, F-4, H-4, J-4, L-4, B-6, D-6, F-6, H-6, J-6, L-6, B-8, D-8, F-8.....**21 Corners**

GRAND BLANC TOWNSHIP, T6N-R7E

F-12, H-12, J-12, L-12.....**4 Corners**

A. Research of public and private records from information regarding public land corners.

B. Field work including, but not limited to:

1. Field traversing for determining mathematical relationships.
2. Excavation for physical evidence of Monumentation of government corners.
3. Setting, restoring, and perpetuating physical Monumentation for government corners under the requirements of P.A. 74 of 1970.
4. Establishment of acceptable accessories for all Monumented Section corners.
5. Provide geodetic coordinates for all contracted corners reported in decimal degrees of Latitude and Longitude with coordinate accuracy of 0.1 feet.
6. Provision of MSP coordinates to 0.01ft precision for the set corner and the two adjoining corners for standard corners or the four adjoining corners for interior corners. Coordinates provide in CSV file with corner (BINGO) code identified for each.

C. Preparation of Corner Recordation Certificates under the guidelines of P.A. 74 of 1970 and presentation of all data to peer review committee for review and approval.

A separate contract will be issued and required of surveyors for peer review involvement.

D. Record keeping of all field activities and corner research in accordance with acceptable County standards.

E. Record keeping of all time and materials expended to accomplish the above listed tasks.

F. All work shall be performed consistent with the requirements indicated in the Genesee County Monumentation and Remonumentation Plan, and the Grant Contract between the State of Michigan and Genesee County.

All work must be completed following the specifications as stated below:

1. Monumentation: All corners that require monumentation shall have Genesee County's standard monument set in place which must be obtained from the CR. This corner may also be set at corners with existing Monumentation at the discretion of the Monumentation Surveyor (MS). All monumentation shall be in accordance with P.A. 74 of 1970.

   The appropriate monument shall be provided by the County. Contact the CR for arrangements to obtain the standard monument and cap.

   It is not necessary to replace existing monumentation with standard monument if the existing monumentation meets the requirements of P.A. 74 of 1970 and is deemed to be in good condition by the MS.

   In those areas requiring excavation and subsequent monumentation in a paved road surface, excavations and monumentation shall be performed only after contacting the Genesee County Road Commission, Michigan Department of Transportation or the appropriate agency of the local unit of government. Utilize the CR as the contact when the MS is not sure of the appropriate contact.

2. Accessories to Monumentation: All corners assigned to the MS for Remonumentation shall have a minimum of four witnesses or accessories taken for use on the Land Corner Recordation Certificate (LCRC). It is imperative that accessories used shall be of some significance so as to survive the ravages of time and progress. All MS shall use identifiable tags with aluminum or galvanized nails for nail and tag accessories. It is suggested that house, garage, and barn foundation corners be used, or any readily identifiable natural, permanent feature be used to identify corner locations. Use of utility poles is discouraged but not prohibited. In areas of double corners, i.e. Township lines, adjacent corners should be utilized as a witness to the subject corner.

   Accessories should be located within 300 feet of the subject corner, but conditions may dictate flexibility. In those areas that lack existing features, standard survey markers may be set around the corner to provide minimum requirements.

   Direction to all accessories should be determined by compass or instrumentation. Measurements shall be to .01 foot using EDM or steel taping procedures.

   All previously existing accessories that can be related to previous surveys, LCRCs, or monumentation should be noted and checked by the MS for the record. Any existing

monumentation found that does not agree with MS corner location shall be noted and described in the record along with any history known about that monumentation.

3. Field standards: All data collected by MS in the course of remonumentation shall become part of a permanent record in the County. These records will be used as a reference by all surveyors working in this County for generations to come and should be prepared with care and professional pride.

   All measurements shall be taken with calibrated equipment. Calibration data shall be entered in the dossier prior to engaging in field traverse activities and be subject to review by the CR and peer review group upon request. There shall be no charge to the program for calibration of equipment.

   All field traversing deemed necessary by the MS shall be entered in the dossier on each corner. All data shall be entered in a format consistent with surveying standards or practices and shall be kept as part of the permanent record.

   All angles shall be observed a minimum of two times in the upright and reversed positions. All EDM distances are to be measured in forward and reverse positions, if utilized.

   All traverses shall be closed traverses where practical.

4. Dossiers: All MS shall utilize a dossier for all data entry. Dossiers will be presented for inspection upon request of the CR at his/her discretion. All abbreviations in each dossier shall be explained on a note page or in some other County approved descriptive manner.

5. Land Corner Recordation Certificate: The LCRC is the sum of all efforts expended in the project. The LCRC shall be complete with the history of the corner and the reasons for the present location. The State Commission mandates that all pertinent data be shown on the certificate so as to eliminate all questions as to depth of research. If many sources duplicate the same data, an abbreviated statement can be made but it is important that all sources be discussed or listed.

6. Restoration Procedures: All retracement procedures shall be in accordance with the Manual of Surveying Instructions – 1973 as published by the US Department of the Interior, Bureau of Land Management. Also, the booklet of Restoration of Lost or Obliterated Corners & Subdivision of Sections published by US Department of Interior is highly recommended for reference material.

7. Common Township Corners: Common corners to townships and/or counties shall be so noted on the LCRC with all pertinent corner codes and Town and Ranges noted on the particular LCRC.

8. Completion Date: Work may begin immediately after contract authorization. All field work must be completed no later than December 30, 2025 in the initial year, and no later than September 30th in following years of the contract. Contractor must perform all services in a professional and timely manner acceptable to the Remonumentation Committee and the County Representative to ensure that grant funds established for contractual survey services are expended and further to ensure that the number of corners accepted for recordation complies with requirements of the Remonumentation Project Grant.

EXHIBIT B
Insurance Checklist

GENESEE COUNTY INSURANCE CHECKLIST

PROFESSIONAL SERVICES CONTRACT FOR: RFQ # 25-423 – Survey for Monument GPS Collection Services

	Coverage Required	Limits (Figures denote minimums)
X	1. Workers Compensation	Statutory limits of Michigan
X	2. Employers' Liability	$100,000 accidental/disease $500,000 policy limit, disease
X	3. General Liability	$1,000,000 per occurrence with $2,000,000 aggregate Including Products/Completed Operations and Contractual Liability and Premises/operations
X	4. Professional Liability	$1,000,000 per occurrence with $2,000,000 aggregate Including errors and omissions
	5. Medical Malpractice	$200,000 per occurrence $800,000 in aggregate
X	6. Automobile liability	$1,000,000 combined single limit each accident – Owned, Hired, Non-owned
	7. Umbrella liability/Excess Coverage	$2,000,000 BI & PD and PI
X	8. A copy of the specific additional insured endorsement naming Genesee County or a blanket additional insured endorsement must be attached to the certificate	
	9. Other Insurance Required:	
	10. A 30-day notice of cancellation or non-renewal is required for all policies	
	11. Builders Risk "All Risk" for all materials and equipment of this contract	
X	12. Best's rating: A VIII or better, or its equivalent (Retention Group Financial Statements)	
X	13. The Certificate must state bid number and title	
	**Additional coverage including excess liability, pollution and errors of omissions may be required Depending on the conditions of the building and processes to be utilized. Each NSP project is to be bid Separately, and each will require evaluation for possible risk exposure and additional insurance requirements	

Insurance Agent's Statement

I have reviewed the requirements with the bidder named below. In addition:

_____ The above required policies carry the following deductibles:

_____

_____ Liability policies are *occurrence* X *claims made* _____

Insurance Agent

Signature

Prospective Contractor's Statement

I understand the insurance requirements and will comply in full if awarded the contract.

MERIDIAN LAND SURVEYING
Contractor

Signature

Required general insurance provisions are provided in the checklist above. These are based on the contract and exposures of the work to be completed under the contract. Modifications to this checklist may occur at any time prior to signing of the contract. Any changes will require approval by the vendor/contractor, the department, and County Risk Manager. To the degree possible, all changes will be made as soon as feasible.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 01/29/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: Simon-Sugg Joint	
Assurance Risk Managers, Inc. 10651 East Bethany Drive Suite 300 Aurora CO 80014-2688	PHONE (A/C, No, Ext): (303) 454-9562	FAX (A/C, No): (303) 454-9564
	E-MAIL ADDRESS: annette.simon@arm-i.com	

INSURED	INSURER(S) AFFORDING COVERAGE	NAIC #
Meridian Land Surveying, Inc. 940 S. Grand Traverse Street Flint MI 48502	INSURER A: RLI Insurance Co	13056
	INSURER B: Hanover Insurance Company	22292
	INSURER C:	
	INSURER D:	
	INSURER E:	
	INSURER F:	

COVERAGES **CERTIFICATE NUMBER:** 25-26 G A W EX 24-25 EO **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT LOC OTHER:	Y		PSB0006858	02/05/2025	02/05/2026	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 1,000,000 $ 10,000 $ 1,000,000 $ 2,000,000 $ 2,000,000
A	AUTOMOBILE LIABILITY X ANY AUTO OWNED AUTOS ONLY SCHEDULED AUTOS HIRED AUTOS ONLY NON-OWNED AUTOS ONLY	Y		PSA0002316	02/05/2025	02/05/2026	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $
A	UMBRELLA LIAB X OCCUR X EXCESS LIAB CLAIMS-MADE DED RETENTION $			PSE0002946	02/05/2025	02/05/2026	EACH OCCURRENCE AGGREGATE	$ 2,000,000 $ 2,000,000
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N: N If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		PSW0003848	02/05/2025	02/05/2026	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 1,000,000 $ 1,000,000 $ 1,000,000
B	Professional Liability Claims Made Policy			LH49709421 12	10/08/2024	10/08/2025	Each Claim Aggregate	1,000,000 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

The certificate holder is an additional insured as their interest may appear when required by written contract.

CERTIFICATE HOLDER

Genesee County
1101 Beach St.
Flint MI 48502

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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GENESEE COUNTY PURCHASING DEPARTMENT

Final Audit Report 2025-10-02

Created:	2025-09-25
By:	Christine Pobocik (CPobocik@geneseecountymi.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAAhzOjRog86-4efNxmF8OB6pnNKLX3OMgP

"GENESEE COUNTY PURCHASING DEPARTMENT" History

Document created by Christine Pobocik (CPobocik@geneseecountymi.gov)
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Document e-signed by Greg M. McArdle (gmcardle@meridianls.com)
Signature Date: 2025-10-02 - 1:12:42 PM GMT - Time Source: server

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2025-10-02 - 1:12:42 PM GMT

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CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 6/3/2026

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: Maribeth Sugg
Assurance Risk Managers, Inc. 10651 East Bethany Drive Suite 300 Aurora CO 80014-2688	PHONE (A/C, No, Ext): (303)454-9562 FAX (A/C, No): (303)454-9564 E-MAIL ADDRESS: maribeth.sugg@arm-i.com
INSURED	INSURER(S) AFFORDING COVERAGE / NAIC #
Meridian Land Surveying, Inc. 940 S. Grand Traverse Street Flint MI 48502	INSURER A : RLI Insurance Co 13056 INSURER B : Hanover Insurance Company 22292 INSURER C : INSURER D : INSURER E : INSURER F :

COVERAGES **CERTIFICATE NUMBER:** 26-27 G A W EX 25-26 EO **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE / X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY / X PRO-JECT / LOC OTHER:	X	Y	PSB0006858	2/5/2026	2/5/2027	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 1,000,000 $ 10,000 $ 1,000,000 $ 2,000,000 $ 2,000,000
A	AUTOMOBILE LIABILITY X ANY AUTO ALL OWNED AUTOS / SCHEDULED AUTOS HIRED AUTOS / NON-OWNED AUTOS	X	Y	PSA0002316	2/5/2026	2/5/2027	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $
A	UMBRELLA LIAB / X OCCUR X EXCESS LIAB / CLAIMS-MADE DED / RETENTION $			PSE0002946	2/5/2026	2/5/2027	EACH OCCURRENCE AGGREGATE	$ 5,000,000 $ 5,000,000
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		PSW0003848	2/5/2026	2/5/2027	X PER STATUTE / OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 1,000,000 $ 1,000,000 $ 1,000,000
B	Professional Liability			LH49709421 13	10/8/2025	10/8/2026	Each Claim/Aggregate	1,000,000
	Pollution Liability			NY25ECPX02009NC	12/2/2025	12/02/2026	Each Claim/Aggregate	1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Genesee County is an additional insured as their interest may appear when required by written contract. Coverage is on a primary & non-contributory basis. A waiver of subrogation applies in favor of the additional insureds, when required by written contract.

CERTIFICATE HOLDER

kkoleda@geneseecountymi.gov

Genesee County
324 S Saginaw St Ste 8A
Flint, MI 48502

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Lisa Isom/MARI

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Genesee County

Staff Report

Genesee County
Administration Building
324 S. Saginaw St.
Flint, MI 48502

File #: RES-2026-0803 **Agenda Date:** 7/15/2026 **Agenda #:** 6.

To: Brian K. Flewelling, Public Works Committee Chairperson

From: Patrick Linihan, Parks and Recreation Director

RE: Approval of a purchase order to Webuildfun, Inc., in an amount not to exceed $15,609.90, for the purchase of replacement playground equipment; the cost of this purchase order will be paid from account 2080-770.01-930.000

BOARD ACTION REQUESTED:

Genesee County Parks and Recreation staff requests the approval of an expense to Webuildfun, Inc., in a total amount not to exceed $15,609.90, for the purchase of replacement playground equipment.

BACKGROUND:

This request is for the purchase of replacement equipment for playgrounds within the Parks system that are damaged and unsafe for use. The replacement equipment is for the exact replacements. Other brand equipment would require additional modifications.

DISCUSSION:

Expenses with the vendor have exceeded the $30,000 threshold for all county departments, for FYE 2026.

IMPACT ON HUMAN RESOURCES:

None.

IMPACT ON BUDGET:

Expenses to be paid from account 2080-770.01-930.000. A budget amendment is attached.

NO USE OF GENERAL FUND.

IMPACT ON FACILITIES:

None.

IMPACT ON TECHNOLOGY:

None.

CONFORMITY TO COUNTY PRIORITIES:

Replacing damaged, unsafe playground equipment supports the county's priority of healthy, livable, and safe communities by improving playground safety, promoting active and inclusive recreation, and

enhancing the overall quality and usability of our park system.

TO THE HONORABLE CHAIRPERSON AND MEMBERS OF THE GENESEE COUNTY BOARD OF COMMISSIONERS, GENESEE COUNTY, MICHIGAN

LADIES AND GENTLEMEN:

BE IT RESOLVED, by this Board of County Commissioners of Genesee County, Michigan, that the request by the Parks and Recreation Director to authorize an expenditure and Purchase Order to Webuildfun, Inc., for the purchase of replacement playground equipment, at a total cost not to exceed $15,609.90 to be paid from account 2080-770.01-930.000, is approved (a copy of the memorandum request and supporting documents being on file with the official records of the July 15, 2026 meeting of the Public Works Committee of this Board), and the Chief Financial Officer is directed to record the attached budget amendment.

LEGISTAR SUBMISSION CHECKLIST*

Before submission of a request for payment/authorization for goods, services, or construction work, the following questions must be answered to determine whether to use a purchase order or formal contract. You must check an option in all questions until the form directs you to what workflow and/or document to use.

DOES THE PRJOECT NEED A CONTRACT?

1) Is this a request for the purchase of goods? (i.e. office supplies, vehicles, equipment, etc.)

Yes: __X__ (Go to Question 2)

No: (Go to Question 4)

2) If providing goods, does the vendor require time on any Genesee County premises for installation and/or maintenance for the goods?

Yes**:** ____ This project requires a contract, skip to the contracts section. No: __X__ (Go to Question 3)

3) Has the vendor presented a document for the county to sign?

Yes: ____

- This document needs to go through Legistar and be reviewed by the proper departments before it can be signed. It is recommended that Corporate Counsel and Risk Management review prior to submission to avoid potential last step denial.

No: __X__

- Use a **Purchase Order** You do not need to complete the remainder of this form.

4) Is this a request for services, an IT submission, or construction work?

Yes: _____ This project requires a contract, skip to the contracts section.

No: _____ Contact corporate counsel office prior to submitting into Legistar.

CONTRACTS

*** After selecting a template, contact the Risk Manager to obtain insurance requirements before submitting it to Legistar. * If the vendor has provided a contract, or if you have a department specific template that you are using or have used historically, have it reviewed by risk management and corporate counsel prior to submission into Legistar. Even if the agreement was used previously, it may need changes.**

1) Is this a new contract or a renewal/extension? _____

a. Renewal/Extension: Use the appropriate renewal/amendment template based on the type of agreement. Include the original signed agreement and all prior amendments in the review process.

b. New Contract: Go to Question 2.

2) How is the contract funded?

a. Budgeted or General Funds: _____(Go to Question 3)

b. Grant Funded: _____(Go to Question 4)

c. Millage Funded: ___ (Go to Question 5)

3) What is the vendor providing?

a. Services: _____
   - Use the **Professional Service Contract Template**

b. Construction/Physical Building Altercation/Remodel _____
   - If the contractor has not provided a proposed contract use the **Construction Contract Template** If the contractor has provided a proposed contract, contact corporate counsel prior to submitting into Legistar.

*** To avoid a last step rejection, ask corporate counsel to review updated template before submission into Legistar. ***

4) Complete the AGA Recipient Checklist for Determining Contractor vs. Subrecipient

a. If the service provider is a **contractor**, go back to Question 3.

b. If the service provider is a **subrecipient**, a department/grant specific subrecipient agreement template must be used. If the template has not been reviewed by corporate counsel within the last year, contact corporate counsel office for review of the agreement/template.

5) Is this a new contract/agreement?

Yes: _____ No: ____

a. If **yes** - contact corporate counsel office for assistance in selecting a template and/or creating an agreement.

b. If **no** – has the template/previous agreement used for this program been reviewed by corporate counsel since August 1, 2023?

If **yes**, use the template/previous agreement.
If **no**, contact corporate counsel regarding template/previous agreement.

6) Is a contract that is not a County prepared contract being submitted for review?

Yes: _____ No: ____

a. If yes, submit the contract to corporate counsel office for review prior to submitting to Legistar.

***** If at any point in time you have questions while completing this checklist, it is recommended that you contact the appropriate reviewing department (fiscal services, purchasing, risk management, or corporate counsel) to address your question prior to submission into Legistar.

GENESEE COUNTY PARKS & RECREATION COMMISSION
BUDGET ADJUSTMENT
9.30.26

GL #	DESCRIPTION	Increase/(Decrease)
2080-770.01-930.000	Repairs Grounds	75,000.00

Genesee County

Staff Report

Genesee County
Administration Building
324 S. Saginaw St.
Flint, MI 48502

File #: RES-2026-0804 **Agenda Date:** 7/15/2026 **Agenda #:** 7.

To: Brian K. Flewelling, Public Works Committee Chairperson

From: Patrick Linihan, Parks and Recreation Director

RE: Approval of a grant award from the Ruth Mott Foundation, in the amount of $400,000.00, to provide for the North Flint Public Safety Strategy 2026 through Keep Genesee County Beautiful program services; the budget for this grant is attached

BOARD ACTION REQUESTED:

Genesee County Parks and Recreation staff requests approval to accept a grant from the Ruth Mott Foundation for the North Flint Public Safety Strategy 2026, for continuation of Keep Genesee County Beautiful program services, in the amount of $400,000.

BACKGROUND:

Grant funds will support activities in City of Flint parks including park adoption, neighborhood cleanup support, cultivating our community gateways, technical assistance and fundraising support related to parks groups.

DISCUSSION:

This grant supports the employment of one full-time employee and up to five seasonal staff who provide services to City of Flint parks.

IMPACT ON HUMAN RESOURCES:

None.

IMPACT ON BUDGET:

Funds to be deposited into account 2084-788.00-674.029.

No match.

NO USE OF PARKS MILLAGE FUNDS. NO USE OF GENERAL FUND.

IMPACT ON FACILITIES:

None.

IMPACT ON TECHNOLOGY:

None.

CONFORMITY TO COUNTY PRIORITIES:

Acceptance of this grant supports the county's priority to expand the role of the county to enhance relationships that contribute to community growth, supports the priority to communicate available resources and services to residents, and promotes environmental stewardship directly through Keep Genesee County Beautiful's programs of Adopt a Park, Community Cleanups, and Cultivating our Community. The program embraces a lean management philosophy.

TO THE HONORABLE CHAIRPERSON AND MEMBERS OF THE GENESEE COUNTY BOARD OF COMMISSIONERS, GENESEE COUNTY, MICHIGAN

LADIES AND GENTLEMEN:

BE IT RESOLVED, by this Board of County Commissioners of Genesee County, Michigan, that the request by the Parks and Recreation Director to authorize accepting the North Flint Public Safety Strategy 2026 grant from the Ruth Mott Foundation, in the amount of $400,000.00 to be deposited into account 2084-788.00-674.029, to fund the Keep Genesee County Beautiful program services, with no match requirement, is approved (a copy of the memorandum request and supporting documents being on file with the official records of the July 15, 2026 meeting of the Public Works Committee of this Board), the Chairperson of this Board is authorized to sign the award letter on behalf of Genesee County, and the Chief Financial officer is directed, as necessary, to amend the budget lines associated with this project.

Docusign Envelope ID: 61D94D62-7BED-825B-8150-7C31D9825623

Ruth Mott Foundation
APPLEWOOD

March 18, 2026

Patrick Linihan
Director
Genesee County Parks and Recreation Commission
5045 Stanley Road
Flint, MI 48506

Dear Patrick Linihan:

On behalf of the Board of Trustees of the Ruth Mott Foundation, it is my pleasure to inform you that a grant to Genesee County Parks and Recreation Commission in the amount of $400,000 has been approved for North Flint Public Safety Strategy 2026. The grant period is 4/1/2026 to 3/31/2027.

Conditions

- The grant will be paid upon receipt and approval of the prior final report (request ID 3573) due on 10/30/2026 and this signed letter.

Use of Funds

- The grantee agrees to use funds in accordance with the attached approved budget. The Ruth Mott Foundation must approve variances that exceed both $1,000 and 20% over the budget line item amount 30 days in advance of the expenditure. Expenses related to any unapproved variances will be the responsibility of the grantee. Any unspent funds at the end of the grant period (over $100) must be returned, so please talk with your program officer in advance if it appears funds may remain near the end of the grant. Grant period extensions should be requested 30 days in advance.
- The grantee warrants that funds will only be used for the purposes allowed by the IRS and other government agencies relating to grants from private foundations. No goods or services have been or will be provided to the Foundation or any of its trustees, officers, or family members.
- If the grantee's tax-exempt status changes or if funds are not used for the purposes described in your proposal, the Foundation reserves the right to have all remaining grant funds immediately returned. The Foundation also reserves the right to terminate the grant if the grantee is unable to carry out its purposes or breaches the terms of this grant agreement.

Docusign Envelope ID: 61D94D62-7BED-825B-8150-7C31D9825623

Communication

- The grantee will furnish to the Foundation any information concerning a change in the grantee's tax-exempt status. The Foundation will also be informed of any significant changes or updates regarding the program or the organization.
- The Foundation encourages grantees to make announcements of grants upon return of the signed commitment letter and to make mention of the Ruth Mott Foundation. However, we require the opportunity to read and approve in advance all publications, press releases, online communications, or other public announcements that make mention of the Ruth Mott Foundation and/or this grant award.

Reporting

- The grantee will provide a final report within one month of the end of the grant. Details of what should be included in the report are attached.

Please acknowledge your agreement with the terms of this letter by signing and returning a copy as soon as possible.

The Ruth Mott Foundation is proud to support your mission. Your program officer will continue to be available as a resource to you throughout the life of this grant. Thank you for your good work!

Sincerely,

Signed by:
Sue Peters
7C3495917371454...
Sue Peters
President

Accepted By

Name of President/CEO: _____

Signature of President/CEO: _____

Date Signed: _____

Name of Board Chair: _____

Signature of Board Chair: _____

Date Signed: _____

Attachments

- Reporting requirements
- Approved budget

Docusign Envelope ID: 61D94D62-7BED-825B-8150-7C31D9825623

Reporting Requirements

Final Report Due Date: **4/30/2027**

You will be required to submit a final report to the Foundation. The final report should include the items below:

- A Narrative Report that includes the specific items listed in Section One below.
- A Financial Report showing how grant funds were spent compared to the approved budget. See Section Two below for specific requirements.

Section One

The following items must be included in the narrative report:

1. An overview of the primary activities conducted during the program, including park adoption, neighborhood cleanup supports, Cultivating Our Community Gateways, technical assistance, fundraising support related to parks groups, and support provided to the City of Flint around park-related investments.
2. The total number of volunteers by ZIP code for each type of activity.
3. Grant outcomes:
   a. Community members are outside more often (measured by surveys).
   b. Public space is well-maintained and inviting (measured by surveys on involvement in a neighborhood clean-up or beautification/garden project and the property ratings of adopted parks.)
4. Key program observations and lessons learned for the future.
5. A description of plans to sustain the program beyond the Ruth Mott Foundation's support and a summary of all fund development efforts.

Section Two

The following items must be included in the financial report:

a. Actual expenditures against the approved budget by line item for the reporting period. In the case of unspent funds, please explain the variance between the total funding received and the total approved budget.
b. Summary of all approved variances that occurred during the grant.
c. Summary of all cash and in-kind project support received during the reporting period. Please identify source, amount, and any relevant restrictions.

Please contact your program officer if you have questions regarding your final report.

Approved Budget	**Approved Amount**
General Project Support	$400,000

GENESEE COUNTY PARKS & RECREATION COMMISSION
BUDGET ADJUSTMENT
KGCB
9.30.26

GL #	DESCRIPTION	Increase/(Decrease)
2084-788.00-674.029	LOCAL CONTRIBUTION	400,000.00
2084-788.00-702.000	SALARIES - FT	75,060.00
2084-788.00-704.000	SALARIES - SEASONAL	150,000.00
2088-788.00-709.000	SOCIAL SECURITY	17,370.00
2084-788.00-713.000	OVERTIME	2,000.00
2084-788-00-718.000	MEDICAL INS	11,000.00
2084-788.00-723.000	POST RETIREMENT	2,600.00
2084-788.00-725.000	OPTICAL	60.00
2084-788.00-726.000	DENTAL	1,000.00
2084-788.00-727.000	LIFE	750.00
2084-788.00-728.000	RETIREMENT	6,165.00
2084-788.00-729.000	WORKERS COMP	900.00
2084-788.00-752.000	SUPPLIES	1,500.00
2084-788.00-850.000	TELEPHONE	6,000.00
2084-788.00-864.001	PROGRAMMING	113,995.00
2084-788.00-939.000	RENT	9,600.00
2084-788.00-910.004	TRAINING	2,000.00

GRANT PERIOD 4.1.26 - 3.31.27

Genesee County

Staff Report

Genesee County
Administration Building
324 S. Saginaw St.
Flint, MI 48502

File #: RES-2026-0805 **Agenda Date:** 7/15/2026 **Agenda #:** 8.

To: Brian K. Flewelling, Public Works Committee Chairperson

From: Patrick Linihan, Parks and Recreation Director

RE Approval of a purchase order to various vendors, in an amount not to exceed $200,000.00, to purchase Halloween supplies for the Crossroads Village Ghosts & Goodies Program; the cost of this purchase order will be paid from the accounts listed

BOARD ACTION REQUESTED:

Genesee County Parks and Recreation staff requests approval to purchase candy, cider, donuts, paper products and supplies for the Crossroads Village Ghosts & Goodies Program (Halloween) in a budgeted amount not to exceed $200,000.

BACKGROUND:

The Crossroads Village Ghosts & Goodies Program runs through the month of October and attracts an average of 40,000 visitors each year. Every park patron receives a bag to trick-or-treat throughout the Village's candy stops.

DISCUSSION:

Parks staff purchase supplies and products from all solicited vendors, based on availability and price. Items will be purchased across two fiscal years, FYE 2026 and FYE 2027, through the end of the program on October 31, 2026.

IMPACT ON HUMAN RESOURCES:

None.

IMPACT ON BUDGET:

Budgeted expenses to be paid from accounts 2083-000.00-123.000 and 2083-765.02-839.000. NO USE OF GENERAL FUND.

IMPACT ON FACILITIES:

None.

IMPACT ON TECHNOLOGY:

None.

CONFORMITY TO COUNTY PRIORITIES:

Approval of expenses allows the department to continue providing quality services to the residents

and visitors of Genesee County and continues the promotion of safe communities and events, directly supporting the county's priority of healthy, livable & safe communities.

TO THE HONORABLE CHAIRPERSON AND MEMBERS OF THE GENESEE COUNTY BOARD OF COMMISSIONERS, GENESEE COUNTY, MICHIGAN

LADIES AND GENTLEMEN:

BE IT RESOLVED, by this Board of County Commissioners of Genesee County, Michigan, that the request by the Parks and Recreation Director to authorize an expenditure and any needed Purchase Orders to solicited vendors, in a total amount not to exceed $200,000.00 to be paid from accounts 2083-000.00-123.000 and 2083-765.02-839.000, for the purchase of products and supplies for the Crossroads Village Halloween Ghosts & Goodies program, is approved (a copy of the memorandum request and supporting documents being on file with the official records of the July 15, 2026 meeting of the Public Works Committee of this Board).

LEGISTAR SUBMISSION CHECKLIST*

Before submission of a request for payment/authorization for goods, services, or construction work, the following questions must be answered to determine whether to use a purchase order or formal contract. You must check an option in all questions until the form directs you to what workflow and/or document to use.

DOES THE PRJOECT NEED A CONTRACT?

1) Is this a request for the purchase of goods? (i.e. office supplies, vehicles, equipment, etc.)

Yes: __X__ (Go to Question 2)

No: (Go to Question 4)

2) If providing goods, does the vendor require time on any Genesee County premises for installation and/or maintenance for the goods?

Yes**:** ____ This project requires a contract, skip to the contracts section. No: __X__ (Go to Question 3)

3) Has the vendor presented a document for the county to sign?

Yes: ____

- This document needs to go through Legistar and be reviewed by the proper departments before it can be signed. It is recommended that Corporate Counsel and Risk Management review prior to submission to avoid potential last step denial.

No: __X__

- Use a **Purchase Order** You do not need to complete the remainder of this form.

4) Is this a request for services, an IT submission, or construction work?

Yes: _____ This project requires a contract, skip to the contracts section.

No: _____ Contact corporate counsel office prior to submitting into Legistar.

CONTRACTS

*** After selecting a template, contact the Risk Manager to obtain insurance requirements before submitting it to Legistar. * If the vendor has provided a contract, or if you have a department specific template that you are using or have used historically, have it reviewed by risk management and corporate counsel prior to submission into Legistar. Even if the agreement was used previously, it may need changes.**

1) Is this a new contract or a renewal/extension? _____

a. Renewal/Extension: Use the appropriate renewal/amendment template based on the type of agreement. Include the original signed agreement and all prior amendments in the review process.

b. New Contract: Go to Question 2.

2) How is the contract funded?

a. Budgeted or General Funds: _____(Go to Question 3)

b. Grant Funded: _____(Go to Question 4)

c. Millage Funded: ___ (Go to Question 5)

3) What is the vendor providing?

a. Services: _____
   - Use the **Professional Service Contract Template**

b. Construction/Physical Building Altercation/Remodel _____
   - If the contractor has not provided a proposed contract use the **Construction Contract Template** If the contractor has provided a proposed contract, contact corporate counsel prior to submitting into Legistar.

*** To avoid a last step rejection, ask corporate counsel to review updated template before submission into Legistar. ***

4) Complete the AGA Recipient Checklist for Determining Contractor vs. Subrecipient

a. If the service provider is a **contractor**, go back to Question 3.

b. If the service provider is a **subrecipient**, a department/grant specific subrecipient agreement template must be used. If the template has not been reviewed by corporate counsel within the last year, contact corporate counsel office for review of the agreement/template.

5) Is this a new contract/agreement?

Yes: _____ No: ____

a. If **yes** - contact corporate counsel office for assistance in selecting a template and/or creating an agreement.

b. If **no** – has the template/previous agreement used for this program been reviewed by corporate counsel since August 1, 2023?

If **yes**, use the template/previous agreement.
If **no**, contact corporate counsel regarding template/previous agreement.

6) Is a contract that is not a County prepared contract being submitted for review?

Yes: _____ No: ____

a. If yes, submit the contract to corporate counsel office for review prior to submitting to Legistar.

***** If at any point in time you have questions while completing this checklist, it is recommended that you contact the appropriate reviewing department (fiscal services, purchasing, risk management, or corporate counsel) to address your question prior to submission into Legistar.

CANDY/PAPER VENDORS - 2026

MJENUWINE@YAHOO.COM – SHELBY WHOLESALE, 7600 23 MILE RD, SHELBY TWP, MI 48316

LJENUWINE@SHELBYWHOLESALE.COM – SHELBY WHOLESALE

SULTANA DISTRIBUTION, 600 FOOD CENTER DR, BRONX, NY 10474

JANCO DISTRIBUTORS, 15928 GRAND RIVER AVE, DETROIT, MI 48227

VG'S, 7461 N GENESEE RD, GENESEE, MI 48437

MEIJER, G-2333 S CENTER RD, BURTON, MI 48519

SAMS CLUB, 6160 S SAGINAW RD, GRAND BLANC, MI 48439

SAMS CLUB, 4373 CORUNNA RD, FLINT, MI 48532

FREDA WHOLESALE CORPORATION, 14020 E ELEVEN MILE RD, WARREN MI 48089

NASSAU CANDY MIDWEST, 35521 INDUSTRIAL RD, LIVONIA, MI 48150

ROGERS BULK CANDY AND ICE CREAM, 15020 E 9 MILE RD, EASTPOINTE, MI 48021

BULK STORE INC, 22635 NORTHPOINT RD, TAYLOR, MI 48180

GORDONS FOOD SERVICE

SUGARMAN CANDY, 1720 NW 20TH ST, MIAMI, FL 33142

ROYAL WHOLESALE CANDY, 717 FELLOWSHIP RD, UNIT C, MT LAUREL, NJ 08054

BLAIR CANDY COMPANY INC, 3421 BEALE AVE, ALTOONA, PA 16601

CANDY NATION, 1721 VALLEY FORGE RD #157, VALLEY FORGE, PA 19481

CANDY CENTRAL, 905 MURRAY RD, EAST HANOVER, NJ 07936

CANDY WAREHOUSE, 215 S DOUGLAS ST, EL SEGUNDO, CA 90245

WHOLESALE CANDY STORE

MY CANDY SUPPLIER, 14723 PARK, LIVONIA, MI 48154

ALLEN BROTHER WHOLESALE DIST, 120 W ERIE AVE, PHILADELPHIA, PA 19140

DOLLARDAYS INTERNATIONAL INC, 7575 E REDFIELD RD, SUITE 201, SCOTTSDALE, AZ 85260

KELLI'S GIFT SHOP SUPPLIERS, 3311 BOYINGTON DR #400, CARROLLTON, TX 75006

WHOLESALE CANDY OUTLET, 10 MERCHANT ST, SHARON, MA 02067

ORIENTAL TRADING

CANDY NATION, 498 LOWER FRICKS LOCK RD, STE 35M, POTTSTOWN, PA 19465

CANDYFAVORITES, 1101 FIFTH AVE, MCKEESPORT, PA 15132

RED STONE, 1736 NEW SALEM RD, BOX 823, REPULIC, PA 15475

CONTINENTAL CONCESSIONS, 575 JERICHO TURNPIKE, STE 300, JERICHO, NY 11753

DONUTS

B & J'S

SPICERS

DAVISON

PORTERS

MONTROSE ORCHARD

CIDER – PASTUERIZED ONLY

MEIJER

VG'S

SPICERS

APPLES

MONTROSE

SPICERS ORCHARD

PORTERS

KOAN ORCHARD

OTHER ORCHARDS IN COUNTY CANNOT PROVIDE OR WERE NOT INTERESTED

Genesee County

Staff Report

Genesee County
Administration Building
324 S. Saginaw St.
Flint, MI 48502

File #: RES-2026-0807 **Agenda Date:** 7/15/2026 **Agenda #:** 9.

To: Brian K. Flewelling, Public Works Committee Chairperson

From: Michael Dawisha, CIO

RE: Approval of an agreement between Genesee County and Site24x7, in an amount not to exceed $22,647.60, to provide subscriptions for IT monitoring services; the cost of this agreement will be paid from the accounts listed

BOARD ACTION REQUESTED:

Approval to renew the Site24x7 subscription for 3 years via ManageEngine/Zoho Corporation in an amount not to exceed $22,647.60, to be paid from the accounts 1010-228.01-933.001 and 1010-000.00-123.00

BACKGROUND:

ManageEngine Site24x7 is a cloud-based monitoring service provided by Zoho. The system is used to monitor the availability and performance of websites, applications, servers, networks, and cloud-based platforms. Site24x7 can check services from multiple global locations as well as from within private networks, helping identify outages, slow response times, and other performance issues. The service also includes monitoring for website transactions, user experience, SSL/TLS certificates, DNS, mail services, APIs, and URLs.

DISCUSSION:

Renewing ManageEngine Site24x7 will allow the County to continue monitoring websites, applications, servers, and certificates without a gap in service. The system alerts the IT Department when services slow down, become unavailable, or when certificates are nearing expiration, which helps staff respond quickly and reduce downtime. Since the team already uses the existing dashboards and reports, renewal avoids retraining or rebuilding monitors and provides a low-risk way to maintain uptime and meet stakeholder expectations.

IMPACT ON HUMAN RESOURCES:

There is no impact on Human Resources.

IMPACT ON BUDGET:

This is a budgeted expense. Renewing for 3 years will save 10%, total cost for the 3-year renewal not to exceed $22,647.60; subscription starting on August 17, 2026, to be paid out of the following accounts 1010-228.01-933.001 $929.03 and pre-paid account 1010-000.00-123.000 $21,718.57.

IMPACT ON FACILITIES:

There is no impact on Facilities.

IMPACT ON TECHNOLOGY:

Reviewed by IT.

CONFORMITY TO COUNTY PRIORITIES:

This renewal supports Long-Term Financial Stability by helping maintain reliable systems, reduce downtime, and avoid unplanned costs related to service interruptions or expired certificates.

TO THE HONORABLE CHAIRPERSON AND MEMBERS OF THE GENESEE COUNTY BOARD OF COMMISSIONERS, GENESEE COUNTY, MICHIGAN

LADIES AND GENTLEMEN:

BE IT RESOLVED, by this Board of County Commissioners of Genesee County, Michigan, that the request by the Chief Information Officer to authorize entering into a three-year agreement between Genesee County and ManageEngine/Zoho Corporation to provide the renewal of the Site24x7 subscription for a clowd-based monitoring service, at a total three-year cost not to exceed $22,647.60 to be paid from accounts 1010-228.01-933.001 ($929.03) and pre-paid account 1010-000.00-123.000 ($21,718.57), is approved (a copy of the memorandum request and supporting documents being on file with the official records of the July 15, 2026 meeting of the Public Works Committee of this Board).

ManageEngine
a division of Zoho Corp
Phone: +1-312-528-3051
Fax: +1-925-924-9600
Email: sales@site24x7.com

ZOHO Corp, 4141 Hacienda Drive, Pleasanton, CA 94588, USA

ManageEngine Pricing

Zoho Corp is pleased to provide a price quote for ManageEngine products. The pricing model is described in the table below

Quote ID:@geneseecountymi.gov-R Dated: 18 Jun 2026

SKU	Product Description	Qty	Amount (in $)
76001.S1	Annual subscription cost for Site24x7 Enterprise plan Start 17 Aug 2026 End 17 Aug 2027	1	5,988.00
76001.12S	Annual subscription cost for 1000 Network Interfaces Start 17 Aug 2026 End 17 Aug 2027	1	2400.00
	1 year renewal pricing		8,388.00
	Multi-year discount on 2 year renewal 5%		15,937.20
	Multi-year discount on 3 year renewal 10%		22,647.60

Important Note: Local taxes as applicable.

1. **Validity**

   Prices are open for acceptance for 30 days from the date of offer. Please reconfirm the prices after the expiry date or before sending your Purchase Order.

2. **Payment Terms**

   a) Net 30 Days.

3. **Payment Mode:**

   a) You can purchase through our online store (or) I can send you a customized link to purchase through a credit card.

   b) Please issue Purchase Order via email to **arun.ramesh@manageengine.com** along with the end user email address.

   c) Please mention the Accounts Payable contacts in the PO.

   d) Zoho Corp accepts payment by valid company check or wire transfer. Please contact Zoho Corp for wire transfer particulars.

Sincerely,

Arun Ramesh
Senior Sales Executive
E-mail: arun.ramesh@manageengine.com
Direct: +1 (910) 661 3796
Office: +1 (312) 528 3051

HDFC ERGO General Insurance Company Limited

	CERTIFICATE OF INSURANCE **Cyber Insurance**	**No.01**	**DATE: 25/11/2025**

	THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHT UPON THE CERTIFICATE HOLDER OTHER THAN THOSE PROVIDED IN THE POLICY. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICY DESCRIBED HEREIN.
	COMPANIES AFFORDING COVERAGE
	COMPANY A **HDFC Ergo General Insurance Company Ltd.**
INSURED	
Zoho Corportion(US), Zoho Corporation Pvt Ltd. Including Its Affiliates	

COVERAGES This certificate supersedes and replaces any previously issued certificate for the policy period noted below.

THIS IS TO CERTIFY THAT POLICIES OF INSURANCE DESCRIBED HEREIN HAVE BEEN ISSUED TO THE INSURED NAMED HEREIN FOR THE POLICY PERIOD INDICATED NOT WITHSTANDING ANY REQUIREMENT TERM OR CONDITION OF ANY CONTRACT OR DOCUMENT WITH RESPECT TO WHICH THE CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, CONDITIONS AND EXCLUSIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCES BY PAID CLAIMS.

Insurance Company	Type Of Insurance	Policy Number	Policy Effective Date DD/MM/YYYY)	Policy Expiration Date (DD/MM/YYYY)	Limits	
A	Cyber Insurance	2999201538187309000	19/11/2025	18/11/2026	Each Occurrence	USD 2,000,000
					Aggregate	USD 2,000,000

Please note that the policy has been issued in INR

CERTIFICATE HOLDER/ADDITIONAL INSURED	CANCELLATION
	SHOULD ANY OF THE POLICIES DESCRIBED HEREIN BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF THE INSURER AFFORDING COVERAGE WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED HEREIN, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER AFFORDING COVERAGE, ITS AGENTS OR REPRESENTATIVES, OR THE ISSUER OF THIS CERTIFICATE.

HDFC ERGO General Insurance Company Limited

Certificate Holder is added as an additional Insured in respect of the policy listed above, where required by the written contract or agreement regarding activities by or on behalf of the named insured	**HDFC ERGO General Insurance Co mpany Limited** AUTHORIZED REPRESENTATIVE

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 4/29/2026

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Marsh & McLennan Agency LLC
Marsh & McLennan Ins Agency LLC
1255 Treat Boulevard #950
Walnut Creek CA 94597

License#: 0H18131

CONTACT NAME: Felicia McAroy
PHONE (A/C, No, Ext): 925-482-9337 **FAX (A/C, No):**
E-MAIL ADDRESS: CertificatesBA@MarshMMA.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Hartford Fire Insurance Company	19682
INSURER B : Trumbull Insurance Company	27120
INSURER C : Hartford Casualty Insurance Company	29424
INSURER D :	
INSURER E :	
INSURER F :	

INSURED
Zoho Corporation
4141 Hacienda Dr
Pleasanton CA 94588-8566

ZOHOCORPO

COVERAGES **CERTIFICATE NUMBER:** 1712809020 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY	Y	N	57UUNBS1EYP	4/25/2026	4/25/2027	EACH OCCURRENCE	$ 1,000,000
	CLAIMS-MADE X OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 1,000,000
							MED EXP (Any one person)	$ 10,000
							PERSONAL & ADV INJURY	$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 2,000,000
	X POLICY PRO-JECT LOC						PRODUCTS - COMP/OP AGG	$ 2,000,000
	OTHER:							$
B	AUTOMOBILE LIABILITY	N	N	57UENBS1NYX	4/25/2026	4/25/2027	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	ANY AUTO						BODILY INJURY (Per person)	$
	OWNED AUTOS ONLY / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	X HIRED AUTOS ONLY / X NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
C	X UMBRELLA LIAB X OCCUR	N	N	57XHUBS1LEZ	4/25/2026	4/25/2027	EACH OCCURRENCE	$ 3,000,000
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	$ 3,000,000
	DED X RETENTION $ 10,000							$
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N	N / A	N	57WEBS2NAW	4/25/2026	4/25/2027	X PER STATUTE OTH-ER	
	ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? N (Mandatory in NH)						E.L. EACH ACCIDENT	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Genesee County -IT Department is included as Additional Insured (General Liability), per the attached.

CERTIFICATE HOLDER

Genesee County -IT Department
324 S. Saginaw Street
Flint, MI 48502

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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Beg	End	Total Days	10/1/2026 PPD Days	Invoice Amt	FY27-Prepaid	FY26
8/17/2026	8/17/2029	1097	1052	$ 22,647.60	$ 21,718.57	$ 929.03

FY26	8/17/2026	9/30/2026	45	$	929.03
FY27	10/1/2026	9/30/2027	365	$	7,535.44
FY28	10/1/2027	9/30/2028	366	$	7,556.08
FY29	10/1/2028	8/17/2029	321	$	6,627.06
FY30	10/1/2029	9/30/2030		$	-
FY31	10/1/2030	5/14/2031		$	-
FY32	10/1/2031	9/30/2032		$	-
FY33	10/1/2032	9/30/2033		$	-
FY34	10/1/2033	9/30/2034		$	-
FY35	10/1/2034	12/23/2034		$	-
			1097	$	22,647.60
FY27	10/1/2026	9/30/2027	365	$	-
FY28	10/1/2027	9/30/2028	366	$	-
FY29	10/1/2028	9/30/2029	365	$	-
FY30	10/1/2029	9/30/2030	365	$	-
FY31	10/1/2030	9/30/2031	365	$	-
FY32	10/1/2031	9/30/2032	366	$	-
FY33	10/1/2032	9/30/2033	365	$	-
FY34	10/1/2033	6/25/2034	268	$	-
			3652	$	-
FY34	10/1/2033	6/25/2034	268	$	-
			3652	$	-

Genesee County

Staff Report

Genesee County
Administration Building
324 S. Saginaw St.
Flint, MI 48502

File #: RES-2026-0811 **Agenda Date:** 7/15/2026 **Agenda #:** 10.

To: Brian K. Flewelling, Public Works Committee Chairperson

From: Michael Dawisha, CIO

RE: Approval of a purchase order to SHI International for the fiscal year ending 2026, in an amount not to exceed $5,850.00, to provide for the purchase two (2) Verkada cameras and a 10-year license for the Legal Resource area and Court Room 2 cameras at the McCree building; the cost of this purchase order will be paid from accounts listed

BOARD ACTION REQUESTED:

Approval to purchase two (2) Verkada cameras and 10-year license through SHI International in an amount not to exceed $5,850.00 for the Legal Resource area and Court Room 2 cameras within the District Court area of the McCree building, to be paid from accounts 2933-286.00-801.004 and 2933-000.00-123.000; vendor exceeds $30,000

BACKGROUND:

The County selected the Verkada camera system as part of an effort to upgrade and standardize security cameras throughout County buildings. Using one camera system helps create a more consistent security platform, improves system management, and allows staff to monitor and access camera footage through a centralized system. This approach also supports better long-term maintenance as cameras are added or replaced in County facilities.

DISCUSSION:

The purchase of two additional Verkada cameras will improve security coverage in the District Court area of the McCree building by adding cameras in the Legal Resource area and Courtroom 2. These areas are used by staff, court personnel, and the public, making reliable visibility important for safety and incident review. Adding the cameras to the existing Verkada system will allow them to be managed through the County's current security platform without introducing a separate system.

IMPACT ON HUMAN RESOURCES:

There is no impact on Human Resources.

IMPACT ON BUDGET:

Per the Purchasing Policy, permission to spend funds with a vendor over the $30,000 threshold is required. This expense will be paid from 2933-286.00-801.004 ($1,987.38) and pre-paid account 2933-000.00-123.000 ($3,862.62), not to exceed $5,850.00. Using August 1, 2026 as a starting point for the 10-year licenses. By selecting SHI International over CDW-G, we are saving approximately

$2,607.00.

IMPACT ON FACILITIES:

Facilities may be required to provide access to secure areas of the building.

IMPACT ON TECHNOLOGY:

Reviewed by IT.

CONFORMITY TO COUNTY PRIORITIES:

This purchase supports Healthy, Livable & Safe Communities by improving security coverage within the District Court building.

TO THE HONORABLE CHAIRPERSON AND MEMBERS OF THE GENESEE COUNTY BOARD OF COMMISSIONERS, GENESEE COUNTY, MICHIGAN

LADIES AND GENTLEMEN:

BE IT RESOLVED, by this Board of County Commissioners of Genesee County, Michigan, that the request by the Chief Information Officer to authorize a purchase order to SHI International, to purchase two Verkada cameras and the 10-year license for each camera for the Legal Resource area and Court Room 2 within the McCree building, at a total cost not to exceed $5,850.00 to be paid from account 2933-286.00-801.004 ($1,987.38) and pre-paid account 2933-000.00-123.00 ($3,862.62), is approved (a copy of the memorandum request and supporting documents being on file with the official records of the July 15, 2026 meeting of the Public Works Committee of this Board).

Pricing Proposal
Quotation #: 27645709
Created On: 6/15/2026
Valid Until: 7/15/2026

MI-County of Genesee

Donald Stockley
1101 Beach St
Admin Bldg Rm 239
Flint, MI 48502
United States
Phone: (810) 237-6102
Email: dstockley@geneseecountymi.gov

Inside Account Manager

Mark Brum
290 Davidson Ave
Somerset, NJ 08873
Phone: 732-652-4760
Email: mark_brum@shi.com

All Prices are in US Dollar (USD)

	Product	Qty	Your Price	Total
1	CD42 Indoor Dome Camera, 256GB, 30 Days Max Verkada - Part#: CD42-256-HW Contract Name: OMNIA Partners IT Solutions, Products & Services Contract #: 2024056-02	2	$916.33	$1,832.66
2	10-Year Camera License, Capacity Increase Verkada - Part#: LIC-CAM-10Y-CAP Contract Name: OMNIA Partners IT Solutions, Products & Services Contract #: 2024056-02	2	$1,964.11	$3,928.22
			Total	$5,760.88

Additional Comments

Thank you for choosing SHI International Corp! The pricing offered on this quote proposal is valid through the expiration date listed above. To ensure the best level of service, please provide End User Name, Phone Number, Email Address and applicable Contract Number when submitting a Purchase Order. For any additional information including Hardware, Software and Services Contracts, please contact an SHI Inside Sales Representative at (888) 744-4084. SHI International Corp. is 100% Minority Owned, Woman Owned Business. TAX ID# 22-3009648; DUNS# 61-1429481; CCR# 61-243957G; CAGE 1HTF0

The products offered under this proposal are resold in accordance with the terms and conditions of the Contract referenced under that applicable line item.

Instructions

1. On the "Split" tab; Update Cell E4 to be the period ending in which costs need to be sepa
2. Enter the start and end dates of the item that needs to be separated in Cells C8 (start) ar
3. Enter the amount to be split in cell H4.
4. The template will calculate a proper split for the time frame and amount in question intc

Tips:

Information should only be entered into yellow cells.

Using this file and attaching it or a PDF of it to any split inoivce for prepaid or year end ansv

If you have any questions or issues with this template please contact fiscal services.

arated.
nd E8 (end) respectively.

o Cells H8 and H10

wers a lot of questions in advance.

Fiscal Year End	9/30/2026	Total Amount	$ 3,928.22	
Old Fiscal	New Fiscal	Allocation		
8/1/2026	7/31/2036	Old Fiscal Year-Allocation	$ 65.60	FY26
2%	98%			
100%		New Fiscal Year Allocation	$ 3,862.62	

Total Days	3653							
Prepaid Days	3592							
						Equipment	Additional	Cushion
FY26	8/1/2026	9/30/2026	61	$	65.60	1,832.66	89.12	$1,987.38
FY27	10/1/2026	9/30/2027	365	$	392.50			
FY28	10/1/2027	9/30/2028	366	$	393.57			
FY29	10/1/2028	9/30/2029	365	$	392.50			
FY30	10/1/2029	9/30/2030	365	$	392.50			
FY31	10/1/2030	9/30/2031	365	$	392.50			
FY32	10/1/2031	9/30/2032	366	$	393.57			
FY33	10/1/2032	9/30/2033	365	$	392.50			
FY34	10/1/2033	9/30/2034	365	$	392.50			
FY35	10/1/2034	9/30/2035	365	$	392.50			
FY36	10/1/2035	7/31/2036	305	$	327.98			
			3653	$	3,928.22			

Genesee County

Staff Report

Genesee County
Administration Building
324 S. Saginaw St.
Flint, MI 48502

File #: RES-2026-0844 **Agenda Date:** 7/15/2026 **Agenda #:** 11.

To: Board of County Commissioners

From: Michael Dawisha,CIO

RE: Approval of a purchase order to Master Electric for the fiscal year ending 2026, in an amount not to exceed $794.00, to provide for wiring for an additional camera location; the cost of this purchase order will be paid from account 1010-265.00-930.000

BOARD ACTION REQUESTED:

Approval to submit a purchase order request, in the amount not to exceed $794.00, for Master Electric, per Purchasing Policy, vendor will exceed the $30,000 threshold

BACKGROUND:

Master Electric is an approved vendor for the County.

DISCUSSION:

The request is to have Master Electric install a camera drop to support the installation of a new security camera covering the garage area at the Tower. Adding camera coverage in this area will increase security and improve the County's ability to monitor activity around this part of the building.

IMPACT ON HUMAN RESOURCES:

There is no impact on Human Resources.

IMPACT ON BUDGET:

The request not to exceed $794.00, to be paid out of the following account - 1010-265.00-930.000.

IMPACT ON FACILITIES:

There is no impact on Facilities.

IMPACT ON TECHNOLOGY:

Reviewed by IT.

CONFORMITY TO COUNTY PRIORITIES:

This request conforms to the County priority of Healthy, Livable & Safe Communities by supporting the installation of a new security camera. The camera drop will improve security coverage and help maintain a safe environment for employees, visitors, and the public.

TO THE HONORABLE CHAIRPERSON AND MEMBERS OF THE GENESEE COUNTY BOARD OF COMMISSIONERS, GENESEE COUNTY, MICHIGAN

LADIES AND GENTLEMEN:

BE IT RESOLVED, by this Board of County Commissioners of Genesee County, Michigan, that the request by the Chief Information Officer to authorize a purchase order to Master Electric, to install a camera drop at a cost not to exceed $794.00 to be paid from account 1010-265.00-930.000, is approved (a copy of the memorandum request and supporting documents being on the file with the official records of the July 15, 2026 meeting of the Public Works Committee of this Board).

Technology Systems Division

March 11, 2026

Jim,

Master Electric Technology Systems Division would like to thank you for the opportunity to price your data drops.

SCOPE OF WORK:
Tower camera drop
TOTAL COST $794.00

Our technicians follow and understand all related NEC, FCC, and EIA/TIA standards as they relate to low voltage cabling. Our technicians are all certified with the highest standards of workmanship.

Master's technician's work well with other trades and all of the work is done in a neat and professional manner within your time frame. We pull all types of low voltage cable, which includes voice, video, data, fiber optics, security, surveillance, fire alarm, and paging. We can terminate and certify all types of low voltage cable and fiber optics.

Thank you for the opportunity to bid on this job, if you have any questions, please do not hesitate to call me at 989-426-9860.

Sincerely,

Jim Conger
Technology Systems Division Manager

Jim Conger
Technology Systems
Division Manager
2350 W. M-61
Gladwin MI 48624
Cell (989) 737-8293
Telephone (989) 426-9860
Facsimile (989) 426-9862
jim@masterelectricinc.net
www.masterelectricir

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 12/09/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: Jackie Rachow	
Diebold Insurance Agency 817 W Houghton Ave PO Box 188 West Branch MI 48661	PHONE (A/C, No, Ext): (989) 345-0200	FAX (A/C, No): (989) 345-0232
	E-MAIL ADDRESS: jackie@dieboldinsurance.com	

INSURED	INSURER(S) AFFORDING COVERAGE	NAIC #
Master Electric Inc & J & B Assoc LLC 2350 West M61 Gladwin MI 48624	INSURER A : West Bend Mutual Insurance Company	15350
	INSURER B : Accident Fund National	12305
	INSURER C :	
	INSURER D :	
	INSURER E :	
	INSURER F :	

COVERAGES **CERTIFICATE NUMBER:** 25 to 26 WB/AF **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	[X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: [ ] POLICY [X] PRO-JECT [ ] LOC [ ] OTHER:	Y	Y	C140414	10/12/2025	10/12/2026	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG Contractors E & O	$ 2,000,000 $ 300,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $ 2,000,000
A	AUTOMOBILE LIABILITY [X] ANY AUTO [ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS [X] HIRED AUTOS ONLY [X] NON-OWNED AUTOS ONLY			C140414	10/12/2025	10/12/2026	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) Automatic Designated	$ 1,000,000 $ $ $ $
A	[X] UMBRELLA LIAB [X] OCCUR EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [X] RETENTION $ 10,000			C140414	10/12/2025	10/12/2026	Insured Blanket EACH OCCURRENCE AGGREGATE	$ 7,000,000 $ 7,000,000
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y / N: N If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		100133576	10/12/2025	10/12/2026	[X] PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 1,000,000 $ 1,000,000 $ 1,000,000
A	Leased/Rented Equipment Builders Risk/Installation Floater			C140414	10/12/2025	10/12/2026	$1,000 Dedudctible $1,000 Deductible	$200,000 $200,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Genesee County, its officials, employees and agents, all boards, commissions and/or authorities and board members, including employees and volunteers there of are additional insured under the general liability per company forms. A waiver of subrogation is in place on the general liability per company form. A 30 day notice will be provided for cancellation for other than nonpayment of premium then a 10 day notice will be provided.

CERTIFICATE HOLDER

Genesee County Attn: Risk Management
324 S. Saginaw Street
Suite 9C
Flint MI 48502

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Mark E. Dantzer

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THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – CONTRACTOR'S BLANKET

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

A. WHO IS AN INSURED (Section II) is amended to include as an additional insured any person or organization whom you are required to add as an additional insured on this policy under a written contract or written agreement.

The written contract or written agreement must be:

1. Currently in effect or becoming effective during the term of this policy; and

2. Signed by all parties to the written contract or written agreement prior to the "bodily injury," "property damage," "personal injury and advertising injury."

B. The insurance provided to the additional insured is limited as follows:

1. That person or organization is only an additional insured with respect to liability for "bodily injury", "property damage' or "personal and advertising injury" caused in whole or in part, by:

a. Your premises; or

b. Your negligent acts or omissions in connection with "Your work" for that additional insured.

However:

a. The insurance afforded to such additional insured only applies to the extent permitted by law; and

b. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the written contract or written agreement to provide such additional insured.

2. The Limits of Insurance applicable to the additional insured are those specified in the written contract or written agreement or in the Declarations for this policy, whichever is less. These Limits of Insurance are inclusive and not in addition to the Limits of Insurance shown in the Declarations.

3. Except when required by written contract or written agreement, the coverage provided to the additional insured by this endorsement does not apply to:

a. "Bodily injury" or "property damage" occurring after:

(1) All work on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured at the site of the covered operations has been completed; or

(2) That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as part of the same project.

b. "Bodily injury" or "property damage" arising out of acts or omissions of the additional insured other than in connection with the general supervision of "your work."

4. The insurance provided to the additional insured does not apply to "bodily injury," "property damage," "personal injury and advertising injury" arising out of an architect's, engineer's, or surveyor's rendering of or failure to render any professional services including;

a. The preparing, approving, or failing to prepare or approve maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; and

b. Supervisory, or inspection activities performed as part of any related architectural or engineering activities.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage", or the offense which caused the "personal and advertising injury", involved the rendering of, or the failure to render, any professional architectural, engineering or surveying services.

C. As respects the coverage provided under this endorsement, Paragraph **4.b. SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS** is amended with the addition of the following:

4. Other insurance

b. Excess insurance

This insurance is excess over:

Any other valid and collectible insurance procured by or on behalf of the additional insured whether primary, excess, contingent or on any other basis unless a written contract specifically requires that this insurance be either primary or primary and noncontributing. Where required by written contract, we will consider any other insurance procured by the additional insured for injury or damage covered by this endorsement to be excess and noncontributing with this insurance.

If no written contract specifically requires primary or noncontributory coverage, then this insurance is excess and as a condition of coverage, the additional insured shall be obligated to tender the defense and indemnity of every claim or suit to all other insurers that may provide coverage to the additional insured, whether on a contingent, excess or primary basis.

When this insurance is excess, we will have no duty under Coverage **A.** and Coverage **B.** to defend the insured against any "suit" if any other insurer has a duty to defend the insured against that "suit". If no other insurer defends, we will undertake to do so, but we will be entitled to the insured's rights against all those other insurers.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US (WAIVER OF SUBROGATION) – AUTOMATIC

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
ELECTRONIC DATA LIABILITY COVERAGE PART
LIQUOR LIABILITY COVERAGE PART
POLLUTION LIABILITY COVERAGE PART DESIGNATED SITES
POLLUTION LIABILITY LIMITED COVERAGE PART DESIGNATED SITES
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART
RAILROAD PROTECTIVE LIABILITY COVERAGE PART
UNDERGROUND STORAGE TANK POLICY DESIGNATED TANKS

The following is added to Paragraph **8. Transfer Of Rights Of Recovery Against Others To Us** of **Section IV – Conditions:**

We waive any right of recovery against any person or organization, because of any payment we make under this Coverage Part, to whom the insured has waived its right of recovery in a written contract or agreement. Such waiver by us applies only to the extent that the insured has waived its right of recovery against such person or organization prior to loss.

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Genesee County

Staff Report

Genesee County
Administration Building
324 S. Saginaw St.
Flint, MI 48502

File #: RES-2026-0865 **Agenda Date:** 7/15/2026 **Agenda #:** 12.

To: Brian K. Flewelling, Public Works Committee Chairperson

From: Raymond Zanke, Director of Facilities and Operations

RE: Approval of an agreement between Genesee County and Spartan Construction Group, INC., in an amount not to exceed $6,424,000.00, to provide masonry repairs to the Genesee County Jail and Circuit Courthouse; the cost of this agreement will be paid from capital improvement funds

BOARD ACTION REQUESTED:

Approval of an agreement between Genesee County and Spartan Construction Group, INC., to provide masonry repairs to the Genesee County Jail and Circuit Courthouse from ITB #26-491 for the base bid amount of $6,424,000.

BACKGROUND:

The county hired an engineering firm to create specifications and address exterior building envelopes concerns associated with the Jail and Circuit Courthouse. Water infiltration and failing motor and sealant joints as well as some bricks falling causing hazards to the public and staff.

DISCUSSION:

Our facilities represent a significant taxpayer investment. Proper stewardship through preventative maintenance and strategic repairs and upgrades to protect the investments and avoid far higher future costs from deferred maintenance.

IMPACT ON HUMAN RESOURCES:

None.

IMPACT ON BUDGET:

To be paid from the capital funds account 4017-265.00-975.001 in the amount of $6,424,000 plus an owner's contingency fund of 7% to address any necessary unforeseen conditions and/or allowances that may be uncovered during the project work.

IMPACT ON FACILITIES:

Facilities and Operations will be overseeing the project.

IMPACT ON TECHNOLOGY:

None.

CONFORMITY TO COUNTY PRIORITIES:

Provide healthy, safe facilities for our residents, visitors, and staff. Protect county assets by addressing repairs and concerns.

TO THE HONORABLE CHAIRPERSON AND MEMBERS OF THE GENESEE COUNTY BOARD OF COMMISSIONERS, GENESEE COUNTY, MICHIGAN

LADIES AND GENTLEMEN:

BE IT RESOLVED, by this Board of County Commissioners of Genesee County, Michigan, that the request by Director of Facilities and Operations to authorize entering into an agreement between Genesee County and Spartan Construction Group, INC., in an amount of $6,424,000 plus an owner's contingency fund of 7% ,to be paid from account 4017-265.00-975.001, for the purpose of addressing exterior building envelopes concerns associated with the Jail and Circuit Courthouse, is approved (a copy of the memorandum request, contract, and supporting documents being on file with the official records of the August 12, 2026 meeting of the Public Works Committee of this Board), and the Chairperson of this Board is authorized to execute the agreement on behalf of Genesee County.

THE AMERICAN INSTITUTE OF ARCHITECTS

AIA Document A310

Bid Bond

KNOW ALL MEN BY THESE PRESENTS, that we SPARTAN CONSTRUCTION GROUP, INC. 30956 Industrial Rd. Livonia, MI 48150
(Here insert full name ,and address or legal title of Contractor)
as Principal, hereinafter called the Principal, and The Ohio Casualty Insurance Company Boston, MA 02116
a corporation duly organized under the laws of the State of NH as Surety, hereinafter called the Surety, are held and firmly bound unto Genesee County 324 S. Saginaw Street Flint, MI 48502
(Here insert full name ,and address or legal title of Owner)
as Obligee, hereinafter called the Obligee, in the sum of 5.00% Att Bid
For the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for
Masonry Repairs at Genesee County Courthouse & Jail
(Here insert full name, address and description of project)

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this 21st day of May, 2026

(Witness)	SPARTAN CONSTRUCTION GROUP, INC. (Principal) (Seal)
(Witness)	The Ohio Casualty Insurance Company (Surety) (Seal) Michelle B. Graham, ATTORNEY-IN-FACT

AIA DOCUMENT A310 BID BOND AIA ® FEBRUARY 1970 ED THE AMERICAN INSTITUTE OF ARCHITECTS, 1735 N.Y. AVE., N.W. WASHINGTON, D.C. 20006

9/93

POWER OF ATTORNEY

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

Certificate No: 8213453-013058

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Lois C. Brink; Suzan Giacona; Michelle B. Graham; Alexandra Johnson; Suzanne M. Moceri

all of the city of Royal Oak state of MI each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 25th day of March, 2025.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

By: _____
Nathan J. Zangerle, Assistant Secretary

State of PENNSYLVANIA
County of MONTGOMERY ss

On this 25th day of March, 2025 before me personally appeared Nathan J. Zangerle, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Plymouth Meeting, Pennsylvania, on the day and year first above written.

Commonwealth of Pennsylvania - Notary Seal
Teresa Pastella, Notary Public
Montgomery County
My commission expires March 28, 2029
Commission number 1126044
Member, Pennsylvania Association of Notaries

By: _____
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS: Section 12. Power of Attorney.
Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts: Section 5. Surety Bonds and Undertakings.
Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes Nathan J. Zangerle, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 21st day of May, 2026.

By: _____
Renee C. Llewellyn, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

For bond and/or Power of Attorney (POA) verification inquiries, please call 610-832-8240 or email HOSUR@libertymutual.com.

COST BID FORM

Masonry Repairs @ Genesee County Courthouse & Jail
ITB # 26-591 Project No. 2024083

Bidders Name: Spartan construction group Inc.
Legal Address: 30956 Industrial Rd.
Livonia, MI 48150
Telephone No.: 734-331-5061
Proposal For: ALL TRADES CONSTRUCTION WORK

Project Name: MASONRY REPAIRS:
GENESEE COUNTY COURTHOUSE & JAIL

Location: FLINT, MICHIGAN

ITB #: 26-491

Project No.: 2024083

PROPOSAL

Genesee County Courthouse & Jail
900 & 1002 S. Saginaw Street
Flint, MI 48502

Proposal:

In response to your invitation to bid, the undersigned submits the following offer to enter into a contract with you and extends this offer for sixty (60) calendar days subsequent to the opening of bids. This offer has been prepared after our examination of the complete plans and specifications, together with their related documents, and our examination of the site and conditions surrounding the construction of the proposed work including the availability of materials, equipment and labor. Included in this offer are all costs necessary to complete the All Trades Construction Work in accordance with the contract documents prepared by WTA Architects, within the time set forth herein for the sum of:

Six Million four hundred and twenty four thousand Dollars
($ 6,424,000)

1.1 SCHEDULE OF ALTERNATES - COURTHOUSE

A. ALTERNATE NO. 1 – INTERIOR PATCH, REPAIR ABD PAINT EXISTING GYPSUM CEILING AND WALL AS INDICATED ON DRAWINGS.

1. ADD____ DEDUCT ✓ NO CHANGE____ NOT APPLICABLE____.
2. Forty thousand Dollars ($ 40,000).
3. . ADD____ DEDUCT 10 calendar days to adjust the Contract Time for this allowance.

B. ALTERNATE NO. 2 – LIMESTONE PANELS AND SNOW MELT SYSTEM AT ORGINAL COURTHOUSE EAST ENTRANCE STAIR AND RAMP

1. ADD____ DEDUCT ✓ NO CHANGE____ NOT APPLICABLE____.

2. Two hundred and twenty thousand Dollars ($ 220,000).
3. . ADD____ DEDUCT 15 calendar days to adjust the Contract Time for this allowance.

1.2 SCHEDULE OF ALTERNATES - JAIL

A. ALTERNATE NO. 1 – STEEL WINDOW / DOOR FRAME, SCRAP AWAY LOOSE MATERIAL AND PAINT TO MATCH EXISTING.
4. ADD_____ DEDUCT✓ NO CHANGE____ NOT APPLICABLE____.
5. Forty nine thousand Dollars ($_____).
6. . ADD____ DEDUCT 10 calendar days to adjust the Contract Time for this allowance.

B. ALTERNATE NO. 2 – LIMESTONE PANELS AND SNOW MELT SYSTEM AT ORGINAL COURTHOUSE EAST ENTRANCE STAIR AND RAMP
4. ADD Replace coping DEDUCT_____ NO CHANGE____ NOT APPLICABLE____.
5. Seventy four thousand Dollars ($ 74,000).
6. . ADD 5 DEDUCT____ calendar days to adjust the Contract Time for this allowance.

1.3 SCHEDULE OF UNIT COST - COURTHOUSE

A. UNIT COST FOR REMOVAL AND REPOINTING OF MORTAR JOINTS
7. ADD✓ DEDUCT_____ NO CHANGE____ NOT APPLICABLE____.
8. Nineteen Dollars ($ 19.00).
9. . ADD____ DEDUCT____ calendar days to adjust the Contract Time for this allowance.

B. UNIT COST FOR REPAIR OF CONCRETE CRACKS AND SPALLING
10. ADD✓ DEDUCT_____ NO CHANGE____ NOT APPLICABLE____.
11. One hundred and seven Dollars ($ 107.00).
12. . ADD____ DEDUCT____ calendar days to adjust the Contract Time for this allowance.

C. UNIT COST FOR REMOVAL AND INSTALLATION OF NEW SEALANT JOINTS
13. ADD✓ DEDUCT_____ NO CHANGE____ NOT APPLICABLE____.
14. Twenty Dollars ($ 20).
15. . ADD____ DEDUCT____ calendar days to adjust the Contract Time for this allowance.

1.4 SCHEDULE OF UNIT COST - JAIL

A. UNIT COST FOR REMOVAL AND REPOINTING OF MORTAR JOINTS
1. ADD✓ DEDUCT_____ NO CHANGE____ NOT APPLICABLE____.
2. Nineteen Dollars ($ 19.00).
3. . ADD____ DEDUCT____ calendar days to adjust the Contract Time for this allowance.

B. UNIT COST FOR REPAIR OF CONCRETE CRACKS AND SPALLING
4. ADD✓ DEDUCT_____ NO CHANGE____ NOT APPLICABLE____.
5. One hundred and seven Dollars ($ 107.00).
6. . ADD____ DEDUCT____ calendar days to adjust the Contract Time for this allowance.

C. UNIT COST FOR REMOVAL AND INSTALLATION OF NEW SEALANT JOINTS
7. ADD✓ DEDUCT_____ NO CHANGE____ NOT APPLICABLE____.
8. Twenty Dollars ($ 20.00).
9. . ADD____ DEDUCT____ calendar days to adjust the Contract Time for this allowance.

FORFEITURE OF BID SECURITY

If within the thirty (30) days this offer is valid, a letter is sent notifying the undersigned of the acceptance of this proposal, the undersigned agrees to deliver within the 10 succeeding days surety bonds in the form specified or will forfeit the enclosed certified or cashier's check or bid bond which accompanies this proposal.

FEE FOR CHANGES IN THE WORK

The undersigned hereby agrees to perform all additional changes in the work ordered by the Owner on the basis of reasonable expenditures, plus reasonable allowance of said cost for overhead and profit. Cost shall be limited to the following: Cost of materials, including sales tax and cost of delivery; cost of labor, including social security, old age and unemployment insurance and fringe benefits required by agreement or custom; workers' or workmen's compensation insurance; bond premiums; rental value of equipment and machinery; and the additional costs of supervision and field office personnel directly attributable to the change.

The undersigned hereby agrees to charge the following fees, based on a mark-up percentage of the actual cost for overhead and profit combined, as stated hereinafter:

- For all additional work performed by the contractor's own forces, a fee of 12 percent of the actual cost as defined above.
- For all additional work subcontracted by the contractor, a fee of 12 percent of the subcontract sum for management, overhead and profit.

TIME OF COMPLETION

Substantial completion shall be: ~~10~~ 07-30-27

The undersigned Bidder proposes and agrees hereby to commence the Work of the Contract Documents on a date specified in a Purchase Order to be issued by the Owner, and shall fully complete the Work within the following calendar days:

~~450~~ 350 calendar days

SIGNATURE

The bidder declares the following legal status in submitting this proposal: (check one)

(X) A Corporation organized and existing under the laws of the state of Michigan, ( ) A Partnership, ( ) An Individual

doing business as Spartan Construction Group Inc.

Respectfully submitted,

By Matthew Misak

Title President

Date 05-21-26

Fed. Employer Identification No. 85-3987755

State License No. 24210059

END OF SECTION 004113

SIGNATURE PAGE
GENESEE COUNTY ITB #26-491

The undersigned represents that he or she:

1. is duly authorized to make binding offers on behalf of the company,
2. has read and understands all information, terms, and conditions in the ITB,
3. has not engaged in any collusive actions with any other potential proposers for this ITB,
4. hereby offers to enter into a binding contract with Genesee County for the products and services herein offered, if selected by Genesee County within 120 days from bid due date,
5. certify that it, its principals, and its key employees are not "Iran linked businesses," as that term is described in the Iran Economic Sanctions Act, P.A. 2012, No. 517, codified as MCL 129.311, et seq.
6. acknowledges the following addenda 1, 2 issued as part of the ITB:

Conflict of Interest:

✓ To the best of our knowledge, the undersigned firm has no potential conflict of interest due to any other County contracts, or property interest for this bid.

____ The undersigned firm by attachment to this form, submits information which may be a potential conflict of interest due to other County contracts, or property interest for this Bid.

Exceptions to Solicitation and/or Standard Contract: NO ✓ YES _____ (include attached statement)

Name (typed): Matthew Spisak

Signature: Matthew Spisak Title: President

Company: Spartan Construction Group Inc.

Federal Employee Identification Number (FEIN): 85-3987755

DUNS Number: 117776702

Date: 05-21-26

Contact Person of company representative for matters regarding this ITB

Matthew Spisak	President
CONTACT NAME	POSITION

matt@spartan-constructiongroup.com
E-MAIL

30956 Industrial Rd.	Livonia	MI	48150
MAILING ADDRESS	CITY	STATE	ZIP CODE

734-331-5061	
PHONE	FAX

GENESEE COUNTY INSURANCE CHECKLIST

CONSTRUCTION WORK CONTRACT FOR: **ITB: 26-482 – Masonry Repairs at Genesee County Courthouse and Jail**

Coverage Required		Limits (Figures denote minimums)
X	1. Workers Compensation	Statutory limits of Michigan
X	2. Employers' Liability	$1,000,000 accidental/disease $1,000,000 policy limit, disease Including Premises/Operations
X	3. General Liability	$1,000,000 per occurrence with $2,000,000 aggregate Including Products/Completed Operations and Contractual Liability
X	4. Professional Liability	$1,000,000 per occurrence with $2,000,000 aggregate Including errors and omissions
	5. Medical Malpractice	1,000,000 per occurrence $2,000,000 in aggregate
X	6. Automobile liability	$1,000,000 combined single limit each accident – Owned, Hired, Non-owned
X	7. Umbrella liability/Excess Coverage	$5,000,000 BI & PD and PI
X	8. Genesee County named as an additional insured on other than worker' compensation via endorsement. A copy of the endorsement or evidence of blanket Additional Insured language in the policy must be included with the certificate.	
X	9. Other Insurance Required: **Contractor's Pollution Liability, Inland Marine/Installation Floater, OCP**	Quotes pending
X	10. Best's rating: A VIII or better, or its equivalent (Retention Group Financial Statements)	
X	11. The Certificate must state bid number and title : ITB # 26-491	

Insurance Agent's Statement

I have reviewed the requirements with the bidder named below. In addition:

✓ The above required policies carry the following deductibles:

See attached Certificate

✓ Liability policies are *occurrence* X *claims made* _____

McNish Group - Michelle Graham — Insurance Agent

Michelle B Graham — Signature

Prospective Contractor's Statement

I understand the insurance requirements and will comply in full if awarded the contract.

Spartan construction group Inc — Contractor

Matthew Fisher — Signature

Required general insurance provisions are provided in the checklist above. These are based on the contract and exposures of the work to be completed under the contract. Modifications to this checklist may occur at any time prior to signing of the contract. Any changes will require approval by the vendor/contractor, the department, and County Risk Manager. To the degree possible, all changes will be made as soon as feasible.

ACORD®

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 5/19/2026

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER McNish Group, Inc. 26622 Woodward Ave. Ste 200 Royal Oak MI 48067 License#: 0019816	**CONTACT NAME:** **PHONE (A/C, No, Ext):** 248-544-4800 **FAX (A/C, No):** 248-544-4801 **E-MAIL ADDRESS:** certs@mcnish.com
INSURED SPARCON-01 Spartan Construction Group, Inc. 30956 Industrial Rd Livonia MI 48150	**INSURER(S) AFFORDING COVERAGE** — **NAIC #** **INSURER A :** EMC INSURANCE COMPANIES **INSURER B :** Hiscox Insurance Company, Inc. — 10200 **INSURER C :** EMCASCO Insurance Company — 21407 **INSURER D :** Travelers Excess And Surplus Lines Company — 29696 **INSURER E :** **INSURER F :**

COVERAGES **CERTIFICATE NUMBER:** 1901465794 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
C	[X] COMMERCIAL GENERAL LIABILITY			BBC1455	1/21/2026	1/21/2027	EACH OCCURRENCE	$ 2,000,000
	[ ] CLAIMS-MADE [X] OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 500,000
	[X] XCU INCLUDED						MED EXP (Any one person)	$ 10,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						PERSONAL & ADV INJURY	$ 2,000,000
	[ ] POLICY [X] PRO-JECT [ ] LOC						GENERAL AGGREGATE	$ 4,000,000
	[X] OTHER PD DED $25,000						PRODUCTS - COMP/OP AGG	$ 4,000,000
								$
A	AUTOMOBILE LIABILITY			6E69506	1/21/2026	1/21/2027	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	[X] ANY AUTO						BODILY INJURY (Per person)	$
	[ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	[X] HIRED AUTOS ONLY [X] NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
							Comp/Coll Ded	$ $5,000/$5,000
A	[X] UMBRELLA LIAB [X] OCCUR			6J69506	1/21/2026	1/21/2027	EACH OCCURRENCE	$ 5,000,000
	[ ] EXCESS LIAB [ ] CLAIMS-MADE						AGGREGATE	$ 5,000,000
	[ ] DED [X] RETENTION $ 10,000							$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N			BCNP392	1/21/2026	1/21/2027	[X] PER STATUTE [ ] OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? [N] (Mandatory in NH)	N/A					E.L. EACH ACCIDENT	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000
A	Installation Floater			6C69506	1/21/2026	1/21/2027	Limit	200,000
B	Professional Liability			ANE551729826	1/21/2026	1/21/2027	2,000,000 each	2,000,000 Agg
D	Cyber			CYB-108157483-01	1/21/2026	1/21/2027	1,000,000 each	2,500 DED

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

ITB: 26-491 Masonry Repairs at Genesee County Courthouse and Jail
Additional Insured as required by written contract: Genesee County

CERTIFICATE HOLDER

Genesee County
324 S. Saginaw St.
Flint MI 48502

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Michelle B Graham

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THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

CONTRACTORS GENERAL LIABILITY ELITE EXTENSION

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE FORM

The COMMERCIAL GENERAL LIABILITY COVERAGE FORM is amended to include the following clarifications and extensions of coverage. The provisions of the Coverage Form apply unless modified by endorsement.

A. EXPECTED OR INTENDED INJURY

Section I – Coverage A, Exclusion **a.** is amended as follows:

a. "Bodily injury" or "property damage" expected or intended from the standpoint of an insured. This exclusion does not apply to "bodily injury" or "property damage" resulting from the use of reasonable force to protect persons or property.

B. NON-OWNED WATERCRAFT

Section I – Coverage A, Exclusion **g. (2)** is amended as follows:

(2) A watercraft you do not own that is:

(a) Less than 60 feet long; and

(b) Not being used to carry person(s) or property for a charge.

C. PROPERTY DAMAGE CARE, CUSTODY OR CONTROL

Section I-Coverage A, Exclusion **2.j.(4)** is deleted and replaced with the following:

(4) Personal property in the care, custody, or control of the insured.

This exclusion applies only to that portion of any "property damage" to personal property in the care, custody, or control of the insured in excess of $25,000 per "occurrence."

D. REAL PROPERTY UPON WHICH OPERATIONS ARE BEING PERFORMED

Section I-Coverage A, Exclusion **2.j.(5)** is deleted and replaced with the following:

(5) That particular part of real property on which you or any contractors or subcontractors working directly or indirectly on your behalf are performing operations, if the "property damage" arises out of those operations.

This exclusion applies only to that portion of any "property damage" to that particular part of real property on which you or any contractors or subcontractors working directly or indirectly on your behalf are performing operations, that arises out of those operations and is in excess of $25,000 per "occurrence."

E. PROPERTY DAMAGE - ELEVATORS

Section I – Coverage A.2. Exclusions Paragraphs **j. (3), j. (4), j. (6)** and **k.** do not apply to use of elevators. This insurance afforded by this provision is excess over any valid and collectible property insurance (including any deductible) available to the insured and **Section IV – Commercial General Liability Conditions,** Paragraph **4. Other Insurance** is changed accordingly.

F. FIRE, LIGHTNING, OR EXPLOSION DAMAGE

Except where it is used in the term "hostile fire", the word fire includes fire, lightning, or explosion wherever it appears in the Coverage Form.

Under Section I – Coverage A, the last paragraph (after the exclusions) is replaced with the following:

Exclusions c. through n. do not apply to damage by fire, smoke, or leakage from automatic fire protection systems to premises while rented to you or temporarily occupied by you with permission of the owner. A separate limit of insurance applies to this coverage as described in **Section III – Limits of Insurance.**

G MEDICAL PAYMENTS

If Section I – Coverage C. Medical Payments Coverage is not otherwise excluded from this Coverage Form: The requirement, in the Insuring Agreement of **Coverage C.,** that expenses must be incurred and reported to us within **one year** of the accident date is changed to **three years.**

H. SUPPLEMENTARY PAYMENTS

Supplementary Payments – Coverages A and **B,** Paragraphs **1.b.** and **1.d.** are replaced by the following:

1.b. Up to $5,000 for cost of bail bonds required because of accidents or traffic law violations arising out of the use of any vehicle to which the Bodily Injury Liability Coverage applies. We do not have to furnish these bonds.

1.d. All reasonable expenses incurred by the insured at our request to assist us in the investigation or defense of the claim or "suit", including actual loss of earnings up to $500 a day because of time off from work.

I. SUBSIDIARIES AS INSUREDS

Includes copyrighted material of ISO Properties, Inc. with its permission.

Section II – Who Is An Insured is amended to add the following:

1.f. Any legally incorporated subsidiary in which you own more than 50% of the voting stock on the effective date of this policy. However, insured does not include any subsidiary that is an insured under any other general liability policy, or would have been an insured under such a policy but for termination of that policy or the exhaustion of that policy's limits of liability.

J. BLANKET ADDITIONAL INSUREDS

SECTION II – WHO IS AN INSURED is amended to include as an additional insured:

1. Ongoing Operations

a. Any person or organization for whom you are performing operations when you and such person or organization have agreed in a written contract, written agreement, or written permit that such person or organization be added as an additional Insured on your commercial general liability policy; and

b. Any other person or organization, including any architects, engineers or surveyors not engaged by you, whom you are required to add as an additional insured under your policy in the contract or agreement in Paragraph **1.** above.

If the written contract, written agreement, or written permit requires the additional insured be added with respect to liability arising out of your ongoing operations, or requires coverage for the additional insured to be included by the use of ISO's Additional Insured – Owners, Lessees or Contractors – Scheduled Person Or Organization endorsement CG2010(10-01) edition or its equivalent, such person or organization is an additional insured only with respect to liability arising out of your ongoing operations performed under that contract, agreement, or permit.

If the written contract, written agreement, or written permit does not require that the additional insured be added with respect to liability arising out of your ongoing operations, or requires coverage for the additional insured to be included by the use of ISO's Additional Insured – Owners, Lessees or Contractors – Scheduled Person Or Organization endorsement CG2010(7-04) (or subsequent) edition or its equivalent, then such person or organization is an additional insured only with respect to "bodily injury", "property damage" or "personal and advertising injury" caused in whole or in part by your ongoing operations performed under that contract, agreement, or permit.

2. Completed Operations

SECTION II – WHO IS AN INSURED is amended to include as an additional insured:

a. Any person or organization for whom you are performing or have performed operations when you and such person or organization have agreed in a written contract, written agreement, or written permit that such person or organization be added as an additional insured on your commercial general liability policy; and

b. Any other person or organization, including any architects, engineers or surveyors not engaged by you, whom you are required to add as an additional insured under your policy in the contract or agreement in Paragraph **1.** above.

If the written contract, written agreement, or written permit requires the additional insured be added with respect to liability arising out of "your work" performed under that contract, agreement, or permit and included in the "products-completed operations hazard", or requires coverage for the additional insured to be included by the use of ISO's Additional Insured – Owners, Lessees or Contractors – Completed Operations endorsement CG 20 37 10-01 edition or its equivalent, such person or organization is an additional insured only with respect to their liability arising out of "your work" performed under that contract, agreement, or permit and included in the "products-completed operations hazard".

If the written contract, written agreement, or written permit does not require that the additional insured be added with respect to liability arising out of "your work" performed under that contract, agreement, or permit and included in the "products-completed operations hazard", or requires coverage for the additional insured to be included by the use of ISO's Additional Insured – Owners, Lessees or Contractors – Completed Operations endorsement CG2037(7-04) (or subsequent) edition or its equivalent, then such person or organization is an additional insured only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by "your work" performed under that contract, agreement, or permit and included in the "products-completed operations hazard".

3. The insurance afforded to the additional insureds in Paragraphs **1.** and **2.** above:

   a. Does not apply unless the written contract or written agreement has been signed by the Named Insured or written permit issued prior to the "bodily injury", "property damage" or "personal and advertising injury";

   b. Only applies to the extent permitted by law; and

   c. Will not be broader than that which you are required by the written contract, written agreement, or written permit to provide to such additional insured.

4. **Exclusions**

   a. With respect to the insurance afforded to additional insureds under **a. Ongoing Operations** the following is added to **2.** Exclusions under **SECTION I – COVERAGE A – BODILY INJURY AND PROPERTY DAMAGE LIABILITY:**

   This insurance does not apply to "bodily injury", "property damage", or "personal and advertising injury" occurring after:

   (1) All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance, or repairs) to be performed by or on behalf of the additional insured(s) at the site of the covered operations has been completed; or

   (2) That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

   b. With respect to the insurance afforded to these additional insureds under **a. Ongoing Operations** and **b. Completed Operations,** the following is added to **2.** Exclusions under **SECTION I – COVERAGE A – BODILY INJURY AND PROPERTY DAMAGE LIABILITY:**

   This insurance does not apply to:

   "Bodily injury", "property damage", or "personal and advertising injury" arising out of the rendering of, or the failure to render, any professional architectural, engineering or surveying services, including:

   (1) The preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or

   (2) Supervisory, inspection, architectural or engineering activities.

5. **Conditions**

   With respect to the insurance afforded to these additional insureds under **a. Ongoing Operations** and **b. Completed Operations** the following is added to Paragraph **4. Other Insurance, a. Primary Insurance** under **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS:**

   This insurance is primary to and will not seek contribution from any other insurance available to an additional insured under this policy provided that:

   a. The additional insured is a Named Insured under such other insurance; and

   b. You have agreed in a written contract, written agreement, or written permit that this insurance would be primary and would not seek contribution from any other insurance available to the additional insured.

K. COVERAGE FOR INJURY TO CO-EMPLOYEES AND/OR YOUR OTHER VOLUNTEER WORKERS

Section II – Who is an Insured, Paragraph **2.a. (1)** is amended to add the following:

e. Paragraphs **(a), (b),** and **(c)** do not apply to your "employees" or "volunteer workers" with respect to "bodily injury" to a co-"employee" or other "volunteer worker".

Damages owed to an injured co-"employee" or "volunteer worker" will be reduced by any amount paid or available to the injured co- "employee" or "volunteer worker" under any other valid and collectible insurance.

L. HEALTH CARE SERVICE PROFESSIONALS AS INSUREDS - INCIDENTAL MALPRACTICE

Section II – Who is an Insured, Paragraph **2.a. (1) (d)** is amended as follows:

This provision does not apply to Nurses, Emergency Medical Technicians, or Paramedics who provide professional health care services on your behalf.

However this exception does not apply if you are in the business or occupation of providing any such professional services.

M. NEWLY FORMED OR ACQUIRED ORGANIZATIONS

Section II – Who Is An Insured, Paragraph **3.a.** is replaced by the following:

3.a. Coverage under this provision is afforded until the end of the policy period.

This provision does not apply if newly formed or acquired organizations coverage is excluded either by the provisions of the Coverage Form or by endorsements.

N. **DAMAGE TO PREMISES RENTED TO YOU**

Section III – Limits of Insurance, Paragraph **6.** is replaced by the following:

Subject to **5.a.** above, the Damage To Premises Rented To You Limit, or $500,000, whichever is higher, is the most we will pay under Coverage **A** for damages because of "property damage" to any one premises, while rented to you, or in the case of damage by fire, smoke, or leakage from automatic protection systems, while rented to you or temporarily occupied by you with permission of the owner.

O. **MEDICAL PAYMENTS – INCREASED LIMITS**

Section III – Limits of Insurance, Paragraph **7.** is replaced by the following:

7. Subject to Paragraph **5.** above, $10,000 is the Medical Expense Limit we will pay under Coverage **C** for all medical expenses because of "bodily injury" sustained by any one person, unless the amount shown on the Declarations of this Coverage Part for Medical Expense Limit states:

(a) No Coverage; or

(b) $1,000; or

(c) $5,000; or

(d) A limit higher than $10,000

P. **DUTIES IN THE EVENT OF OCCURRENCE, OFFENSE, CLAIM OR SUIT**

Section IV – Commercial General Liability Conditions, Paragraph **2.** is amended to add the following:

e. The requirement in **Condition 2.a.** that you must see to it that we are notified as soon as practicable of an "occurrence" or an offense which may result in a claim, applies only when the "occurrence" or offense is known to:

(1) You, if you are an individual or a limited liability company;

(2) A partner if you are a partnership;

(3) A member or manager if you are a limited liability company;

(4) An "executive officer" or insurance manager if you are a corporation; or

(5) A trustee if you are a trust.

f. The requirement in **Condition 2.b.** that you must see to it that we receive notice of a claim or "suit" as soon as practicable will not be considered breached unless the breach occurs after such claim or "suit" is known to:

(1) You, if you are an individual or a limited liability company;

(2) A partner if you are a partnership;

(3) A member or manager if you are a limited liability company;

(4) An "executive officer" or insurance manager if you are a corporation; or

(5) A trustee if you are a trust

Q. **PRIMARY AND NONCONTRIBUTORY – ADDITIONAL INSURED EXTENSION**

Section IV – Commercial General Liability Conditions, Paragraph **4. Other Insurance** is amended to add the following:

This insurance is primary to and will not seek contribution from any other insurance available to an additional insured under your policy provided that:

(1) The additional insured is a Named Insured under such other insurance; and

(2) You have agreed in writing in a contract or agreement that this insurance would be primary and would not seek contribution from any other insurance available to the additional insured. However, if the additional insured has been added as an additional insured on other policies, whether primary, excess, contingent or on any other basis, this insurance is excess over any other insurance regardless of the written agreement between you and an additional insured.

R. **UNINTENTIONAL FAILURE TO DISCLOSE EXPOSURES**

Section IV – Commercial General Liability Conditions, Paragraph **6. Representations** is amended to add the following: If you unintentionally fail to disclose any exposures existing at the inception date of your policy, we will not deny coverage under the Coverage Form solely because of such failure to disclose. However, this provision does not affect our right to collect additional premium or exercise our right of cancellation or nonrenewal. This provision does not apply to any known injury or damage which is excluded under any other provision of this policy.

S. **WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US**

Section IV – Commercial General Liability Condition, Paragraph **8. Transfer Of Rights Of Recovery Against Others To Us** is amended to add the following:

We waive any right of recovery we may have against any person or organization because of payments we make for injury or damage arising out of:

1. Your ongoing operations; or

2. "Your work" included in the "products completed operations hazard".

However, this waiver applies only when you have agreed in writing to waive such rights of recovery in a contract or agreement, and only if the contract or agreement:

1. Is in effect or becomes effective during the term of this policy; and

2. Was executed prior to loss.

T. **MENTAL ANGUISH**

Section V – Definition 3. is replaced by the following:

"Bodily injury" means bodily injury, sickness or disease sustained by a person, including mental anguish or death resulting from bodily injury, sickness, or disease.

U. **LIBERALIZATION**

If we revise this endorsement to provide greater coverage without additional premium charge, we will automatically provide the additional coverage to all endorsement holders as of the day the revision is effective in your state.

V. **ELECTRONIC DATA LIABILITY**

A. Exclusion **p. Access or Disclosure Of Confidential Or Personal Information** And **Data-related Liability** under **COVERAGE A BODILY INJURY AND PROPERTY DAMAGE LIABILITY, 2.** Exclusions is deleted in its entirety and replaced by the following:

p. Access or Disclosure Of Confidential Or Personal Information And Data-related Liability Damages arising out of:

(1) Any access to or disclosure of any person's or organization's confidential or personal information, including patents, trade secrets, processing methods, customer lists, financial information, credit card information or any other type of nonpublic information; or

(2) The loss of loss of use of, damage to, corruption of, inability to access, or inability to manipulate "electronic data" that does not result from physical injury to tangible property.

This exclusion applies even if damages are claimed for notification costs, credit monitoring expenses, forensic expenses, public relations expenses or any other loss, cost or expense incurred by you or others arising out of that which is described in Paragraphs **(1) or (2)** above.

B. The following paragraph is added to **SECTION III – LIMITS OF INSURANCE:**

Subject to **5.** above, the most we will pay under Coverage **A** for "property damage" because of all loss of "electronic data" arising out of any one "occurrence" is a sub-limit of $25,000.

W. **CONTRACTUAL LIABILITY (RAILROADS)**

Definition 9. Insured Contract is amended as follows:

Paragraph **c.** is deleted in its entirety and replaced with the following:

Any easement or license agreement.

Paragraph **f.(1)** is deleted in its entirety.

X. **AGGREGATE LIMITS PER PROJECT**

The General Aggregate Limit applies separately to each of your construction projects away from premises owned by or rented to you.

Y. **AGGREGATE LIMITS PER LOCATION**

The General Aggregate Limit applies separately to each of your locations, but only when required by written contract, written agreement, or certificate of insurance. As respects this provision **8.**, your locations are premises you own, rent or use involving the same or connecting lots or premises whose connection is interrupted only by a street, roadway, waterway, or right-of-way of a railroad. However, your locations do not include any premises where you, or others acting on your behalf, are performing construction operations.

Z. **CONTRACTUAL LIABILITY – PERSONAL AND ADVERTISING INJURY**

Under **SECTION I – COVERAGE B.,** Paragraph **2.** Exclusions, Paragraph **e. Contractual Liability** is deleted.

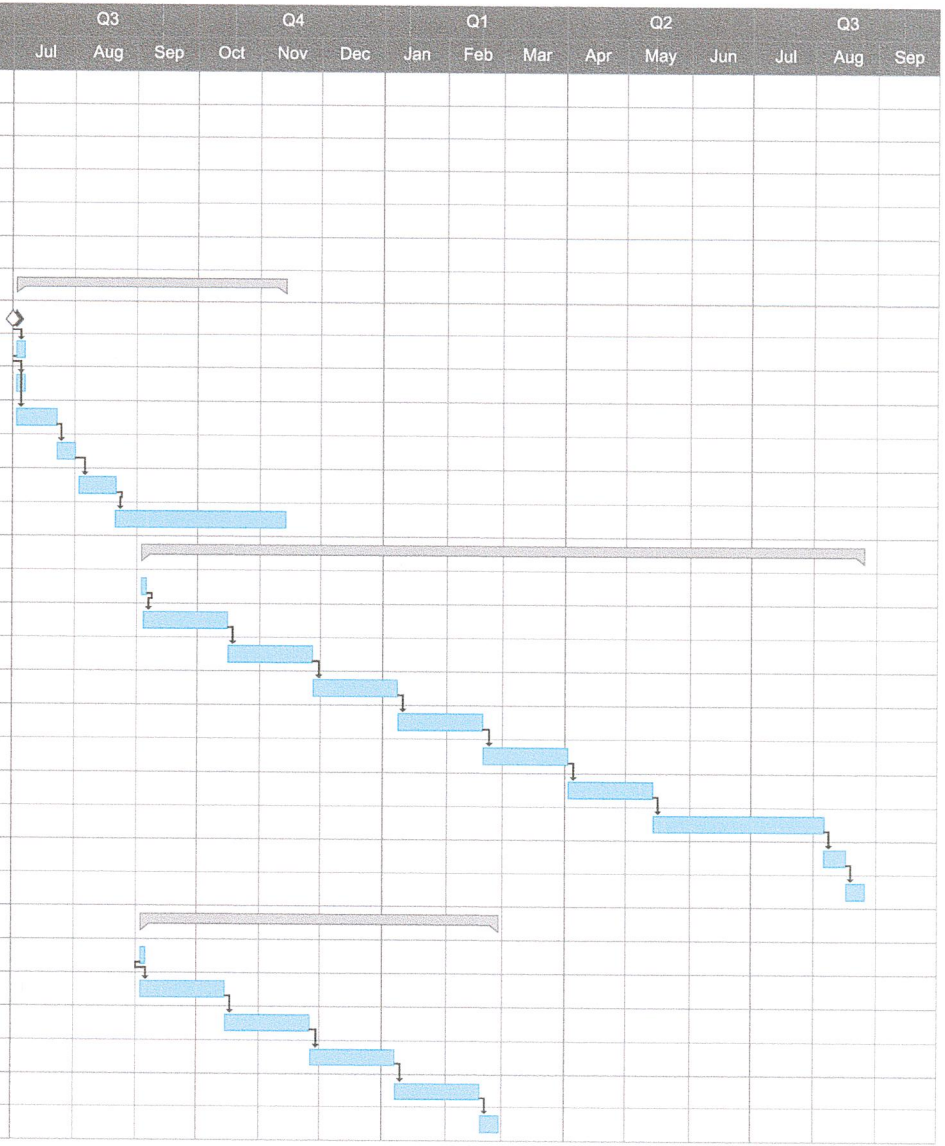
AA. **MOBILE EQUIPMENT**

Under the **Section V – Definitions,** Paragraph **f.(1)(a), (b)** and **(c)** of Mobile Equipment does not apply to self-propelled vehicles of less than 1,000 pounds gross vehicle weight.

Genesee County Courthouse and Jail

smartsheet

	Primary Column	Duration
1	**Major Milestones**	
2	Pre- Construction	95d
3	Construction Start (CourtHouse)	1d
4	Construction Completion (Court House	255d
5	Construction Complete (Jail)	1d
6	Construction Complete (Jail)	127d
7	**Pre Construction**	95d
8	Contract Award	0
9	Bonds & Insurance	2d
10	Permits	2d
11	Submittals	14d
12	Field Measuring and Site Visits (Material Suppliers)	7d
13	Submittal Review	14d
14	Order Long Lead Items	12w
15	**Construction - CourtHouse**	255d
16	Site Mobilization	1d
17	North Elevation	30d
18	East Elevation	30d
19	South Elevation	30d
20	West Elevation	30d
21	North Entrance	30d
22	South Entrance	30d
23	East Entrance	60d
24	Remove / Replace Roofing	7d
25	Internal Quality Control / Inspections / Final Clean	7d
26	**Construction - Jail**	127d
27	Site Mobilization	1d
28	North Elevation	30d
29	East Elevation	30d
30	South Elevation	30d
31	West Elevation	30d
32	Internal Quality Control / Inspections / Final Clean	7d



Exported on May 20, 2026 3:02:27 PM VET

REFERENCES

List 3 references of similar projects Submitted by: Spartan construction group Inc.

Company/Client:	Contacts:
state of michigan	Name: Kyle Knepley- state of michigan
	Title: Field Rep
	Phone: 517-599-0406
Dates of Service: September 2024 - December 2025	Email: KnepleyK1@michigan.gov
	Address:
	City, State:

Company/Client:	Contacts:
state of michigan	Name: Richard mann
	Title: Architect
	Phone: 248-496-3490
Dates of Service: January 2024 - July 2024	Email: rmann@straubpettitmann.com
	Address:
	City, State:

Company/Client:	Contacts: Royce coltman
Hartranch Public schools	Name: [redacted]
	Title: Director of operations
	Phone: 313-580-0340
Dates of Service: multiple projects 2022-ongoing	Email:
	Address:
	City, State:

FAMILIAL RELATIONSHIP SWORN STATEMENT

Spartan Construction Group does hereby disclose that:

(Company Name)

_____ YES, there exists a familial relationship between the Genesee County representatives, members of their Board(s), Directors or Supervisor(s), officer(s) or employee(s) and the Owner(s), officer(s) or employee(s) of:

_____.

(Company Name)

Disclosure Between

Name _____ and	Name _____
Title _____	Title _____
Relationship _____	Relationship _____

X NO, A familial relationship does not exist between the Genesee County representatives, members of their Board(s), Directors or Supervisor(s), officer(s) or employee(s) and the Owner(s), officer(s) or employee(s) of:

Spartan Construction Group.

(Company Name)

Name (printed) Matthew Spirak Position President

Signature Matthew Spirak Date 05-14-26

Notary Public (printed) Donovan Green

Signature D.G County Wayne

Date 5/14/26 My Commission Expires Sep 15 2030

Affix Notary Seal here:

DONOVAN MARQUISE GREEN
Notary Public - State of Michigan
County of Wayne
My Commission Expires Sep 15, 2030
Acting in the County of Wayne

RFP #26-491 Masonry Repairs at Genesee County Courthouse & Jail
DUE 2:00 P.M. (EST), Thursday, May 21, 2026

COMPANY	Spartan Construction						
Signed Signature Page	X						
Signed Insurance Checklist	X						
Reference Form	X						
Statement of Exceptions	X-N						
Administrative Bids:							
Cost Bid Form	X						
Familial Relationship Sworn Statement	X						
Bid Bond	X						
Work Plan	-						
Business Organization	-						
Statement of Project	-						
Additional Information	-						
Cost Submitted	$6,424,000.00						

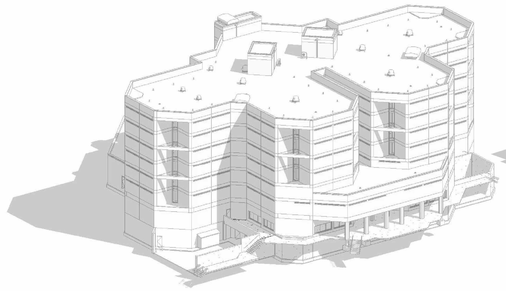
This is a draft tabulation. Entries are recorded during bid opening, may include incorrect price extensions or transcription errors, and are subject to change if conflicting information is discovered during analysis of the bid responses.

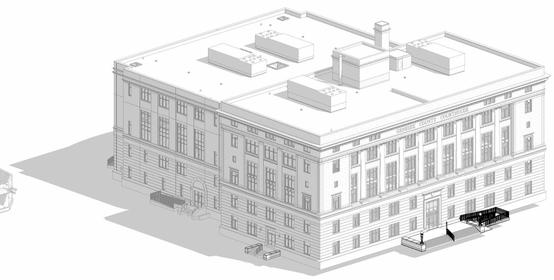
ATTENDEES @ BID OPENING – PRINT YOUR NAME AND COMPANY:

MASONRY REPAIRS TO:

GENESEE COUNTY COURTHOUSE & JAIL

900 & 1002 S. SAGINAW STREET
FLINT, MI 48502





CONTACTS:

OWNER:

GENESEE COUNTY BOARD OF COMMISSIONERS
1101 BEACH STREET
FLINT, MI 48502
PHONE: (810) 257-3020

OFFICE OF THE ARCHITECT:

WTA ARCHITECTS
100 S. JEFFERSON AVENUE, SUITE 601
SAGINAW, MICHIGAN 48607
PHONE: (989) 752-8107
EMAIL: DESIGN@WTAARCH.COM

STRUCTURAL, MECHANICAL & ELECTRICAL ENGINEER:

MACMILLAN ASSOCIATES, INC.
714 E. MIDLAND STREET
BAY CITY, MICHIGAN 48706
PHONE: (989) 894-4300
FAX: (989) 864-9930

EXISTING BUILDING INFORMATION (COURTHOUSE)

REVIEW BASED ON THE FOLLOWING CODES:
MICHIGAN FIRE SAFETY BOARD
NATIONAL FIRE PROTECTION ASSOCIATION NO. 101, 2012 ed. LIFE SAFETY CODE (NFPA)
2021 MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS (Rehab)
2023 NATIONAL ELECTRICAL CODE (2023 NFPA 70)

ITEM	REFERENCE	INFORMATION
EXISTING USE GROUP & OCCUPANCY CLASSIFICATION	6.1.2.1 (NFPA)	MIXED USE, NON-SEPARATED B, BUSINESS (CIVIL ADMINISTRATION) A-3, ASSEMBLY (COURTROOMS / JURY ASSEMBLY) I-3, INSTITUTIONAL (HOLDING CELLS), ACCESSORY AREA
EXISTING CONSTRUCTION TYPE		TYPE 2A - PROTECTED, NONCOMBUSTIBLE
AUTOMATIC SPRINKLER SYSTEMS		EXISTING BUILDING IS FULLY SPRINKLERED
BUILDING REHABILITATION - MODIFICATIONS	45.5.1.3 (NFPA)	NEWLY CONSTRUCTION ELEMENTS, COMPONENTS, AND SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS OF OTHER SECTIONS OF THE CODE APPLICABLE TO NEW CONSTRUCTION.

EXISTING BUILDING INFORMATION (JAIL)

REVIEW BASED ON THE FOLLOWING CODES:
MICHIGAN FIRE SAFETY BOARD
NATIONAL FIRE PROTECTION ASSOCIATION NO. 101, 2012 ed. LIFE SAFETY CODE (NFPA)
2021 MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS (Rehab)
2023 NATIONAL ELECTRICAL CODE (2023 NFPA 70)

ITEM	REFERENCE	INFORMATION
EXISTING USE GROUP & OCCUPANCY CLASSIFICATION	6.1.2.1 (NFPA)	MIXED USE, NON-SEPARATED B, BUSINESS (CIVIL ADMINISTRATION) I-3, INSTITUTIONAL (JAIL)
EXISTING CONSTRUCTION TYPE		TYPE IIB - UNPROTECTED, NONCOMBUSTIBLE
AUTOMATIC SPRINKLER SYSTEMS		EXISTING BUILDING IS FULLY SPRINKLERED
BUILDING REHABILITATION - MODIFICATIONS	45.5.1.3 (NFPA)	NEWLY CONSTRUCTION ELEMENTS, COMPONENTS, AND SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS OF OTHER SECTIONS OF THE CODE APPLICABLE TO NEW CONSTRUCTION.

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TS TITLE SHEET

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A1.0-2 JAIL ARCHITECTURAL SITE PLAN, ENLARGED PARTIAL PLAN & DETAILS

A2.0-1 COURTHOUSE BASEMENT FLOOR PLAN
A2.1-1 COURTHOUSE FIRST FLOOR PLAN & ENLARGED PLANS
A2.1-2 JAIL LEVEL 1 FLOOR PLAN
A2.2-1 COURTHOUSE SECOND FLOOR PLAN
A2.2-2 JAIL LEVEL 2 FLOOR PLAN
A2.3-1 COURTHOUSE THIRD FLOOR PLAN
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A4.1-1 ENLARGED STAIR & RAMP PLAN & SECTIONS

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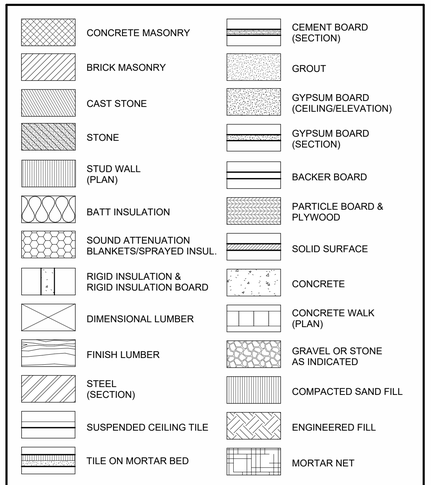
ME1.2 COURTHOUSE BASEMENT SNOW MELT SYSTEM SCHED'S & SPECIFICATIONS
ME1.3 COURTHOUSE BASEMENT SNOW MELT SYSTEM ELEC SPECIFICATIONS



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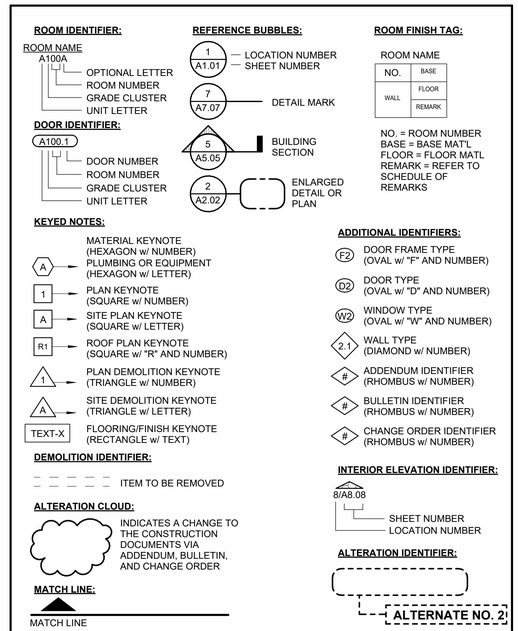

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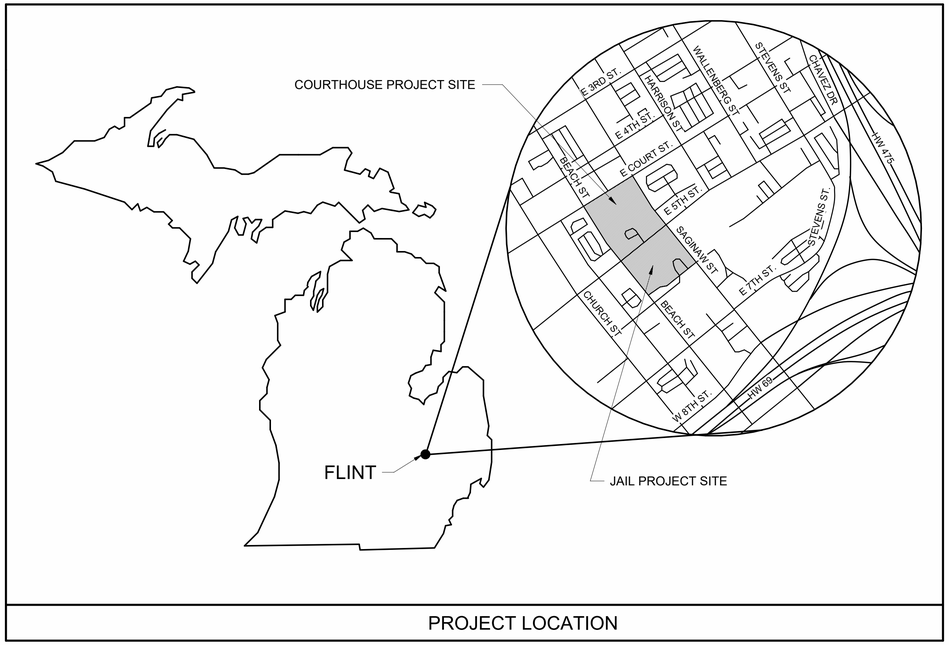

PROJECT LOCATION

SCHEDULE OF ALTERNATES FOR COURTHOUSE:

DEDUCT ALTERNATE NO. 1: INTERIOR: PATCH, REPAIR AND PAINT EXISTING GYPSUM CEILING AND WALL AS INDICATED ON THE DRAWINGS.

ALTERNATE NO. 2:
BASE BID: LIMESTONE PANELS AND SNOW MELT SYSTEM AT ORGINAL COURTHOUSE EAST ENTRANCE STAIR AND RAMP.

ALTERNATE: GRANITE BASE PANELS IN LIEU OF LIMESTONE PANELS AT ORIGINAL COURTHOUSE EAST ENTRANCE STAIR AND RAMP.

SCHEDULE OF UNIT PRICES FOR COURTHOUSE:

UNIT PRICE NO. 1: REMOVAL AND REPOINTING OF MORTAR JOINTS PER LINEAL FOOT.

UNIT PRICE NO. 2: REPAIR OF CONCRETE CRACKS AND SPALLING PER SQUARE FOOT.

UNIT PRICE NO. 3: REMOVE AND INSTALL NEW SEALANT JOINTS PER LINEAL FOOT.

SCHEDULE OF ALTERNATES FOR JAIL:

DEDUCT ALTERNATE NO. 1: STEEL WINDOW / DOOR FRAME, SCRAP AWAY LOOSE MATERIAL AND PAINT TO MATCH EXISTING. INCLUDE A HIGH PERFORMANCE PAINT ALLOWANCE OF $5,000.00.

ALTERNATE NO. 2:
BASE BID: REPLACE METAL PARAPET COPING AT AREAS DAMAGED / FAILING.

ALTERNATE: REPLACE METAL PARAPET COPING ON ENTIRE BUILDING.

SCHEDULE OF UNIT PRICES FOR JAIL:

UNIT PRICE NO. 1: REMOVAL AND REPOINTING OF MORTAR JOINTS PER LINEAL FOOT.

UNIT PRICE NO. 2: REPAIR OF CONCRETE CRACKS AND SPALLING PER SQUARE FOOT.

UNIT PRICE NO. 3: REMOVE AND INSTALL NEW SEALANT JOINTS PER LINEAL FOOT.

NO.	REVISION	DATE
	ISSUED FOR BIDS	4-06-26

WTAARCH.COM

WTA ARCHITECTS
100 S Jefferson Ave, Suite 601
Saginaw, Michigan 48607
989 752 8107

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PROJECT TITLE
MASONRY REPAIRS TO:
GENESEE COUNTY COURTHOUSE & JAIL
900 & 1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE
TITLE SHEET

PROJECT NUMBER
2024083.1

PROJECT DATE
APRIL 06, 2026

CHECKED BY
K.C.L.

SHEET NUMBER
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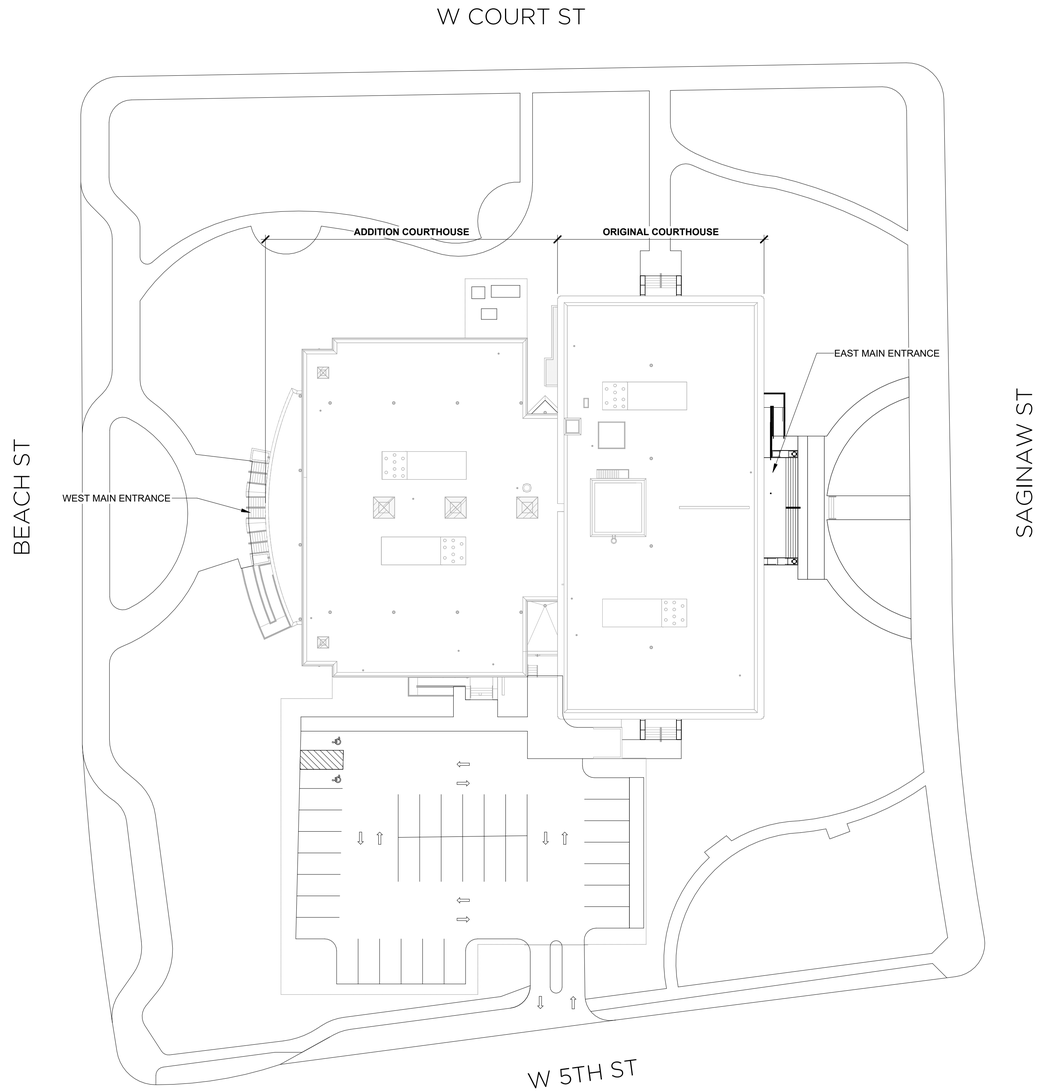

NORTH

ARCHITECTRUAL SITE PLAN

SCALE: 1" = 30'-0"

EXTERIOR RESTORATION GENERAL NOTES:

1. INCLUDE AN ALLOWANCE FOR FIFTY (50) INJECTED EPOXY AND CEMENTITIOUS COMPOUND STONE CRACK REPAIRS. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 1.
2. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF ONE HUNDRED (100) SQUARE FEET OF DAMAGED LIMESTONE UNITS. NEW LIMESTONE SHALL MATCH EXISTING EXPOSED LIMESTONE, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED, AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT, AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 2.
3. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPOINTING OF TWO THOUSAND (2,000) LINEAL FEET OF DAMAGED MORTAR JOINTS, DEPTH OF NEW MORTAR SHALL BE 1 INCH MINIMUM. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 3 AND 7.
4. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF ONE HUNDRED (100) SQUARE FEET OF DAMAGED BRICK UNITS. NEW BRICK SHALL MATCH EXISTING EXPOSED BRICK COURSING, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED, AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT, AND CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 13.
5. INCLUDE AN ALLOWANCE FOR ONE THOUSAND (1000) LINEAL FEET OF NEW SEALANT JOINTS OF EXISTING DETERIORATED AND CRACKED JOINTS. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH ARCHITECT PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 9, 10, 14, 18, 23, AND 25.
6. WHERE ALL NEW FLASHING TERMINATE AGAINST A VERTICAL SURFACE - PROVIDE PROPER WATERTIGHT END DAMS THAT DIRECT WATER TO DRAINAGE WEEPS. COPPER PAN FLASHING SHALL HAVE EDGE TURNED UP WITH CORNERS SOLDERED WATERTIGHT. TYPICAL ALL LOCATIONS.
7. COLOR SCHEDULE FOR NEW SEALANTS SHALL BE AS FOLLOWS:
8. A) VERTICAL BRICK TO BRICK = BROWN TO MATCH BRICK
   B) HORIZONTAL BRICK OR STONE - LIMESTONE U.N.O.)
   C) BRICK TO STONE OR STONE TO STONE = LIMESTONE

   PROVIDE ACTUAL IN WALL SEALANT MOCKUPS OF EACH TYPE, AND EACH COLOR FOR OWNER'S AND ARCHITECT'S REVIEW. MOCKUPS MAY BECOME PART OF THE PERMANENT WORK IF APPROVED.
9. AT NEW AND EXISTING STEEL PREPARATION AND PAINTING, ALL STEEL SHALL BE HAND TOOL CLEANED PER SSPC-SP2, REFERENCE SPECIFICATION SECTION 099600-HIGH PERFORMANCE COATINGS. PRIME RUST AND COAT WITH HIGH PERFORMANCE PAINT PRODUCTS AS SPECIFIED AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MINIMUM 6 MILS TOTAL WET FILM THICKNESS.
10. AT ALL LOCATIONS OF MASONRY REMOVAL AND REPLACEMENT, CONTRACTOR SHALL PROPERLY INSTALL SHORING TO SUPPORT EXISTING MASONRY TO REMAIN ABOVE OPENED AREA. FAILURE TO INSTALL ADEQUATE SHORING THAT RESULTS IN DAMAGE TO THE MASONRY TO REMAIN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND / OR REPLACE DAMAGED MASONRY AND / OR ADJACENT SURFACES, ROOFS, ETC.
11. ALL ROOF AREAS EFFECTED BY CONSTRUCTION ACTIVITY SHALL BE PROTECTED W/ 3/4" PLYWOOD ON 2" RIGID SLOTTED INSULATION ON 6 MIL. PLASTIC SHEETING OVER THE EXISTING ROOFING. THIS SHALL INCLUDE ROOFS BOTH ABOVE AND BELOW THE AREAS UNDER CONSTRUCTION. DO NOT BLOCK EXISTING ROOF DRAINS, MAINTAIN POSITIVE DRAINAGE TO THEM, PROTECT DRAINS FROM DAMAGE.
12. CLEAN ALL EXISTING ROOF DRAINS.
13. ALL WORK INDICATED ON DRAWINGS DOES NOT NECESSARILY HAVE A CORRESPONDING "RESTORATION KEYNOTE" ASSIGNED TO IT AND MAY BE INDICATED BY "GENERAL NOTES" OR DETAILS.
14. REFERENCE RESTORATION KEYNOTES AND GENERAL NOTES FOR DEMOLITION ITEMS ASSOCIATED WITH THE FACADE AND RENOVATION WORK.
15. COPING AND MASONRY REPAIR MOCKUPS: REFERENCE SPECIFICATION SECTION 040120-MASONRY PARAPET REPAIR FOR LOCATIONS, AND DESCRIPTION OF REQUIRED MOCKUPS.
16. ALONG WITH CLEANING ALL AREAS OF THE NEW MASONRY INSTALLATIONS AND WHERE SPECIFIC STAINING IS NOTED TO BE CLEANED, CONTRACTOR SHALL CLEAN ALL AREAS OF EXISTING MASONRY BELOW AND ADJACENT TO THE WORK AREA THAT MAY BE AFFECTED BY RUN-OFF OR OVER-SPRAY AT NO ADDITIONAL COST TO OWNER.
17. ALL WELDING ON THIS PROJECT TO BE PERFORMED BY CERTIFIED WELDERS (NO EXCEPTIONS). INDIVIDUAL WELDERS CERTIFICATES TO BE INCLUDED IN SUBMITTALS.
18. ALL WELDING WORK AND FLASHING PANS TO BE INSPECTED BY ARCHITECT, STRUCTURAL ENGINEER AND/OR TESTING COMPANY HIRED BY OWNER PRIOR TO COVERING WITH NEW MASONRY.
19. AFTER COMPLETION OF WORK, CONTRACTOR SHALL CLEAN ALL WINDOW UNITS WHERE CONSTRUCTION DUST, DIRT, MATERIAL RESIDUE, ETC. MAY BE PRESENT.

GENERAL SITE PLAN NOTES:

1. ARCHITECTURAL SITE PLAN IS FOR REFERENCE ONLY AND DOES NOT REPRESENT CURRENT CONDITIONS.

NO.	REVISION	DATE
	ISSUED FOR BIDS	4-06-26

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WTA ARCHITECTS

100 S Jefferson Ave, Suite 601
Saginaw, Michigan 48607
989 752 8107

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PROJECT TITLE

MASONRY REPAIRS TO:

GENESEE COUNTY COURTHOUSE & JAIL

900 & 1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE

COURTHOUSE ARCHITECTURAL SITE PLAN

PROJECT NUMBER 2024083.1

PROJECT DATE APRIL 06, 2026

CHECKED BY K.C.L.

SHEET NUMBER A1.0-1

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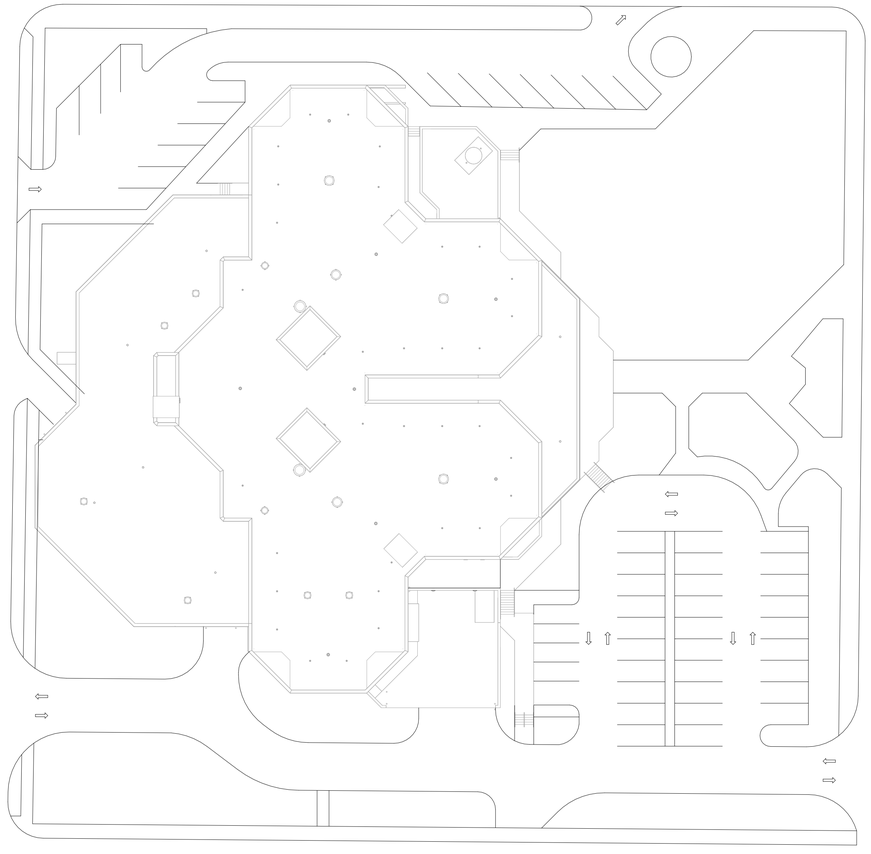
W 5TH ST

BEACH ST



SAGINAW ST

NORTH

ARCHITECTRUAL SITE PLAN
SCALE: 1" = 30'-0"

EXTERIOR RESTORATION GENERAL NOTES:

1. INCLUDE AN ALLOWANCE FOR ONE THOUSAND (1000) LINEAL FEET OF NEW SEALANT JOINTS OF EXISTING DETERIORATED AND CRACKED JOINTS. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH ARCHITECT PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 2 AND 3.

2. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF TWO HUNDRED (200) INDIVIDUALLY DAMAGED BRICK UNITS. NEW BRICK SHALL MATCH EXISTING EXPOSED BRICK COURSING, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 5.

3. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF TWO HUNDRED (100) INDIVIDUALLY DAMAGED BRICK UNITS. NEW BRICK SHALL MATCH EXISTING EXPOSED BRICK COURSING, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 5.

4. WHERE ALL NEW FLASHINGS TERMINATE AGAINST A VERTICAL SURFACE - PROVIDE PROPER WATERTIGHT END DAMS THAT DIRECT WATER TO DRAINAGE WEEPS. COPPER PAN FLASHINGS SHALL HAVE EDGE TURNED UP WITH CORNERS SOLDERED WATERTIGHT. TYPICAL ALL LOCATIONS.

5. COLOR SCHEDULE FOR NEW SEALANTS SHALL BE AS FOLLOWS:

   A) VERTICAL BRICK TO BRICK = TAN TO MATCH BRICK
   B) HORIZONTAL BRICK TO BRICK = TAN TO MATCH BRICK

   PROVIDE ACTUAL IN WALL SEALANT MOCKUPS OF EACH TYPE, AND EACH COLOR FOR OWNER'S AND ARCHITECT'S REVIEW. MOCKUPS MAY BECOME PART OF THE PERMANENT WORK IF APPROVED.

6. AT NEW AND EXISTING STEEL PREPARATION AND PAINTING, ALL STEEL SHALL BE HAND TOOL CLEANED PER SSPC-SP2. REFERENCE SPECIFICATION SECTION 099600-HIGH PERFORMANCE COATINGS. PRIME RUST AND COAT WITH HIGH PERFORMANCE PAINT PRODUCTS AS SPECIFIED AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MINIMUM 6 MILS TOTAL WET FILM THICKNESS.

7. AT ALL LOCATIONS OF MASONRY REMOVAL AND REPLACEMENT, CONTRACTOR SHALL PROPERLY INSTALL SHORING TO SUPPORT EXISTING MASONRY TO REMAIN ABOVE OPENED AREA. FAILURE TO INSTALL ADEQUATE SHORING THAT RESULTS IN DAMAGE TO THE MASONRY TO REMAIN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND / OR REPLACE DAMAGED MASONRY AND / OR ADJACENT SURFACES, ROOFS, ETC.

8. ALL ROOF AREAS EFFECTED BY CONSTRUCTION ACTIVITY SHALL BE PROTECTED W/ 3/4" PLYWOOD ON 2" RIGID SLOTTED INSULATION ON 6 MIL. PLASTIC SHEETING OVER THE EXISTING ROOFING. THIS SHALL INCLUDE ROOFS BOTH ABOVE AND BELOW THE AREAS UNDER CONSTRUCTION. DO NOT BLOCK EXISTING ROOF DRAINS, MAINTAIN POSITIVE DRAINAGE TO THEM, PROTECT DRAINS FROM DAMAGE.

9. CLEAN ALL EXISTING ROOF DRAINS.

10. ALL WORK INDICATED ON DRAWINGS DOES NOT NECESSARILY HAVE A CORRESPONDING "RESTORATION KEYNOTE" ASSIGNED TO IT AND MAY BE INDICATED BY "GENERAL NOTES" OR DETAILS.

11. REFERENCE RESTORATION KEYNOTES AND GENERAL NOTES FOR DEMOLITION ITEMS ASSOCIATED WITH THE FACADE AND RENOVATION WORK.

12. COPING AND MASONRY REPAIR MOCKUPS: REFERENCE SPECIFICATION SECTION 040120-MASONRY PARAPET REPAIR FOR LOCATIONS, AND DESCRIPTION OF REQUIRED MOCKUPS.

13. ALONG WITH CLEANING ALL AREAS OF THE NEW MASONRY INSTALLATIONS AND WHERE SPECIFIC STAINING IS NOTED TO BE CLEANED, CONTRACTOR SHALL CLEAN ALL AREAS OF EXISTING MASONRY BELOW AND ADJACENT TO THE WORK AREA THAT MAY BE AFFECTED BY RUN-OFF OR OVER-SPRAY AT NO ADDITIONAL COST TO OWNER.

14. ALL WELDING ON THIS PROJECT TO BE PERFORMED BY CERTIFIED WELDERS (NO EXCEPTIONS). INDIVIDUAL WELDERS CERTIFICATES TO BE INCLUDED IN SUBMITTALS.

15. ALL WELDING WORK AND FLASHING PANS TO BE INSPECTED BY ARCHITECT, STRUCTURAL ENGINEER AND/OR TESTING COMPANY HIRED BY OWNER PRIOR TO COVERING WITH NEW MASONRY.

16. AFTER COMPLETION OF WORK, CONTRACTOR SHALL CLEAN ALL WINDOW UNITS WHERE CONSTRUCTION DUST, DIRT, MATERIAL RESIDUE, ETC. MAY BE PRESENT.

GENERAL SITE PLAN NOTES:

1. ARCHITECTURAL SITE PLAN IS FOR REFERENCE ONLY AND DOES NOT REPRESENT CURRENT CONDITIONS.

(#) RESTORATION KEYNOTES

1 CLEAN RUST OFF ENTIRE EXISTING STEEL WINDOW FRAME AND PAINT WITH NEW HIGH PERFORMANCE PAINT, TYPICAL ALL WINDOWS.
2 REMOVE SEALANT AROUND ENTIRE PERIMETER OF EXISTING STEEL WINDOW AND FILL WITH NEW BACKER ROD AND SEALANT. REFER TO DETAIL 7/A7.1-2.
3 REMOVE ALL SEALANT AT EXISTING VERTICAL EXPANSION JOINT AND FILL WITH NEW BACKER ROD AND SEALANT. REFER TO DETAIL 11/A7.1-2.
4 CLEAN RUST OFF EXISTING STEEL DOOR AND PAINT WITH NEW HIGH PERFORMANCE PAINT.
5 REMOVE AND REPLACE PORTIONS OF CRACKED AND SPALLING BRICK WITH NEW BRICK TO MATCH EXISTING.
7 OPEN SOLDIER COURSING AND REMOVE ALL BRITTLE FLASHING AT SHELF ANGLES AND REPLACE WITH NEW CONTINUOUS FLASHING OVER THE ENTIRE SHELF ANGLE AND PROVIDE NEW WEEP SYSTEMS. REFER TO DETAIL 7/A7.1-2.
8 PROVIDE NEW END DAM FLASHING AT ALL SHELF ANGLES. REFER TO DETAIL 14/A7.1-2.
9 OPEN SOLDIER COURSING AND REMOVE ALL BRITTLE FLASHING AT SHELF ANGLES AND REPLACE WITH NEW CONTINUOUS FLASHING OVER ENTIRE SHELF ANGLE AND PROVIDE NEW WEEP SYSTEMS. REFER TO DETAIL 8/A7.1-2.
10 PROVIDE NEW HORIZONTAL EXPANSION JOINT BELOW ALL SHELF ANGLES SUPPORTING BRICK WYTHE.
11 PROVIDE NEW ISOLATION JOINT IN EXTERIOR BRICK VENEER AS INDICATED.
12 PROVIDE NEW CONTINUED EXPANSION JOINT VERTICALLY UP TO PARAPET.
13 REMOVE AND REPLACE DAMAGED/FAILING METAL COPING. RE: COPING SPLICE AND FLASHING DETAIL 2/A6.4-2.
14 REPLACE MISSING/DAMAGED COUNTERFLASHING WITH NEW COUNTERFLASHING. RE: DETAIL 1/A6.4-2.
15 SAWCUT FULL DEPTH AND REMOVE ALL DEBRIS.
16 REPAIR CONCRETE PER DETAIL 16/A7.1-2.
17 REPAIR CONCRETE COLUMN, RE: DETAIL 16/A7.1.2 FOR CONCRETE REPAIR PROCEDURES.

NO.	REVISION	DATE
	ISSUED FOR BIDS	4-06-26

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Saginaw, Michigan 48607
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PROJECT TITLE
MASONRY REPAIRS TO:
GENESEE COUNTY JAIL
1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE
JAIL ARCHITECTURAL SITE PLAN, ENLARGED PARTIAL PLAN & DETAILS

PROJECT NUMBER 2024083.1
PROJECT DATE APRIL 06, 2026
CHECKED BY K.C.L.
SHEET NUMBER A1.0-2

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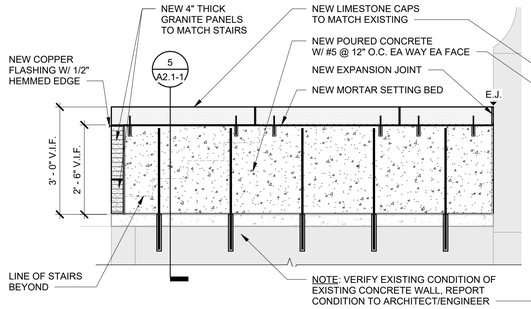
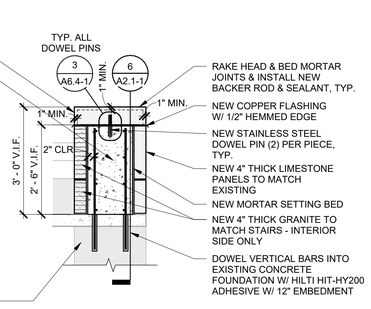


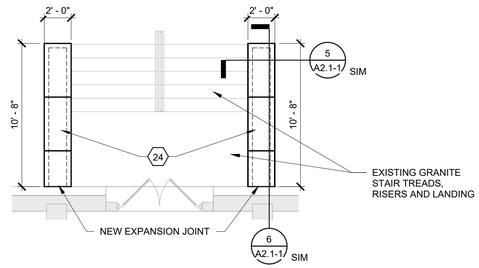
6 A2.1-1 CHEEK WALL SECTION @ ORIGINAL

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



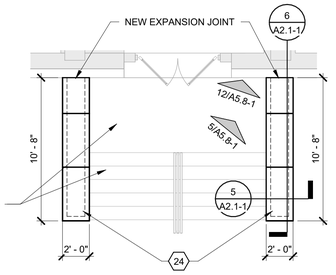
5 A2.1-1 CHEEK WALL SECTION @ ORIGINAL

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



NORTH 4 A2.1-1 ENLARGED ORIGINAL NORTH ENTRY STAIR PLAN

SCALE: 3/16" = 1'-0"



NORTH 3 A2.1-1 ENLARGED ORIGINAL SOUTH ENTRY STAIR PLAN

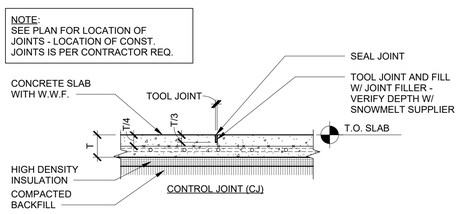
SCALE: 3/16" = 1'-0"

CONCRETE NOTES

1. ACI BUILDING CODE (318); MANUAL OF STANDARD PRACTICE FOR DETAILING (315) FOR THE MIXING, FABRICATION AND PLACEMENT OF CONCRETE, REINFORCING STEEL, AND ACCESSORIES.
2. CONCRETE STRENGTH - (STANDARD) WEIGHT CONCRETE:
   WALLS: f'c =4500 MINIMUM PSI
   EXTERIOR CONCRETE SLABS EXPOSED TO DE-ICING: f'c = 4500 MINIMUM PSI
3. REINFORCING - BARS: ASTM A-615 GRADE 60
   WELDED WIRE FABRIC: ASTM A-1064
4. FORM ALL CONCRETE.
5. WATER/CEMENT RATIO LIMITS:
   f'c = 4500 PSI 0.4 AIR-ENTRAINED
6. SLUMP LIMITS:
   4" FOR SLABS AND WALLS
7. PROVIDE AIR ENTRAINED CONCRETE FOR EXTERIOR EXPOSURES.
8. PROVIDE CORNER BARS FOR ALL CONTINUOUS CORNERS.
9. EXPOSED EDGES OF CONCRETE BEAMS, COLUMNS, ETC. SHALL BE CHAMFERED 3/4".
10. WALL FOOTING REINFORCING LAP LENGTH: MINIMUM 27", 21" IF LAPS STAGGERED.

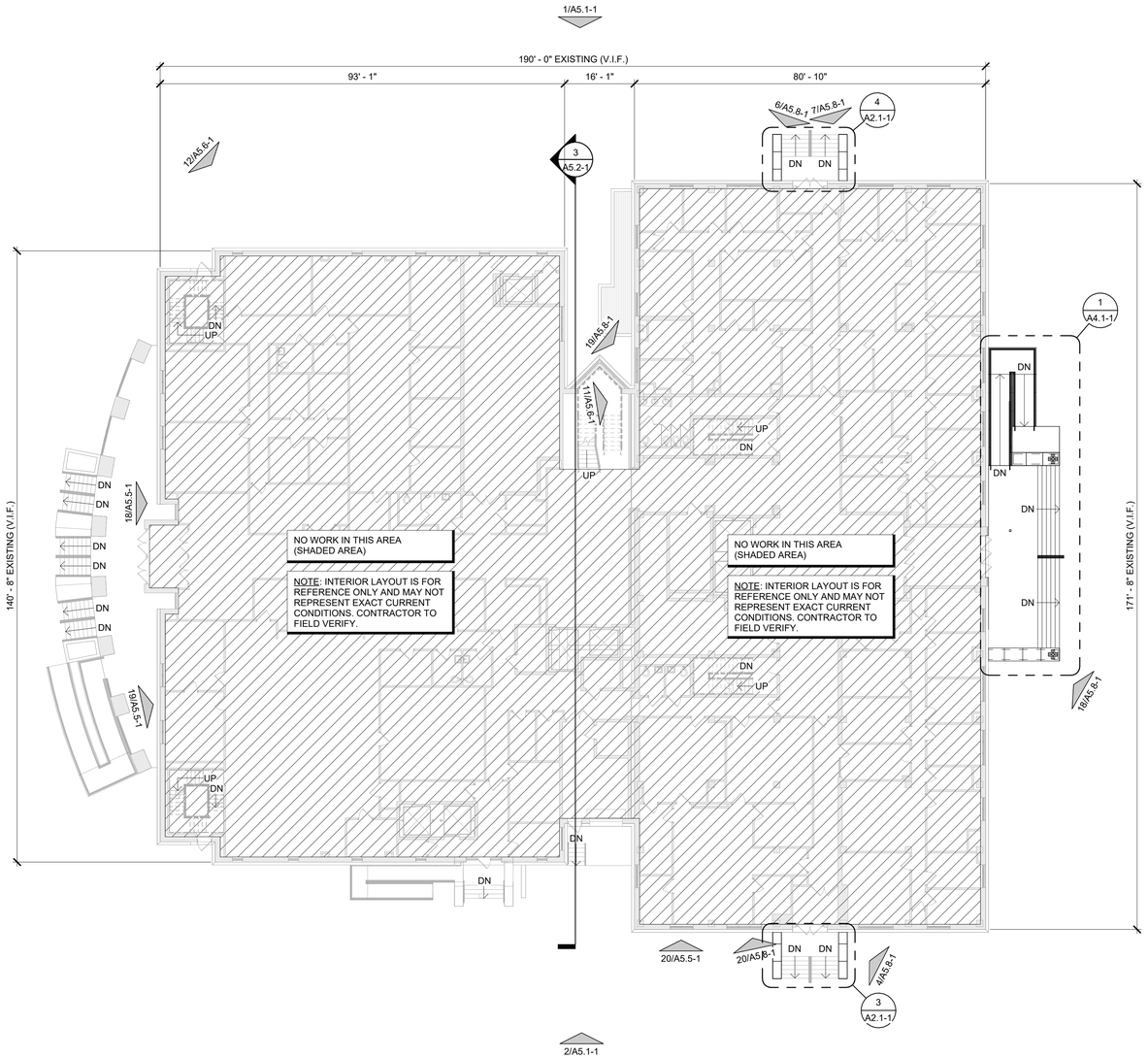
FOUNDATION NOTES

1. FOUNDATIONS ARE DESIGNED BASED ON SOIL BEARING OF 2000 PSF. IF SOIL OF THIS CAPACITY IS NOT FOUND AT THE ELEVATION NOTED, ENLARGE OR LOWER FOOTINGS AT THE DIRECTION OF THE ARCHITECT/ENGINEER.
2. PLACE STRUCTURAL BACKFILL MEETING OR EXCEEDING MDOT CLASS II IN LAYERS NOT EXCEEDING 9" LOOSE THICKNESS. COMPACT EACH LAYER TO AT LEAST 95% OF THE MAXIMUM DENSITY PER ASTM D-1557. COMPACTING BY FLOODING IS NOT PERMITTED.
3. CENTER FOOTINGS UNDER WALL LOCATION AND COLUMNS UNLESS NOTED.
4. EARTH FORMS ARE NOT PERMITTED UNLESS SPECIFICALLY NOTED.
5. PROVIDE BOND BREAK MATERIAL BETWEEN ALL GRADE SLABS AND VERTICAL SURFACES.



7 A2.1-1 CONTROL JOINT DETAIL W/ SNOW MELT

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



NORTH 1 A2.1-1 FIRST FLOOR CONSTRUCTION PLAN

SCALE: 1/16" = 1'-0"

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1. INCLUDE AN ALLOWANCE FOR FIFTY (50) INJECTED EPOXY AND CEMENTITIOUS COMPOUND STONE CRACK REPAIRS. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 1.
2. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF ONE HUNDRED (100) SQUARE FEET OF DAMAGED LIMESTONE UNITS. NEW LIMESTONE SHALL MATCH EXISTING EXPOSED LIMESTONE, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED, AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT, AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 2.
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19. AFTER COMPLETION OF WORK, CONTRACTOR SHALL CLEAN ALL WINDOW UNITS WHERE CONSTRUCTION DUST, DIRT, MATERIAL RESIDUE, ETC. MAY BE PRESENT.

RESTORATION KEYNOTES

1. FILL CRACKS IN LIMESTONE WITH AN INJECTED MASONRY EPOXY. PATCH FACE OF STONE AS REQUIRED TO BLEND WITH ADJACENT SURFACES.
2. PATCH SPALLED/VOIDS IN EXISTING LIMESTONE WITH CEMENTITIOUS COLORED PRODUCT. MATCH ADJACENT STONE TEXTURE AND COLOR. WHERE DAMAGED AREAS ARE TOO EXTENSIVE FOR PATCHING, REMOVE DAMAGED LIMESTONE PIECE(S) AND REPLACE WITH NEW LIMESTONE PIECE(S).
3. REMOVE EXISTING DAMAGED MORTAR FROM JOINTS TO A MINIMUM DEPTH OF ONE INCH, OR BACK TO SOUND MORTAR, AND REPLACE WITH NEW MORTAR BY REPOINTING METHOD. MATCH EXISTING COLOR.
4. CLEAN ALL EXISTING LIMESTONE SURFACES WITH A CHEMICAL PRODUCT AND LOW-PRESSURE WASH. PERFORM THIS AFTER ALL REPAIRS ARE COMPLETED.
5. PROVIDE NEW DRAINAGE WEEPS SPACED FROM 32" TO 48" ON CENTER AT THROUGH-WALL FLASHING.
6. PROVIDE NEW EXPANSION JOINT IN EXISTING MASONRY VENEER AS INDICATED AND FILL WITH NEW BACKER ROD AND SEALANT.
7. REMOVE ALL EXISTING HEAD JOINT MORTAR TO A DEPTH OF ONE INCH MINIMUM AT CULTURED STONE AND FILL WITH NEW BACKER ROD & SEALANT.
8. CHEMICALLY CLEAN ALL AREAS OF SOILED MASONRY SURFACES.
9. REMOVE ALL OPEN JOINT SEALANT AT EXISTING STAINLESS STEEL FLASHING AND REPLACE WITH NEW SEALANT BELOW EXISTING FLASHING.
10. REMOVE ALL EXISTING COPING HEAD JOINT SEALANT AND REPLACE WITH NEW JOINT SEALANT. RE: DETAIL 1/A6.4-1 AND 2/A6.4-1.
11. REMOVE ALL EXISTING LIMESTONE COPING, SALVAGE, CLEAN AND RE-INSTALL WITH NEW STAINLESS STEEL FLASHING AND FILL WITH NEW BACKER ROD AND SEALANT. RE: DETAIL 2/A6.4-1.
12. REMOVE AND REPLACE TERMINATION FLASHING. REFER TO SHEET A6.4-1.
13. REMOVE ENTIRE PERIMETER OF BRICK VENEER AT WINDOW UNIT AND REPLACE WITH NEW TIGHTLY SEALED FLASHING, END DAM FLASHING & WEEP HOLES. FILL PERIMETER OF WINDOW UNITS WITH NEW BACKER ROD AND SEALANT. RE: SHEET A7.1-1.
14. REMOVE ALL HORIZONTAL SEALANT BELOW FLASHING AND BLACK ADHESIVE ABOVE FLASHING AT EXISTING SHELF ANGLES AND FILL WITH NEW BACKER ROD AND SEALANT BELOW FLASHING AND NEW WEEP DRAINAGE HOLES.
15. PATCH & REPAIR PORTIONS OF INTERIOR GYP. BOARD CEILING AT WATER SPOT LOCATIONS, ONCE WATER LEAK REPAIRS ARE COMPLETE.
16. PATCH & REPAIR PORTIONS OF INTERIOR GYP. BOARD WALLS SURROUNDING WINDOW UNIT(S) AT WATER SPOT LOCATIONS, ONCE FLASHING REPAIRS ARE COMPLETE.
17. REPLACE WATER DAMAGED SILL. MATCH EXISTING.
18. REMOVE EXISTING EXPANSION JOINT SEALANT AND FILL WITH NEW BACKER ROD AND SEALANT. MATCH EXISTING SEALANT COLOR.
19. FILL OPEN JOINT WITH NEW BACKER ROD AND SEALANT.
20. REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF ALL ORGINAL COURTHOUSE STEEL WINDOW LINTELS, TYP. PAINT WITH NEW HIGH PERFORMANCE PAINT.
21. REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF EXISTING STAIR/RAMP RAILINGS. PAINT WITH NEW HIGH PERFORMANCE PAINT.
22. REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF EXISTING IRON DOOR FRAME. PAINT WITH NEW HIGH PERFORMANCE PAINT.
23. REMOVE ALL EXISTING SEALANT FROM GRANITE STEPS AT ALL JOINTS AND FILL WITH NEW SEALANT.
24. REMOVE ENTIRE MASONRY CHEEK WALL STRUCTURE FOR NEW CHEEK WALL STRUCTURE. RE: SHEET A2.1-1.
25. REMOVE ALL CRACKED SEALANT AND REPLACE WITH NEW SEALANT.
26. EXISTING SEALANT MAY CONTAIN HAZARDOUS MATERIALS AND SHOULD BE FURTHER TESTED.
28. NEW CONCRETE RAMP AND STAIR ON NEW SNOWMELT SYSTEM. REFER TO SHEET A4.1-1.
29. SAWCUT FULL DEPTH AND REMOVE ALL DEBRIS.
30. SAWCUT, REMOVE AND REPLACE WITH NEW LIMESTONE PANELS. MATCH EXISTING PROFILE.

NO.	REVISION	DATE
	ISSUED FOR BIDS	4-06-26

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Saginaw, Michigan 48607
989 752 8107

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PROJECT TITLE

MASONRY REPAIRS TO:

GENESEE COUNTY COURTHOUSE & JAIL

900 & 1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE

COURTHOUSE FIRST FLOOR PLAN & ENLARGED PLANS

PROJECT NUMBER 2024083.1

PROJECT DATE APRIL 06, 2026

CHECKED BY K.C.L.

SHEET NUMBER A2.1-1

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1/A5.2-2

1/A5.1-2

2/A5.1-2

2/A5.2-2

NORTH

1 A2.1-2 LEVEL 1 CONSTRUCTION PLAN
SCALE: 1/16" = 1'-0"

DEMOLITION KEYNOTES

1 REMOVE EXISTING FLOOR DRAIN.
2 REMOVE EXISTING 2" PVC SANITARY PIPING UNDER LANDING.
3 REMOVE EXISTING 4" COPPER INSULATED SANITARY PIPING UNDER LANDING.
4 REMOVE EXISTING SANITARY PIPING UP TO WALL AND

PROM-DECK DRAIN SCHEDULE:

PD-1 ZURN (OR EQUAL) MODEL NO. Z158, 8" PROM-DECK DRAIN WITH HEEL-PROOF GRATE. 3" PIPE SIZE. DURA- COATED CAST IRON BODY WITH SQUARE PROMENADE FRAME, VANDAL-PROOF SECURED TOP.

EXTERIOR RESTORATION GENERAL NOTES:

1. INCLUDE AN ALLOWANCE FOR ONE THOUSAND (1000) LINEAL FEET OF NEW SEALANT JOINTS OF EXISTING DETERIORATED AND CRACKED JOINTS. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH ARCHITECT PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 2 AND 3.
2. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF TWO HUNDRED (200) INDIVIDUALLY DAMAGED BRICK UNITS. NEW BRICK SHALL MATCH EXISTING EXPOSED BRICK COURSING, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 5.
3. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF TWO HUNDRED (100) INDIVIDUALLY DAMAGED BRICK UNITS. NEW BRICK SHALL MATCH EXISTING EXPOSED BRICK COURSING, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 5.
4. WHERE ALL NEW FLASHINGS TERMINATE AGAINST A VERTICAL SURFACE - PROVIDE PROPER WATERTIGHT END DAMS THAT DIRECT WATER TO DRAINAGE WEEPS. COPPER PAN FLASHINGS SHALL HAVE EDGE TURNED UP WITH CORNERS SOLDERED WATERTIGHT. TYPICAL ALL LOCATIONS.
5. COLOR SCHEDULE FOR NEW SEALANTS SHALL BE AS FOLLOWS:
   A) VERTICAL BRICK TO BRICK = TAN TO MATCH BRICK
   B) HORIZONTAL BRICK TO BRICK = TAN TO MATCH BRICK

   PROVIDE ACTUAL IN WALL SEALANT MOCKUPS OF EACH TYPE, AND EACH COLOR FOR OWNER'S AND ARCHITECT'S REVIEW. MOCKUPS MAY BECOME PART OF THE PERMANENT WORK IF APPROVED.
6. AT NEW AND EXISTING STEEL PREPARATION AND PAINTING, ALL STEEL SHALL BE HAND TOOL CLEANED PER SSPC-SP2. REFERENCE SPECIFICATION SECTION 099600-HIGH PERFORMANCE COATINGS. PRIME RUST AND COAT WITH HIGH PERFORMANCE PAINT PRODUCTS AS SPECIFIED AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MINIMUM 6 MILS TOTAL WET FILM THICKNESS.
7. AT ALL LOCATIONS OF MASONRY REMOVAL AND REPLACEMENT, CONTRACTOR SHALL PROPERLY INSTALL SHORING TO SUPPORT EXISTING MASONRY TO REMAIN ABOVE OPENED AREA. FAILURE TO INSTALL ADEQUATE SHORING THAT RESULTS IN DAMAGE TO THE MASONRY TO REMAIN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND / OR REPLACE DAMAGED MASONRY AND / OR ADJACENT SURFACES, ROOFS, ETC.
8. ALL ROOF AREAS EFFECTED BY CONSTRUCTION ACTIVITY SHALL BE PROTECTED W/ 3/4" PLYWOOD ON 2" RIGID SLOTTED INSULATION ON 6 MIL PLASTIC SHEETING OVER THE EXISTING ROOFING. THIS SHALL INCLUDE ROOFS BOTH ABOVE AND BELOW THE AREAS UNDER CONSTRUCTION. DO NOT BLOCK EXISTING ROOF DRAINS, MAINTAIN POSITIVE DRAINAGE TO THEM, PROTECT DRAINS FROM DAMAGE.
9. CLEAN ALL EXISTING ROOF DRAINS.
10. ALL WORK INDICATED ON DRAWINGS DOES NOT NECESSARILY HAVE A CORRESPONDING "RESTORATION KEYNOTE" ASSIGNED TO IT AND MAY BE INDICATED BY "GENERAL NOTES" OR DETAILS.
11. REFERENCE RESTORATION KEYNOTES AND GENERAL NOTES FOR DEMOLITION ITEMS ASSOCIATED WITH THE FACADE AND RENOVATION WORK.
12. COPING AND MASONRY REPAIR MOCKUPS: REFERENCE SPECIFICATION SECTION 040120-MASONRY PARAPET REPAIR FOR LOCATIONS, AND DESCRIPTION OF REQUIRED MOCKUPS.
13. ALONG WITH CLEANING ALL AREAS OF THE NEW MASONRY INSTALLATIONS AND WHERE SPECIFIC STAINING IS NOTED TO BE CLEANED, CONTRACTOR SHALL CLEAN ALL AREAS OF EXISTING MASONRY BELOW AND ADJACENT TO THE WORK AREA THAT MAY BE AFFECTED BY RUN-OFF OR OVER-SPRAY AT NO ADDITIONAL COST TO OWNER.
14. ALL WELDING ON THIS PROJECT TO BE PERFORMED BY CERTIFIED WELDERS (NO EXCEPTIONS). INDIVIDUAL WELDERS CERTIFICATES TO BE INCLUDED IN SUBMITTALS.
15. ALL WELDING WORK AND FLASHING PANS TO BE INSPECTED BY ARCHITECT, STRUCTURAL ENGINEER AND/OR TESTING COMPANY HIRED BY OWNER PRIOR TO COVERING WITH NEW MASONRY.
16. AFTER COMPLETION OF WORK, CONTRACTOR SHALL CLEAN ALL WINDOW UNITS WHERE CONSTRUCTION DUST, DIRT, MATERIAL RESIDUE, ETC. MAY BE PRESENT.

NOTE:
CONDITIONS INDICATED ON THESE DRAWINGS OCCUR THROUGHOUT ENTIRE BUILDING. CONTRACTOR TO FIELD VERIFY.

RESTORATION KEYNOTES

1 CLEAN RUST OFF ENTIRE EXISTING STEEL WINDOW FRAME AND PAINT WITH NEW HIGH PERFORMANCE PAINT, TYPICAL ALL WINDOWS.
2 REMOVE SEALANT AROUND ENTIRE PERIMETER OF EXISTING STEEL WINDOW AND FILL WITH NEW BACKER ROD AND SEALANT. REFER TO DETAIL 7/A7.1-2.
3 REMOVE ALL SEALANT AT EXISTING VERTICAL EXPANSION JOINT AND FILL WITH NEW BACKER ROD AND SEALANT. REFER TO DETAIL 11/A7.1-2.
4 CLEAN RUST OFF EXISTING STEEL DOOR AND PAINT WITH NEW HIGH PERFORMANCE PAINT.
5 REMOVE AND REPLACE PORTIONS OF CRACKED AND SPALLING BRICK WITH NEW BRICK TO MATCH EXISTING.
7 OPEN SOLDIER COURSING AND REMOVE ALL BRITTLE FLASHING AT SHELF ANGLES AND REPLACE WITH NEW CONTINUOUS FLASHING OVER THE ENTIRE SHELF ANGLE AND PROVIDE NEW WEEP SYSTEMS. REFER TO DETAIL 7/A7.1-2.
8 PROVIDE NEW END DAM FLASHING AT ALL SHELF ANGLES. REFER TO DETAIL 14/A7.1-2.
9 OPEN SOLDIER COURSING AND REMOVE ALL BRITTLE FLASHING AT SHELF ANGLES AND REPLACE WITH NEW CONTINUOUS FLASHING OVER ENTIRE SHELF ANGLE AND PROVIDE NEW WEEP SYSTEMS. REFER TO DETAIL 8/A7.1-2.
10 PROVIDE NEW HORIZONTAL EXPANSION JOINT BELOW ALL SHELF ANGLES SUPPORTING BRICK WYTHE.
11 PROVIDE NEW ISOLATION JOINT IN EXTERIOR BRICK VENEER AS INDICATED.
12 PROVIDE NEW CONTINUED EXPANSION JOINT VERTICALLY UP TO PARAPET.
13 REMOVE AND REPLACE DAMAGED/FAILING METAL COPING. RE: COPING SPLICE AND FLASHING DETAIL 2/A6.4-2.
14 REPLACE MISSING/DAMAGED COUNTERFLASHING WITH NEW COUNTERFLASHING. RE: DETAIL 1/A6.4-2.
15 SAWCUT FULL DEPTH AND REMOVE ALL DEBRIS.
16 REPAIR CONCRETE PER DETAIL 16/A7.1-2.
17 REPAIR CONCRETE COLUMN, RE: DETAIL 16/A7.1.2 FOR CONCRETE REPAIR PROCEDURES.

NO.	REVISION	DATE
	ISSUED FOR BIDS	4-06-26

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PROJECT TITLE
MASONRY REPAIRS TO:
GENESEE COUNTY JAIL
1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE
JAIL LEVEL 1 FLOOR PLAN

PROJECT NUMBER 2024083.1
PROJECT DATE APRIL 06, 2026
CHECKED BY K.C.L.
SHEET NUMBER A2.1-2

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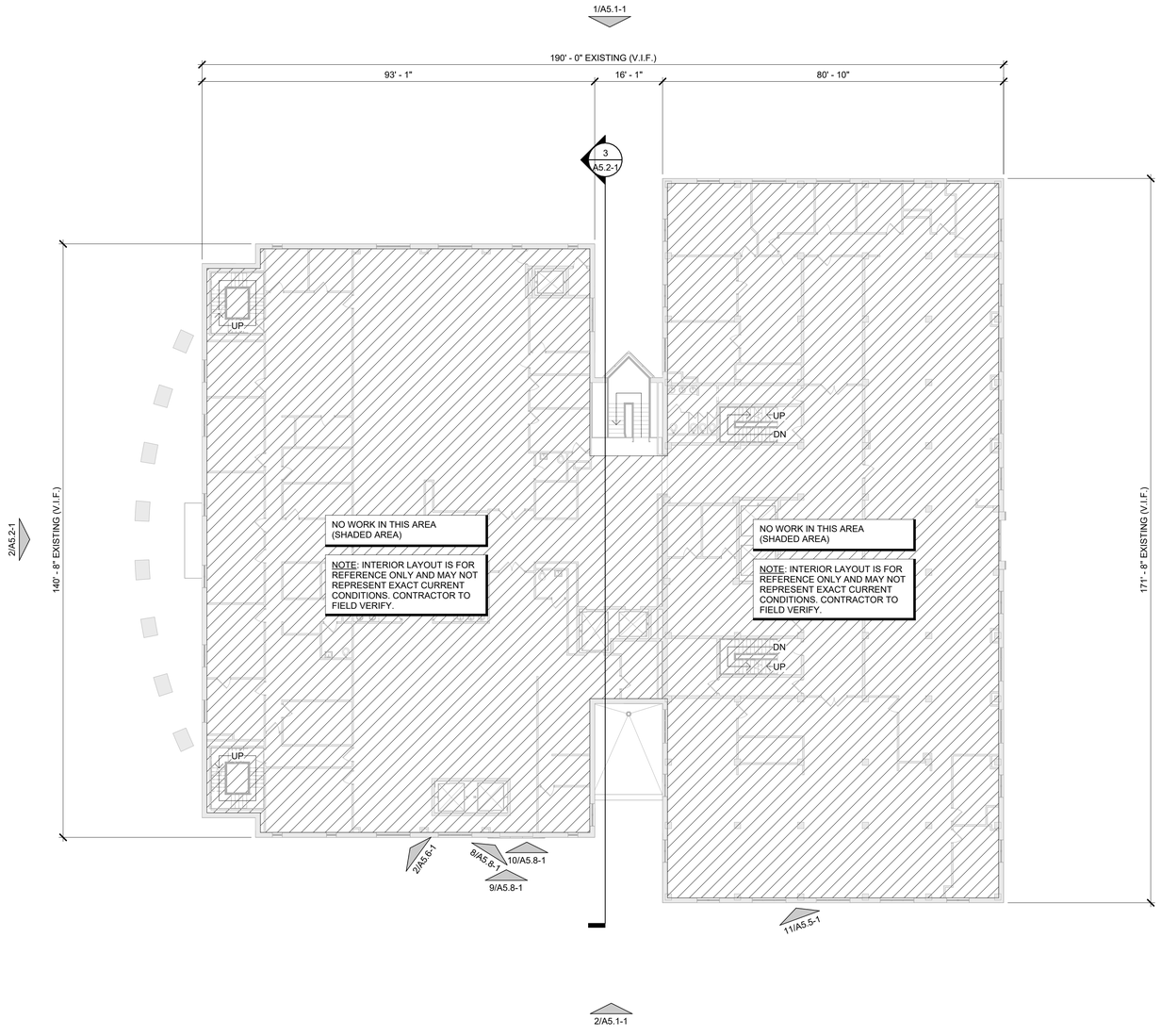

NORTH

SECOND FLOOR CONSTRUCTION PLAN

SCALE: 1/16" = 1'-0"

EXTERIOR RESTORATION GENERAL NOTES:

1. INCLUDE AN ALLOWANCE FOR FIFTY (50) INJECTED EPOXY AND CEMENTITIOUS COMPOUND STONE CRACK REPAIRS. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 1.

2. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF ONE HUNDRED (100) SQUARE FEET OF DAMAGED LIMESTONE UNITS. NEW LIMESTONE SHALL MATCH EXISTING EXPOSED LIMESTONE, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED, AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT, AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 2.

3. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPOINTING OF TWO THOUSAND (2,000) LINEAL FEET OF DAMAGED MORTAR JOINTS, DEPTH OF NEW MORTAR SHALL BE 1 INCH MINIMUM. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 3 AND 7.

4. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF ONE HUNDRED (100) SQUARE FEET OF DAMAGED BRICK UNITS. NEW BRICK SHALL MATCH EXISTING EXPOSED BRICK COURSING, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED, AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT, AND CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 13.

5. INCLUDE AN ALLOWANCE FOR ONE THOUSAND (1000) LINEAL FEET OF NEW SEALANT JOINTS OF EXISTING DETERIORATED AND CRACKED JOINTS. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH ARCHITECT PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 9, 10, 14, 18, 23, AND 25.

6. WHERE ALL NEW FLASHING TERMINATE AGAINST A VERTICAL SURFACE - PROVIDE PROPER WATERTIGHT END DAMS THAT DIRECT WATER TO DRAINAGE WEEPS. COPPER PAN FLASHING SHALL HAVE EDGE TURNED UP WITH CORNERS SOLDERED WATERTIGHT. TYPICAL ALL LOCATIONS.

7. COLOR SCHEDULE FOR NEW SEALANTS SHALL BE AS FOLLOWS:
8.
   A) VERTICAL BRICK TO BRICK = BROWN TO MATCH BRICK
   B) HORIZONTAL BRICK OR STONE - LIMESTONE U.N.O.)
   C) BRICK TO STONE OR STONE TO STONE = LIMESTONE

   PROVIDE ACTUAL IN WALL SEALANT MOCKUPS OF EACH TYPE, AND EACH COLOR FOR OWNER'S AND ARCHITECT'S REVIEW. MOCKUPS MAY BECOME PART OF THE PERMANENT WORK IF APPROVED.

9. AT NEW AND EXISTING STEEL PREPARATION AND PAINTING, ALL STEEL SHALL BE HAND TOOL CLEANED PER SSPC-SP2, REFERENCE SPECIFICATION SECTION 099600-HIGH PERFORMANCE COATINGS. PRIME RUST AND COAT WITH HIGH PERFORMANCE PAINT PRODUCTS AS SPECIFIED AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MINIMUM 6 MILS TOTAL WET FILM THICKNESS.

10. AT ALL LOCATIONS OF MASONRY REMOVAL AND REPLACEMENT, CONTRACTOR SHALL PROPERLY INSTALL SHORING TO SUPPORT EXISTING MASONRY TO REMAIN ABOVE OPENED AREA. FAILURE TO INSTALL ADEQUATE SHORING THAT RESULTS IN DAMAGE TO THE MASONRY TO REMAIN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND / OR REPLACE DAMAGED MASONRY AND / OR ADJACENT SURFACES, ROOFS, ETC.

11. ALL ROOF AREAS EFFECTED BY CONSTRUCTION ACTIVITY SHALL BE PROTECTED W/ 3/4" PLYWOOD ON 2" RIGID SLOTTED INSULATION ON 6 MIL PLASTIC SHEETING OVER THE EXISTING ROOFING. THIS SHALL INCLUDE ROOFS BOTH ABOVE AND BELOW THE AREAS UNDER CONSTRUCTION. DO NOT BLOCK EXISTING ROOF DRAINS, MAINTAIN POSITIVE DRAINAGE TO THEM, PROTECT DRAINS FROM DAMAGE.

12. CLEAN ALL EXISTING ROOF DRAINS.

13. ALL WORK INDICATED ON DRAWINGS DOES NOT NECESSARILY HAVE A CORRESPONDING "RESTORATION KEYNOTE" ASSIGNED TO IT AND MAY BE INDICATED BY "GENERAL NOTES" OR DETAILS.

14. REFERENCE RESTORATION KEYNOTES AND GENERAL NOTES FOR DEMOLITION ITEMS ASSOCIATED WITH THE FACADE AND RENOVATION WORK.

15. COPING AND MASONRY REPAIR MOCKUPS: REFERENCE SPECIFICATION SECTION 040120-MASONRY PARAPET REPAIR FOR LOCATIONS, AND DESCRIPTION OF REQUIRED MOCKUPS.

16. ALONG WITH CLEANING ALL AREAS OF THE NEW MASONRY INSTALLATIONS AND WHERE SPECIFIC STAINING IS NOTED TO BE CLEANED, CONTRACTOR SHALL CLEAN ALL AREAS OF EXISTING MASONRY BELOW AND ADJACENT TO THE WORK AREA THAT MAY BE AFFECTED BY RUN-OFF OR OVER-SPRAY AT NO ADDITIONAL COST TO OWNER.

17. ALL WELDING ON THIS PROJECT TO BE PERFORMED BY CERTIFIED WELDERS (NO EXCEPTIONS). INDIVIDUAL WELDERS CERTIFICATES TO BE INCLUDED IN SUBMITTALS.

18. ALL WELDING WORK AND FLASHING PANS TO BE INSPECTED BY ARCHITECT, STRUCTURAL ENGINEER AND/OR TESTING COMPANY HIRED BY OWNER PRIOR TO COVERING WITH NEW MASONRY.

19. AFTER COMPLETION OF WORK, CONTRACTOR SHALL CLEAN ALL WINDOW UNITS WHERE CONSTRUCTION DUST, DIRT, MATERIAL RESIDUE, ETC. MAY BE PRESENT.

(#) RESTORATION KEYNOTES

1 FILL CRACKS IN LIMESTONE WITH AN INJECTED MASONRY EPOXY. PATCH FACE OF STONE AS REQUIRED TO BLEND WITH ADJACENT SURFACES.
2 PATCH SPALLED/VOIDS IN EXISTING LIMESTONE WITH CEMENTITIOUS COLORED PRODUCT. MATCH ADJACENT STONE TEXTURE AND COLOR. WHERE DAMAGED AREAS ARE TOO EXTENSIVE FOR PATCHING, REMOVE DAMAGED LIMESTONE PIECE(S) AND REPLACE WITH NEW LIMESTONE PIECE(S).
3 REMOVE EXISTING DAMAGED MORTAR FROM JOINTS TO A MINIMUM DEPTH OF ONE INCH, OR BACK TO SOUND MORTAR, AND REPLACE WITH NEW MORTAR BY REPOINTING METHOD. MATCH EXISTING COLOR.
4 CLEAN ALL EXISTING LIMESTONE SURFACES WITH A CHEMICAL PRODUCT AND LOW-PRESSURE WASH. PERFORM THIS AFTER ALL REPAIRS ARE COMPLETED.
5 PROVIDE NEW DRAINAGE WEEPS SPACED FROM 32" TO 48" ON CENTER AT THROUGH-WALL FLASHING.
6 PROVIDE NEW EXPANSION JOINT IN EXISTING MASONRY VENEER AS INDICATED AND FILL WITH NEW BACKER ROD AND SEALANT.
7 REMOVE ALL EXISTING HEAD JOINT MORTAR TO A DEPTH OF ONE INCH MINIMUM AT CULTURED STONE AND FILL WITH NEW BACKER ROD & SEALANT.
8 CHEMICALLY CLEAN ALL AREAS OF SOILED MASONRY SURFACES.
9 REMOVE ALL OPEN JOINT SEALANT AT EXISTING STAINLESS STEEL FLASHING AND REPLACE WITH NEW SEALANT BELOW EXISTING FLASHING.
10 REMOVE ALL EXISTING COPING HEAD JOINT SEALANT AND REPLACE WITH NEW JOINT SEALANT. RE: DETAIL 1/A6.4-1 AND 2/A6.4-1.
11 REMOVE ALL EXISTING LIMESTONE COPING, SALVAGE, CLEAN AND RE-INSTALL WITH NEW STAINLESS STEEL FLASHING AND FILL WITH NEW BACKER ROD AND SEALANT. RE: DETAIL 2/A6.4-1.
12 REMOVE AND REPLACE TERMINATION FLASHING. REFER TO SHEET A6.4-1.
13 REMOVE ENTIRE PERIMETER OF BRICK VENEER AT WINDOW UNIT AND REPLACE WITH NEW TIGHTLY SEALED FLASHING, END DAM FLASHING & WEEP HOLES. FILL PERIMETER OF WINDOW UNITS WITH NEW BACKER ROD AND SEALANT. RE: SHEET A7.1-1.
14 REMOVE ALL HORIZONTAL SEALANT BELOW FLASHING AND BLACK ADHESIVE ABOVE FLASHING AT EXISTING SHELF ANGLES AND FILL WITH NEW BACKER ROD AND SEALANT BELOW FLASHING AND NEW WEEP DRAINAGE HOLES.
15 PATCH & REPAIR PORTIONS OF INTERIOR GYP. BOARD CEILING AT WATER SPOT LOCATIONS, ONCE WATER LEAK REPAIRS ARE COMPLETE.
16 PATCH & REPAIR PORTIONS OF INTERIOR GYP. BOARD WALLS SURROUNDING WINDOW UNIT(S) AT WATER SPOT LOCATIONS, ONCE FLASHING REPAIRS ARE COMPLETE.
17 REPLACE WATER DAMAGED SILL. MATCH EXISTING.
18 REMOVE EXISTING EXPANSION JOINT SEALANT AND FILL WITH NEW BACKER ROD AND SEALANT. MATCH EXISTING SEALANT COLOR.
19 FILL OPEN JOINT WITH NEW BACKER ROD AND SEALANT.
20 REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF ALL ORGINAL COURTHOUSE STEEL WINDOW LINTELS, TYP. PAINT WITH NEW HIGH PERFORMANCE PAINT.
21 REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF EXISTING STAIR/RAMP RAILINGS. PAINT WITH NEW HIGH PERFORMANCE PAINT.
22 REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF EXISTING IRON DOOR FRAME. PAINT WITH NEW HIGH PERFORMANCE PAINT.
23 REMOVE ALL EXISTING SEALANT FROM GRANITE STEPS AT ALL JOINTS AND FILL WITH NEW SEALANT.
24 REMOVE ENTIRE MASONRY CHEEK WALL STRUCTURE FOR NEW CHEEK WALL STRUCTURE. RE: SHEET A2.1-1.
25 REMOVE ALL CRACKED SEALANT AND REPLACE WITH NEW SEALANT.
26 EXISTING SEALANT MAY CONTAIN HAZARDOUS MATERIALS AND SHOULD BE FURTHER TESTED.
28 NEW CONCRETE RAMP AND STAIR ON NEW SNOWMELT SYSTEM. REFER TO SHEET A4.1-1.
29 SAWCUT FULL DEPTH AND REMOVE ALL DEBRIS.
30 SAWCUT, REMOVE AND REPLACE WITH NEW LIMESTONE PANELS. MATCH EXISTING PROFILE.

NO.	REVISION	DATE
	ISSUED FOR BIDS	4-06-26

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PROJECT TITLE

MASONRY REPAIRS TO:

GENESEE COUNTY COURTHOUSE & JAIL

900 & 1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE

COURTHOUSE SECOND FLOOR PLAN

PROJECT NUMBER	SHEET NUMBER
2024083.1	A2.2-1
PROJECT DATE	
APRIL 06, 2026	
CHECKED BY	
K.C.L.	

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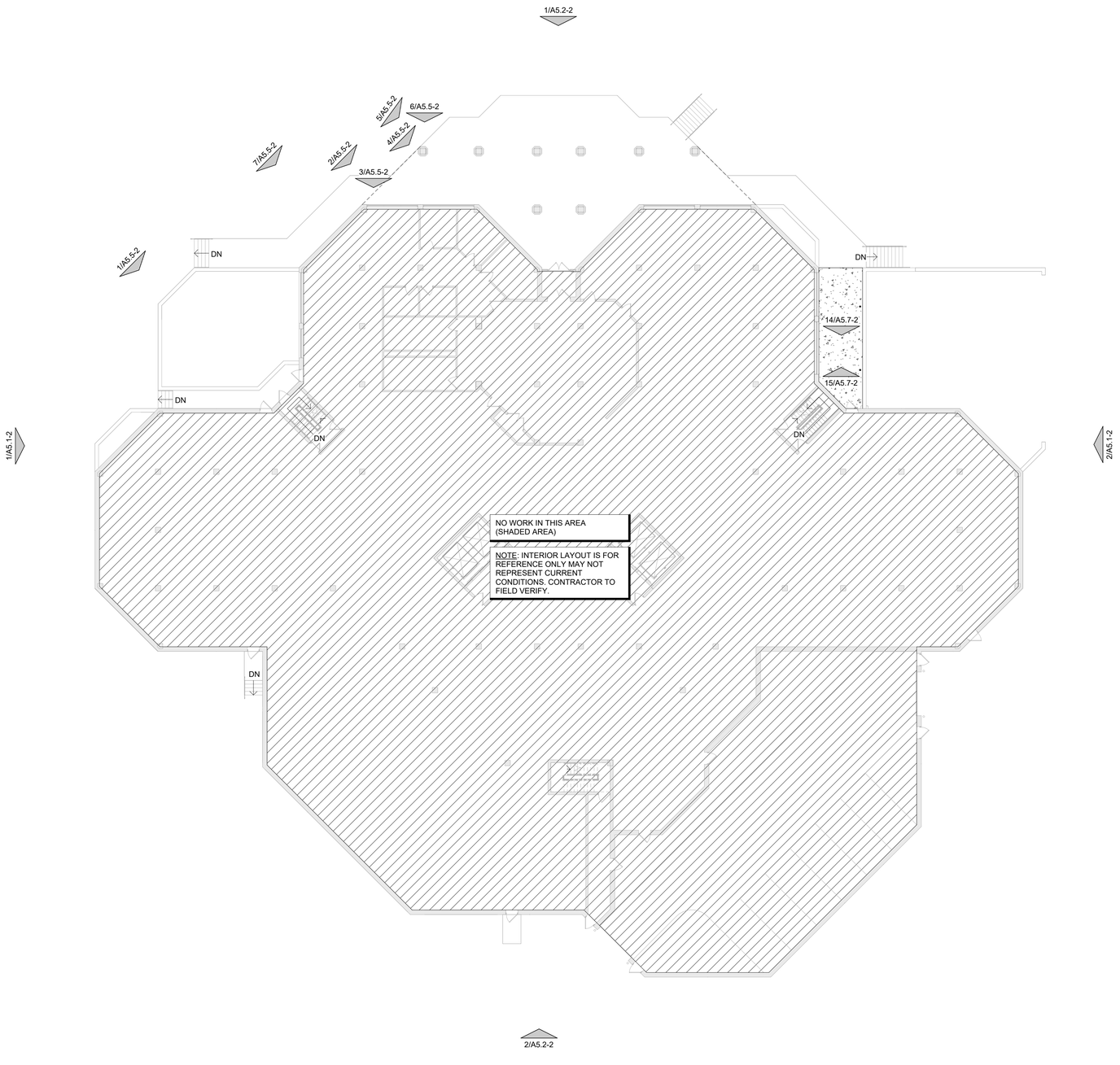

NORTH

1 / A2.2-2 LEVEL 2 FLOOR CONSTRUCTION PLAN

SCALE: 1/16" = 1'-0"

EXTERIOR RESTORATION GENERAL NOTES:

1. INCLUDE AN ALLOWANCE FOR ONE THOUSAND (1000) LINEAL FEET OF NEW SEALANT JOINTS OF EXISTING DETERIORATED AND CRACKED JOINTS. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH ARCHITECT PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 2 AND 3.
2. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF TWO HUNDRED (200) INDIVIDUALLY DAMAGED BRICK UNITS. NEW BRICK SHALL MATCH EXISTING EXPOSED BRICK COURSING, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 5.
3. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF TWO HUNDRED (100) INDIVIDUALLY DAMAGED BRICK UNITS. NEW BRICK SHALL MATCH EXISTING EXPOSED BRICK COURSING, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 5.
4. WHERE ALL NEW FLASHINGS TERMINATE AGAINST A VERTICAL SURFACE - PROVIDE PROPER WATERTIGHT END DAMS THAT DIRECT WATER TO DRAINAGE WEEPS. COPPER PAN FLASHINGS SHALL HAVE EDGE TURNED UP WITH CORNERS SOLDERED WATERTIGHT. TYPICAL ALL LOCATIONS.
5. COLOR SCHEDULE FOR NEW SEALANTS SHALL BE AS FOLLOWS:
   A) VERTICAL BRICK TO BRICK = TAN TO MATCH BRICK
   B) HORIZONTAL BRICK TO BRICK = TAN TO MATCH BRICK

   PROVIDE ACTUAL IN WALL SEALANT MOCKUPS OF EACH TYPE, AND EACH COLOR FOR OWNER'S AND ARCHITECT'S REVIEW. MOCKUPS MAY BECOME PART OF THE PERMANENT WORK IF APPROVED.
6. AT NEW AND EXISTING STEEL PREPARATION AND PAINTING, ALL STEEL SHALL BE HAND TOOL CLEANED PER SSPC-SP2. REFERENCE SPECIFICATION SECTION 099600-HIGH PERFORMANCE COATINGS. PRIME RUST AND COAT WITH HIGH PERFORMANCE PAINT PRODUCTS AS SPECIFIED AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MINIMUM 6 MILS TOTAL WET FILM THICKNESS.
7. AT ALL LOCATIONS OF MASONRY REMOVAL AND REPLACEMENT, CONTRACTOR SHALL PROPERLY INSTALL SHORING TO SUPPORT EXISTING MASONRY TO REMAIN ABOVE OPENED AREA. FAILURE TO INSTALL ADEQUATE SHORING THAT RESULTS IN DAMAGE TO THE MASONRY TO REMAIN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND / OR REPLACE DAMAGED MASONRY AND / OR ADJACENT SURFACES, ROOFS, ETC.
8. ALL ROOF AREAS EFFECTED BY CONSTRUCTION ACTIVITY SHALL BE PROTECTED W/ 3/4" PLYWOOD ON 2" RIGID SLOTTED INSULATION ON 6 MIL. PLASTIC SHEETING OVER THE EXISTING ROOFING. THIS SHALL INCLUDE ROOFS BOTH ABOVE AND BELOW THE AREAS UNDER CONSTRUCTION. DO NOT BLOCK EXISTING ROOF DRAINS, MAINTAIN POSITIVE DRAINAGE TO THEM, PROTECT DRAINS FROM DAMAGE.
9. CLEAN ALL EXISTING ROOF DRAINS.
10. ALL WORK INDICATED ON DRAWINGS DOES NOT NECESSARILY HAVE A CORRESPONDING "RESTORATION KEYNOTE" ASSIGNED TO IT AND MAY BE INDICATED BY "GENERAL NOTES" OR DETAILS.
11. REFERENCE RESTORATION KEYNOTES AND GENERAL NOTES FOR DEMOLITION ITEMS ASSOCIATED WITH THE FACADE AND RENOVATION WORK.
12. COPING AND MASONRY REPAIR MOCKUPS: REFERENCE SPECIFICATION SECTION 040120-MASONRY PARAPET REPAIR FOR LOCATIONS, AND DESCRIPTION OF REQUIRED MOCKUPS.
13. ALONG WITH CLEANING ALL AREAS OF THE NEW MASONRY INSTALLATIONS AND WHERE SPECIFIC STAINING IS NOTED TO BE CLEANED, CONTRACTOR SHALL CLEAN ALL AREAS OF EXISTING MASONRY BELOW AND ADJACENT TO THE WORK AREA THAT MAY BE AFFECTED BY RUN-OFF OR OVER-SPRAY AT NO ADDITIONAL COST TO OWNER.
14. ALL WELDING ON THIS PROJECT TO BE PERFORMED BY CERTIFIED WELDERS (NO EXCEPTIONS). INDIVIDUAL WELDERS CERTIFICATES TO BE INCLUDED IN SUBMITTALS.
15. ALL WELDING WORK AND FLASHING PANS TO BE INSPECTED BY ARCHITECT, STRUCTURAL ENGINEER AND/OR TESTING COMPANY HIRED BY OWNER PRIOR TO COVERING WITH NEW MASONRY.
16. AFTER COMPLETION OF WORK, CONTRACTOR SHALL CLEAN ALL WINDOW UNITS WHERE CONSTRUCTION DUST, DIRT, MATERIAL RESIDUE, ETC. MAY BE PRESENT.

NOTE:
CONDITIONS INDICATED ON THESE DRAWINGS OCCUR THROUGHOUT ENTIRE BUILDING. CONTRACTOR TO FIELD VERIFY.

RESTORATION KEYNOTES

1. CLEAN RUST OFF ENTIRE EXISTING STEEL WINDOW FRAME AND PAINT WITH NEW HIGH PERFORMANCE PAINT, TYPICAL ALL WINDOWS.
2. REMOVE SEALANT AROUND ENTIRE PERIMETER OF EXISTING STEEL WINDOW AND FILL WITH NEW BACKER ROD AND SEALANT. REFER TO DETAIL 7/A7.1-2.
3. REMOVE ALL SEALANT AT EXISTING VERTICAL EXPANSION JOINT AND FILL WITH NEW BACKER ROD AND SEALANT. REFER TO DETAIL 11/A7.1-2.
4. CLEAN RUST OFF EXISTING STEEL DOOR AND PAINT WITH NEW HIGH PERFORMANCE PAINT.
5. REMOVE AND REPLACE PORTIONS OF CRACKED AND SPALLING BRICK WITH NEW BRICK TO MATCH EXISTING.
7. OPEN SOLDIER COURSING AND REMOVE ALL BRITTLE FLASHING AT SHELF ANGLES AND REPLACE WITH NEW CONTINUOUS FLASHING OVER THE ENTIRE SHELF ANGLE AND PROVIDE NEW WEEP SYSTEMS. REFER TO DETAIL 7/A7.1-2.
8. PROVIDE NEW END DAM FLASHING AT ALL SHELF ANGLES. REFER TO DETAIL 14/A7.1-2.
9. OPEN SOLDIER COURSING AND REMOVE ALL BRITTLE FLASHING AT SHELF ANGLES AND REPLACE WITH NEW CONTINUOUS FLASHING OVER ENTIRE SHELF ANGLE AND PROVIDE NEW WEEP SYSTEMS. REFER TO DETAIL 8/A7.1-2.
10. PROVIDE NEW HORIZONTAL EXPANSION JOINT BELOW ALL SHELF ANGLES SUPPORTING BRICK WYTHE.
11. PROVIDE NEW ISOLATION JOINT IN EXTERIOR BRICK VENEER AS INDICATED.
12. PROVIDE NEW CONTINUED EXPANSION JOINT VERTICALLY UP TO PARAPET.
13. REMOVE AND REPLACE DAMAGED/FAILING METAL COPING. RE: COPING SPLICE AND FLASHING DETAIL 2/A6.4-2.
14. REPLACE MISSING/DAMAGED COUNTERFLASHING WITH NEW COUNTERFLASHING. RE: DETAIL 1/A6.4-2.
15. SAWCUT FULL DEPTH AND REMOVE ALL DEBRIS.
16. REPAIR CONCRETE PER DETAIL 16/A7.1-2.
17. REPAIR CONCRETE COLUMN, RE: DETAIL 16/A7.1.2 FOR CONCRETE REPAIR PROCEDURES.

NO.	REVISION	DATE
	ISSUED FOR BIDS	4-06-26

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PROJECT TITLE

MASONRY REPAIRS TO:

GENESEE COUNTY JAIL

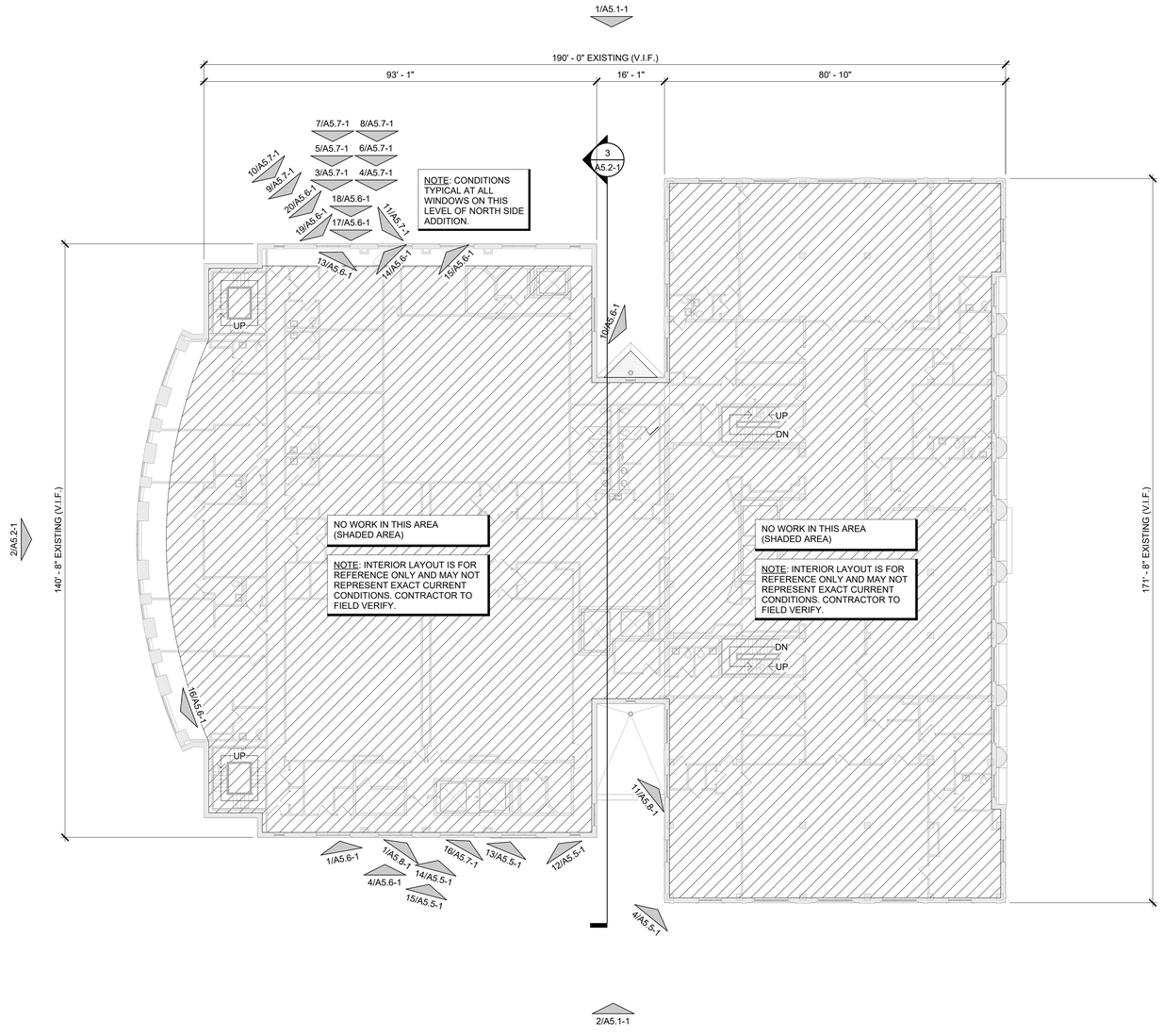
1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE

JAIL LEVEL 2 FLOOR PLAN

PROJECT NUMBER	SHEET NUMBER
2024083.1	A2.2-2
PROJECT DATE	
APRIL 06, 2026	
CHECKED BY	
K.C.L.	

R.G.S. 4/6/2026 9:06:51 PM C:\Users\jjohnston\Documents\CENTRAL-2024083.2-GCJailMR_V25_jjohnstonYU42B.rvt



NORTH

THIRD FLOOR CONSTRUCTION PLAN

SCALE: 1/16" = 1'-0"

EXTERIOR RESTORATION GENERAL NOTES:

1. INCLUDE AN ALLOWANCE FOR FIFTY (50) INJECTED EPOXY AND CEMENTITIOUS COMPOUND STONE CRACK REPAIRS. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 1.

2. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF ONE HUNDRED (100) SQUARE FEET OF DAMAGED LIMESTONE UNITS. NEW LIMESTONE SHALL MATCH EXISTING EXPOSED LIMESTONE, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED, AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT, AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 2.

3. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPOINTING OF TWO THOUSAND (2,000) LINEAL FEET OF DAMAGED MORTAR JOINTS, DEPTH OF NEW MORTAR SHALL BE 1 INCH MINIMUM. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 3 AND 7.

4. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF ONE HUNDRED (100) SQUARE FEET OF DAMAGED BRICK UNITS. NEW BRICK SHALL MATCH EXISTING EXPOSED BRICK COURSING, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED, AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT, AND CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 13.

5. INCLUDE AN ALLOWANCE FOR ONE THOUSAND (1000) LINEAL FEET OF NEW SEALANT JOINTS OF EXISTING DETERIORATED AND CRACKED JOINTS. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH ARCHITECT PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 9, 10, 14, 18, 23, AND 25.

6. WHERE ALL NEW FLASHING TERMINATE AGAINST A VERTICAL SURFACE - PROVIDE PROPER WATERTIGHT END DAMS THAT DIRECT WATER TO DRAINAGE WEEPS. COPPER PAN FLASHING SHALL HAVE EDGE TURNED UP WITH CORNERS SOLDERED WATERTIGHT. TYPICAL ALL LOCATIONS.

7. COLOR SCHEDULE FOR NEW SEALANTS SHALL BE AS FOLLOWS:

8. A) VERTICAL BRICK TO BRICK = BROWN TO MATCH BRICK
   B) HORIZONTAL BRICK OR STONE - LIMESTONE U.N.O.)
   C) BRICK TO STONE OR STONE TO STONE = LIMESTONE

   PROVIDE ACTUAL IN WALL SEALANT MOCKUPS OF EACH TYPE, AND EACH COLOR FOR OWNER'S AND ARCHITECT'S REVIEW. MOCKUPS MAY BECOME PART OF THE PERMANENT WORK IF APPROVED.

9. AT NEW AND EXISTING STEEL PREPARATION AND PAINTING, ALL STEEL SHALL BE HAND TOOL CLEANED PER SSPC-SP2, REFERENCE SPECIFICATION SECTION 099600-HIGH PERFORMANCE COATINGS. PRIME RUST AND COAT WITH HIGH PERFORMANCE PAINT PRODUCTS AS SPECIFIED AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MINIMUM 6 MILS TOTAL WET FILM THICKNESS.

10. AT ALL LOCATIONS OF MASONRY REMOVAL AND REPLACEMENT, CONTRACTOR SHALL PROPERLY INSTALL SHORING TO SUPPORT EXISTING MASONRY TO REMAIN ABOVE OPENED AREA. FAILURE TO INSTALL ADEQUATE SHORING THAT RESULTS IN DAMAGE TO THE MASONRY TO REMAIN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND / OR REPLACE DAMAGED MASONRY AND / OR ADJACENT SURFACES, ROOFS, ETC.

11. ALL ROOF AREAS EFFECTED BY CONSTRUCTION ACTIVITY SHALL BE PROTECTED W/ 3/4" PLYWOOD ON 2" RIGID SLOTTED INSULATION ON 6 MIL. PLASTIC SHEETING OVER THE EXISTING ROOFING. THIS SHALL INCLUDE ROOFS BOTH ABOVE AND BELOW THE AREAS UNDER CONSTRUCTION. DO NOT BLOCK EXISTING ROOF DRAINS, MAINTAIN POSITIVE DRAINAGE TO THEM, PROTECT DRAINS FROM DAMAGE.

12. CLEAN ALL EXISTING ROOF DRAINS.

13. ALL WORK INDICATED ON DRAWINGS DOES NOT NECESSARILY HAVE A CORRESPONDING "RESTORATION KEYNOTE" ASSIGNED TO IT AND MAY BE INDICATED BY "GENERAL NOTES" OR DETAILS.

14. REFERENCE RESTORATION KEYNOTES AND GENERAL NOTES FOR DEMOLITION ITEMS ASSOCIATED WITH THE FACADE AND RENOVATION WORK.

15. COPING AND MASONRY REPAIR MOCKUPS: REFERENCE SPECIFICATION SECTION 040120-MASONRY PARAPET REPAIR FOR LOCATIONS, AND DESCRIPTION OF REQUIRED MOCKUPS.

16. ALONG WITH CLEANING ALL AREAS OF THE NEW MASONRY INSTALLATIONS AND WHERE SPECIFIC STAINING IS NOTED TO BE CLEANED, CONTRACTOR SHALL CLEAN ALL AREAS OF EXISTING MASONRY BELOW AND ADJACENT TO THE WORK AREA THAT MAY BE AFFECTED BY RUN-OFF OR OVER-SPRAY AT NO ADDITIONAL COST TO OWNER.

17. ALL WELDING ON THIS PROJECT TO BE PERFORMED BY CERTIFIED WELDERS (NO EXCEPTIONS). INDIVIDUAL WELDERS CERTIFICATES TO BE INCLUDED IN SUBMITTALS.

18. ALL WELDING WORK AND FLASHING PANS TO BE INSPECTED BY ARCHITECT, STRUCTURAL ENGINEER AND/OR TESTING COMPANY HIRED BY OWNER PRIOR TO COVERING WITH NEW MASONRY.

19. AFTER COMPLETION OF WORK, CONTRACTOR SHALL CLEAN ALL WINDOW UNITS WHERE CONSTRUCTION DUST, DIRT, MATERIAL RESIDUE, ETC. MAY BE PRESENT.

RESTORATION KEYNOTES

1 FILL CRACKS IN LIMESTONE WITH AN INJECTED MASONRY EPOXY. PATCH FACE OF STONE AS REQUIRED TO BLEND WITH ADJACENT SURFACES.
2 PATCH SPALLED/VOIDS IN EXISTING LIMESTONE WITH CEMENTITIOUS COLORED PRODUCT. MATCH ADJACENT STONE TEXTURE AND COLOR. WHERE DAMAGED AREAS ARE TOO EXTENSIVE FOR PATCHING, REMOVE DAMAGED LIMESTONE PIECE(S) AND REPLACE WITH NEW LIMESTONE PIECE(S).
3 REMOVE EXISTING DAMAGED MORTAR FROM JOINTS TO A MINIMUM DEPTH OF ONE INCH, OR BACK TO SOUND MORTAR, AND REPLACE WITH NEW MORTAR BY REPOINTING METHOD. MATCH EXISTING COLOR.
4 CLEAN ALL EXISTING LIMESTONE SURFACES WITH A CHEMICAL PRODUCT AND LOW-PRESSURE WASH. PERFORM THIS AFTER ALL REPAIRS ARE COMPLETED.
5 PROVIDE NEW DRAINAGE WEEPS SPACED FROM 32" TO 48" ON CENTER AT THROUGH-WALL FLASHING.
6 PROVIDE NEW EXPANSION JOINT IN EXISTING MASONRY VENEER AS INDICATED AND FILL WITH NEW BACKER ROD AND SEALANT.
7 REMOVE ALL EXISTING HEAD JOINT MORTAR TO A DEPTH OF ONE INCH MINIMUM AT CULTURED STONE AND FILL WITH NEW BACKER ROD & SEALANT.
8 CHEMICALLY CLEAN ALL AREAS OF SOILED MASONRY SURFACES.
9 REMOVE ALL OPEN JOINT SEALANT AT EXISTING STAINLESS STEEL FLASHING AND REPLACE WITH NEW SEALANT BELOW EXISTING FLASHING.
10 REMOVE ALL EXISTING COPING HEAD JOINT SEALANT AND REPLACE WITH NEW JOINT SEALANT. RE: DETAIL 1/A6.4-1 AND 2/A6.4-1.
11 REMOVE ALL EXISTING LIMESTONE COPING, SALVAGE, CLEAN AND RE-INSTALL WITH NEW STAINLESS STEEL FLASHING AND FILL WITH NEW BACKER ROD AND SEALANT. RE: DETAIL 2/A6.4-1.
12 REMOVE AND REPLACE TERMINATION FLASHING. REFER TO SHEET A6.4-1.
13 REMOVE ENTIRE PERIMETER OF BRICK VENEER AT WINDOW UNIT AND REPLACE WITH NEW TIGHTLY SEALED FLASHING, END DAM FLASHING & WEEP HOLES. FILL PERIMETER OF WINDOW UNITS WITH NEW BACKER ROD AND SEALANT. RE: SHEET A7.1-1.
14 REMOVE ALL HORIZONTAL SEALANT BELOW FLASHING AND BLACK ADHESIVE ABOVE FLASHING AT EXISTING SHELF ANGLES AND FILL WITH NEW BACKER ROD AND SEALANT BELOW FLASHING AND NEW WEEP DRAINAGE HOLES.
15 PATCH & REPAIR PORTIONS OF INTERIOR GYP. BOARD CEILING AT WATER SPOT LOCATIONS, ONCE WATER LEAK REPAIRS ARE COMPLETE.
16 PATCH & REPAIR PORTIONS OF INTERIOR GYP. BOARD WALLS SURROUNDING WINDOW UNIT(S) AT WATER SPOT LOCATIONS, ONCE FLASHING REPAIRS ARE COMPLETE.
17 REPLACE WATER DAMAGED SILL. MATCH EXISTING.
18 REMOVE EXISTING EXPANSION JOINT SEALANT AND FILL WITH NEW BACKER ROD AND SEALANT. MATCH EXISTING SEALANT COLOR.
19 FILL OPEN JOINT WITH NEW BACKER ROD AND SEALANT.
20 REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF ALL ORGINAL COURTHOUSE STEEL WINDOW LINTELS, TYP. PAINT WITH NEW HIGH PERFORMANCE PAINT.
21 REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF EXISTING STAIR/RAMP RAILINGS. PAINT WITH NEW HIGH PERFORMANCE PAINT.
22 REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF EXISTING IRON DOOR FRAME. PAINT WITH NEW HIGH PERFORMANCE PAINT.
23 REMOVE ALL EXISTING SEALANT FROM GRANITE STEPS AT ALL JOINTS AND FILL WITH NEW SEALANT.
24 REMOVE ENTIRE MASONRY CHEEK WALL STRUCTURE FOR NEW CHEEK WALL STRUCTURE. RE: SHEET A2.1-1.
25 REMOVE ALL CRACKED SEALANT AND REPLACE WITH NEW SEALANT.
26 EXISTING SEALANT MAY CONTAIN HAZARDOUS MATERIALS AND SHOULD BE FURTHER TESTED.
28 NEW CONCRETE RAMP AND STAIR ON NEW SNOWMELT SYSTEM. REFER TO SHEET A4.1-1.
29 SAWCUT FULL DEPTH AND REMOVE ALL DEBRIS.
30 SAWCUT, REMOVE AND REPLACE WITH NEW LIMESTONE PANELS. MATCH EXISTING PROFILE.

NO.	REVISION	DATE
	ISSUED FOR BIDS	4-06-26

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PROJECT TITLE

MASONRY REPAIRS TO:

GENESEE COUNTY COURTHOUSE & JAIL

900 & 1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE

COURTHOUSE THIRD FLOOR PLAN

PROJECT NUMBER	SHEET NUMBER
2024083.1	A2.3-1
PROJECT DATE: APRIL 06, 2026	
CHECKED BY: K.C.L.	

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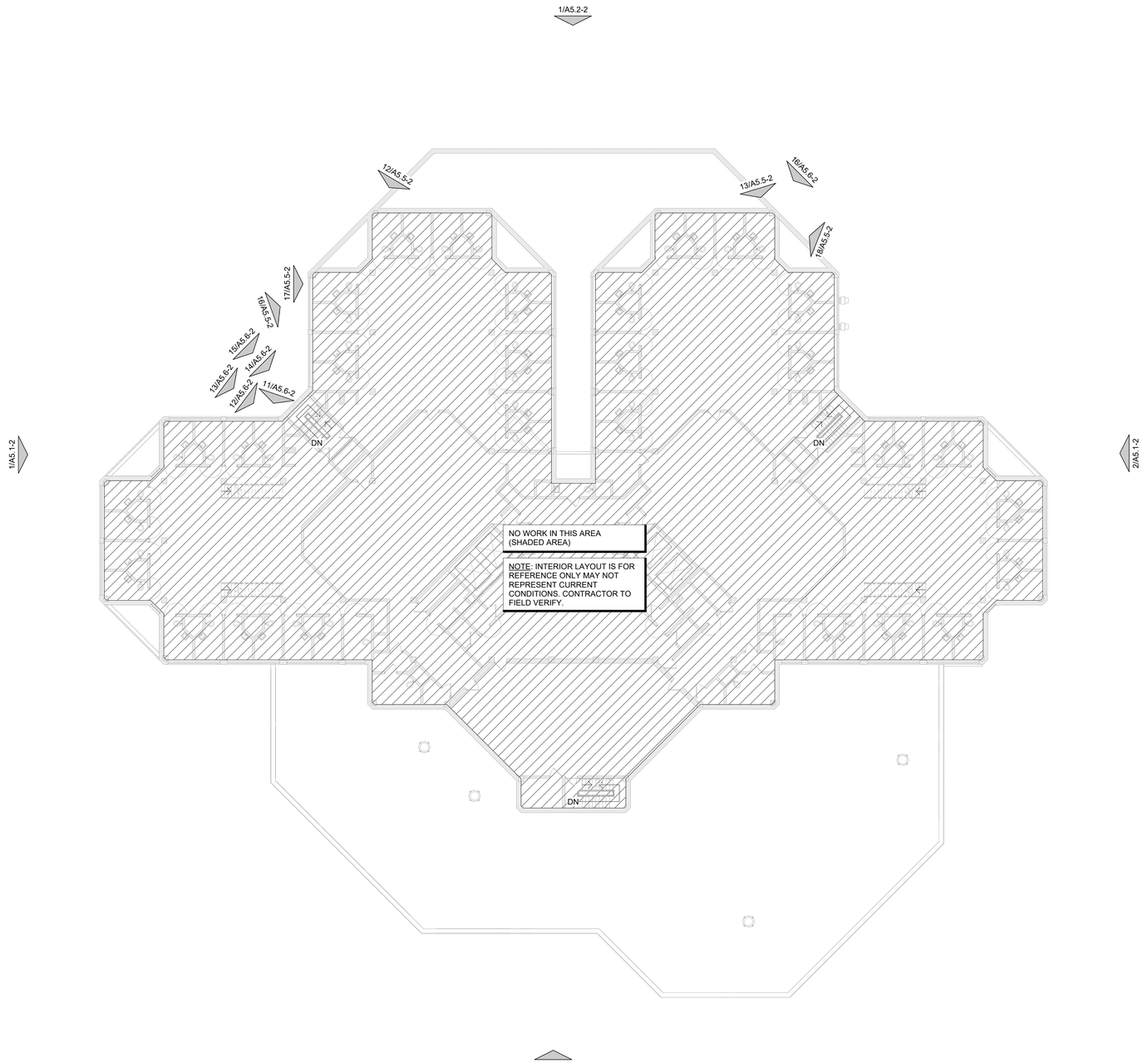

NORTH

LEVEL 3 CONSTRUCTION PLAN

SCALE: 1/16" = 1'-0"

EXTERIOR RESTORATION GENERAL NOTES:

1. INCLUDE AN ALLOWANCE FOR ONE THOUSAND (1000) LINEAL FEET OF NEW SEALANT JOINTS OF EXISTING DETERIORATED AND CRACKED JOINTS. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH ARCHITECT PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 2 AND 3.
2. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF TWO HUNDRED (200) INDIVIDUALLY DAMAGED BRICK UNITS. NEW BRICK SHALL MATCH EXISTING EXPOSED BRICK COURSING, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 5.
3. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF TWO HUNDRED (100) INDIVIDUALLY DAMAGED BRICK UNITS. NEW BRICK SHALL MATCH EXISTING EXPOSED BRICK COURSING, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 5.
4. WHERE ALL NEW FLASHINGS TERMINATE AGAINST A VERTICAL SURFACE - PROVIDE PROPER WATERTIGHT END DAMS THAT DIRECT WATER TO DRAINAGE WEEPS. COPPER PAN FLASHINGS SHALL HAVE EDGE TURNED UP WITH CORNERS SOLDERED WATERTIGHT. TYPICAL ALL LOCATIONS.
5. COLOR SCHEDULE FOR NEW SEALANTS SHALL BE AS FOLLOWS:
   A) VERTICAL BRICK TO BRICK = TAN TO MATCH BRICK
   B) HORIZONTAL BRICK TO BRICK = TAN TO MATCH BRICK

   PROVIDE ACTUAL IN WALL SEALANT MOCKUPS OF EACH TYPE, AND EACH COLOR FOR OWNER'S AND ARCHITECT'S REVIEW. MOCKUPS MAY BECOME PART OF THE PERMANENT WORK IF APPROVED.
6. AT NEW AND EXISTING STEEL PREPARATION AND PAINTING, ALL STEEL SHALL BE HAND TOOL CLEANED PER SSPC-SP2. REFERENCE SPECIFICATION SECTION 099600-HIGH PERFORMANCE COATINGS. PRIME RUST AND COAT WITH HIGH PERFORMANCE PAINT PRODUCTS AS SPECIFIED AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MINIMUM 6 MILS TOTAL WET FILM THICKNESS.
7. AT ALL LOCATIONS OF MASONRY REMOVAL AND REPLACEMENT, CONTRACTOR SHALL PROPERLY INSTALL SHORING TO SUPPORT EXISTING MASONRY TO REMAIN ABOVE OPENED AREA. FAILURE TO INSTALL ADEQUATE SHORING THAT RESULTS IN DAMAGE TO THE MASONRY TO REMAIN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND / OR REPLACE DAMAGED MASONRY AND / OR ADJACENT SURFACES, ROOFS, ETC.
8. ALL ROOF AREAS EFFECTED BY CONSTRUCTION ACTIVITY SHALL BE PROTECTED W/ 3/4" PLYWOOD ON 2" RIGID SLOTTED INSULATION ON 6 MIL. PLASTIC SHEETING OVER THE EXISTING ROOFING. THIS SHALL INCLUDE ROOFS BOTH ABOVE AND BELOW THE AREAS UNDER CONSTRUCTION. DO NOT BLOCK EXISTING ROOF DRAINS, MAINTAIN POSITIVE DRAINAGE TO THEM, PROTECT DRAINS FROM DAMAGE.
9. CLEAN ALL EXISTING ROOF DRAINS.
10. ALL WORK INDICATED ON DRAWINGS DOES NOT NECESSARILY HAVE A CORRESPONDING "RESTORATION KEYNOTE" ASSIGNED TO IT AND MAY BE INDICATED BY "GENERAL NOTES" OR DETAILS.
11. REFERENCE RESTORATION KEYNOTES AND GENERAL NOTES FOR DEMOLITION ITEMS ASSOCIATED WITH THE FACADE AND RENOVATION WORK.
12. COPING AND MASONRY REPAIR MOCKUPS: REFERENCE SPECIFICATION SECTION 040120-MASONRY PARAPET REPAIR FOR LOCATIONS, AND DESCRIPTION OF REQUIRED MOCKUPS.
13. ALONG WITH CLEANING ALL AREAS OF THE NEW MASONRY INSTALLATIONS AND WHERE SPECIFIC STAINING IS NOTED TO BE CLEANED, CONTRACTOR SHALL CLEAN ALL AREAS OF EXISTING MASONRY BELOW AND ADJACENT TO THE WORK AREA THAT MAY BE AFFECTED BY RUN-OFF OR OVER-SPRAY AT NO ADDITIONAL COST TO OWNER.
14. ALL WELDING ON THIS PROJECT TO BE PERFORMED BY CERTIFIED WELDERS (NO EXCEPTIONS). INDIVIDUAL WELDERS CERTIFICATES TO BE INCLUDED IN SUBMITTALS.
15. ALL WELDING WORK AND FLASHING PANS TO BE INSPECTED BY ARCHITECT, STRUCTURAL ENGINEER AND/OR TESTING COMPANY HIRED BY OWNER PRIOR TO COVERING WITH NEW MASONRY.
16. AFTER COMPLETION OF WORK, CONTRACTOR SHALL CLEAN ALL WINDOW UNITS WHERE CONSTRUCTION DUST, DIRT, MATERIAL RESIDUE, ETC. MAY BE PRESENT.

NOTE:
CONDITIONS INDICATED ON THESE DRAWINGS OCCUR THROUGHOUT ENTIRE BUILDING. CONTRACTOR TO FIELD VERIFY.

RESTORATION KEYNOTES

1. CLEAN RUST OFF ENTIRE EXISTING STEEL WINDOW FRAME AND PAINT WITH NEW HIGH PERFORMANCE PAINT, TYPICAL ALL WINDOWS.
2. REMOVE SEALANT AROUND ENTIRE PERIMETER OF EXISTING STEEL WINDOW AND FILL WITH NEW BACKER ROD AND SEALANT. REFER TO DETAIL 7/A7.1-2.
3. REMOVE ALL SEALANT AT EXISTING VERTICAL EXPANSION JOINT AND FILL WITH NEW BACKER ROD AND SEALANT. REFER TO DETAIL 11/A7.1-2.
4. CLEAN RUST OFF EXISTING STEEL DOOR AND PAINT WITH NEW HIGH PERFORMANCE PAINT.
5. REMOVE AND REPLACE PORTIONS OF CRACKED AND SPALLING BRICK WITH NEW BRICK TO MATCH EXISTING.
7. OPEN SOLDIER COURSING AND REMOVE ALL BRITTLE FLASHING AT SHELF ANGLES AND REPLACE WITH NEW CONTINUOUS FLASHING OVER THE ENTIRE SHELF ANGLE AND PROVIDE NEW WEEP SYSTEMS. REFER TO DETAIL 7/A7.1-2.
8. PROVIDE NEW END DAM FLASHING AT ALL SHELF ANGLES. REFER TO DETAIL 14/A7.1-2.
9. OPEN SOLDIER COURSING AND REMOVE ALL BRITTLE FLASHING AT SHELF ANGLES AND REPLACE WITH NEW CONTINUOUS FLASHING OVER ENTIRE SHELF ANGLE AND PROVIDE NEW WEEP SYSTEMS. REFER TO DETAIL 8/A7.1-2.
10. PROVIDE NEW HORIZONTAL EXPANSION JOINT BELOW ALL SHELF ANGLES SUPPORTING BRICK WYTHE.
11. PROVIDE NEW ISOLATION JOINT IN EXTERIOR BRICK VENEER AS INDICATED.
12. PROVIDE NEW CONTINUED EXPANSION JOINT VERTICALLY UP TO PARAPET.
13. REMOVE AND REPLACE DAMAGED/FAILING METAL COPING. RE: COPING SPLICE AND FLASHING DETAIL 2/A6.4-2.
14. REPLACE MISSING/DAMAGED COUNTERFLASHING WITH NEW COUNTERFLASHING. RE: DETAIL 1/A6.4-2.
15. SAWCUT FULL DEPTH AND REMOVE ALL DEBRIS.
16. REPAIR CONCRETE PER DETAIL 16/A7.1-2.
17. REPAIR CONCRETE COLUMN, RE: DETAIL 16/A7.1.2 FOR CONCRETE REPAIR PROCEDURES.

NO.	REVISION	DATE
	ISSUED FOR BIDS	4-06-26

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PROJECT TITLE
MASONRY REPAIRS TO:
GENESEE COUNTY JAIL
1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE
JAIL LEVEL 3 FLOOR PLAN

PROJECT NUMBER	SHEET NUMBER
2024083.1	A2.3-2
PROJECT DATE: APRIL 06, 2026	
CHECKED BY: K.C.L.	

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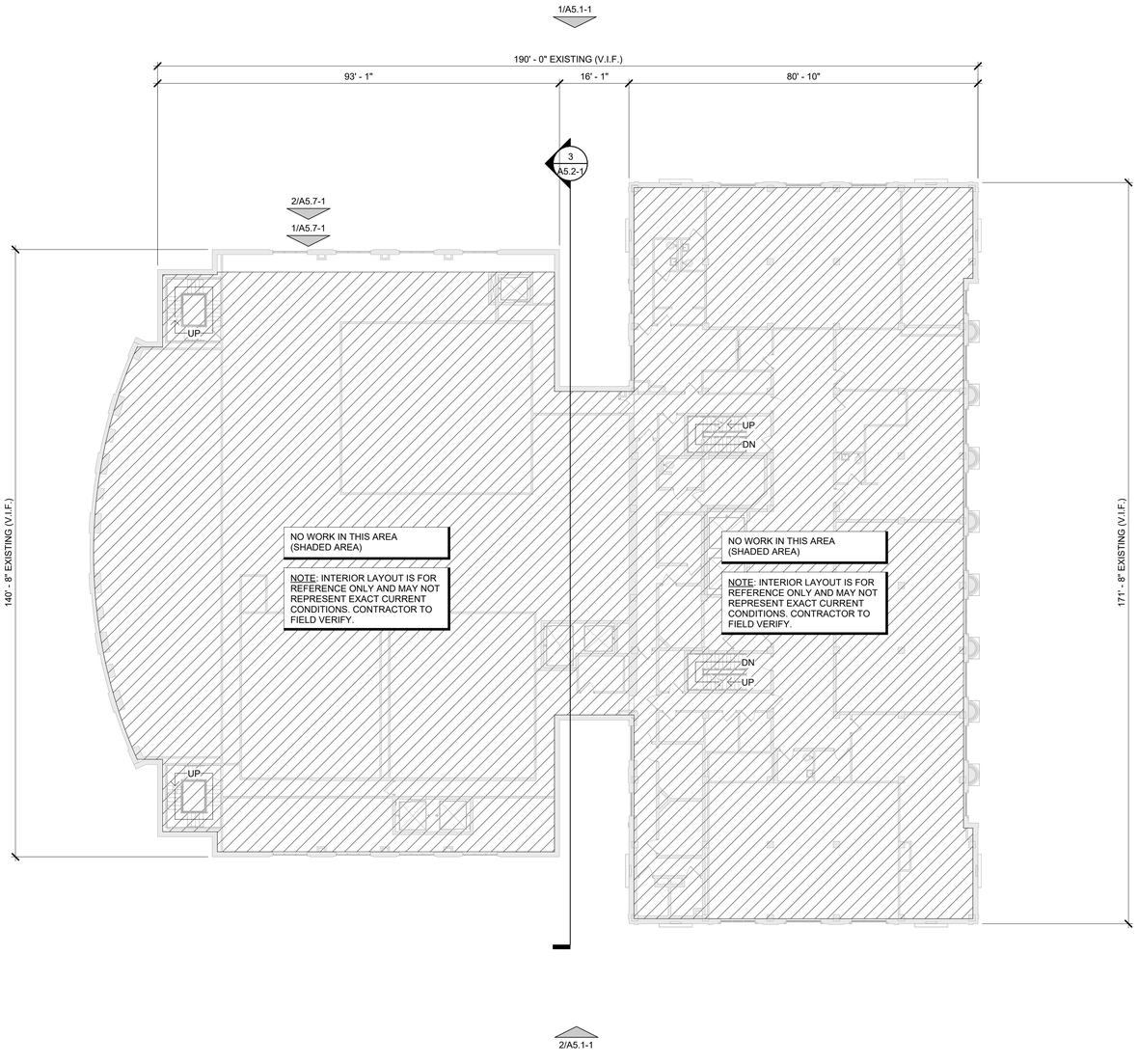

NORTH

FOURTH FLOOR CONSTRUCTION PLAN

SCALE: 1/16" = 1'-0"

EXTERIOR RESTORATION GENERAL NOTES:

1. INCLUDE AN ALLOWANCE FOR FIFTY (50) INJECTED EPOXY AND CEMENTITIOUS COMPOUND STONE CRACK REPAIRS. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 1.

2. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF ONE HUNDRED (100) SQUARE FEET OF DAMAGED LIMESTONE UNITS. NEW LIMESTONE SHALL MATCH EXISTING EXPOSED LIMESTONE, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED, AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT, AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 2.

3. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPOINTING OF TWO THOUSAND (2,000) LINEAL FEET OF DAMAGED MORTAR JOINTS, DEPTH OF NEW MORTAR SHALL BE 1 INCH MINIMUM. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 3 AND 7.

4. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF ONE HUNDRED (100) SQUARE FEET OF DAMAGED BRICK UNITS. NEW BRICK SHALL MATCH EXISTING EXPOSED BRICK COURSING, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED, AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT, AND CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 13.

5. INCLUDE AN ALLOWANCE FOR ONE THOUSAND (1000) LINEAL FEET OF NEW SEALANT JOINTS OF EXISTING DETERIORATED AND CRACKED JOINTS. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH ARCHITECT PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 9, 10, 14, 18, 23, AND 25.

6. WHERE ALL NEW FLASHING TERMINATE AGAINST A VERTICAL SURFACE - PROVIDE PROPER WATERTIGHT END DAMS THAT DIRECT WATER TO DRAINAGE WEEPS. COPPER PAN FLASHING SHALL HAVE EDGE TURNED UP WITH CORNERS SOLDERED WATERTIGHT. TYPICAL ALL LOCATIONS.

7. COLOR SCHEDULE FOR NEW SEALANTS SHALL BE AS FOLLOWS:

8. A) VERTICAL BRICK TO BRICK = BROWN TO MATCH BRICK
   B) HORIZONTAL BRICK OR STONE - LIMESTONE U.N.O.)
   C) BRICK TO STONE OR STONE TO STONE = LIMESTONE

   PROVIDE ACTUAL IN WALL SEALANT MOCKUPS OF EACH TYPE, AND EACH COLOR FOR OWNER'S AND ARCHITECT'S REVIEW. MOCKUPS MAY BECOME PART OF THE PERMANENT WORK IF APPROVED.

9. AT NEW AND EXISTING STEEL PREPARATION AND PAINTING, ALL STEEL SHALL BE HAND TOOL CLEANED PER SSPC-SP2, REFERENCE SPECIFICATION SECTION 099600-HIGH PERFORMANCE COATINGS. PRIME RUST AND COAT WITH HIGH PERFORMANCE PAINT PRODUCTS AS SPECIFIED AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MINIMUM 6 MILS TOTAL WET FILM THICKNESS.

10. AT ALL LOCATIONS OF MASONRY REMOVAL AND REPLACEMENT, CONTRACTOR SHALL PROPERLY INSTALL SHORING TO SUPPORT EXISTING MASONRY TO REMAIN ABOVE OPENED AREA. FAILURE TO INSTALL ADEQUATE SHORING THAT RESULTS IN DAMAGE TO THE MASONRY TO REMAIN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND / OR REPLACE DAMAGED MASONRY AND / OR ADJACENT SURFACES, ROOFS, ETC.

11. ALL ROOF AREAS EFFECTED BY CONSTRUCTION ACTIVITY SHALL BE PROTECTED W/ 3/4" PLYWOOD ON 2" RIGID SLOTTED INSULATION ON 6 MIL. PLASTIC SHEETING OVER THE EXISTING ROOFING. THIS SHALL INCLUDE ROOFS BOTH ABOVE AND BELOW THE AREAS UNDER CONSTRUCTION. DO NOT BLOCK EXISTING ROOF DRAINS, MAINTAIN POSITIVE DRAINAGE TO THEM, PROTECT DRAINS FROM DAMAGE.

12. CLEAN ALL EXISTING ROOF DRAINS.

13. ALL WORK INDICATED ON DRAWINGS DOES NOT NECESSARILY HAVE A CORRESPONDING "RESTORATION KEYNOTE" ASSIGNED TO IT AND MAY BE INDICATED BY "GENERAL NOTES" OR DETAILS.

14. REFERENCE RESTORATION KEYNOTES AND GENERAL NOTES FOR DEMOLITION ITEMS ASSOCIATED WITH THE FACADE AND RENOVATION WORK.

15. COPING AND MASONRY REPAIR MOCKUPS: REFERENCE SPECIFICATION SECTION 040120-MASONRY PARAPET REPAIR FOR LOCATIONS, AND DESCRIPTION OF REQUIRED MOCKUPS.

16. ALONG WITH CLEANING ALL AREAS OF THE NEW MASONRY INSTALLATIONS AND WHERE SPECIFIC STAINING IS NOTED TO BE CLEANED, CONTRACTOR SHALL CLEAN ALL AREAS OF EXISTING MASONRY BELOW AND ADJACENT TO THE WORK AREA THAT MAY BE AFFECTED BY RUN-OFF OR OVER-SPRAY AT NO ADDITIONAL COST TO OWNER.

17. ALL WELDING ON THIS PROJECT TO BE PERFORMED BY CERTIFIED WELDERS (NO EXCEPTIONS). INDIVIDUAL WELDERS CERTIFICATES TO BE INCLUDED IN SUBMITTALS.

18. ALL WELDING WORK AND FLASHING PANS TO BE INSPECTED BY ARCHITECT, STRUCTURAL ENGINEER AND/OR TESTING COMPANY HIRED BY OWNER PRIOR TO COVERING WITH NEW MASONRY.

19. AFTER COMPLETION OF WORK, CONTRACTOR SHALL CLEAN ALL WINDOW UNITS WHERE CONSTRUCTION DUST, DIRT, MATERIAL RESIDUE, ETC. MAY BE PRESENT.

(#) RESTORATION KEYNOTES

1 FILL CRACKS IN LIMESTONE WITH AN INJECTED MASONRY EPOXY. PATCH FACE OF STONE AS REQUIRED TO BLEND WITH ADJACENT SURFACES.
2 PATCH SPALLED/VOIDS IN EXISTING LIMESTONE WITH CEMENTITIOUS COLORED PRODUCT. MATCH ADJACENT STONE TEXTURE AND COLOR. WHERE DAMAGED AREAS ARE TOO EXTENSIVE FOR PATCHING, REMOVE DAMAGED LIMESTONE PIECE(S) AND REPLACE WITH NEW LIMESTONE PIECE(S).
3 REMOVE EXISTING DAMAGED MORTAR FROM JOINTS TO A MINIMUM DEPTH OF ONE INCH, OR BACK TO SOUND MORTAR, AND REPLACE WITH NEW MORTAR BY REPOINTING METHOD. MATCH EXISTING COLOR.
4 CLEAN ALL EXISTING LIMESTONE SURFACES WITH A CHEMICAL PRODUCT AND LOW-PRESSURE WASH. PERFORM THIS AFTER ALL REPAIRS ARE COMPLETED.
5 PROVIDE NEW DRAINAGE WEEPS SPACED FROM 32" TO 48" ON CENTER AT THROUGH-WALL FLASHING.
6 PROVIDE NEW EXPANSION JOINT IN EXISTING MASONRY VENEER AS INDICATED AND FILL WITH NEW BACKER ROD AND SEALANT.
7 REMOVE ALL EXISTING HEAD JOINT MORTAR TO A DEPTH OF ONE INCH MINIMUM AT CULTURED STONE AND FILL WITH NEW BACKER ROD & SEALANT.
8 CHEMICALLY CLEAN ALL AREAS OF SOILED MASONRY SURFACES.
9 REMOVE ALL OPEN JOINT SEALANT AT EXISTING STAINLESS STEEL FLASHING AND REPLACE WITH NEW SEALANT BELOW EXISTING FLASHING.
10 REMOVE ALL EXISTING COPING HEAD JOINT SEALANT AND REPLACE WITH NEW JOINT SEALANT. RE: DETAIL 1/A6.4-1 AND 2/A6.4-1.
11 REMOVE ALL EXISTING LIMESTONE COPING, SALVAGE, CLEAN AND RE-INSTALL WITH NEW STAINLESS STEEL FLASHING AND FILL WITH NEW BACKER ROD AND SEALANT. RE: DETAIL 2/A6.4-1.
12 REMOVE AND REPLACE TERMINATION FLASHING. REFER TO SHEET A6.4-1.
13 REMOVE ENTIRE PERIMETER OF BRICK VENEER AT WINDOW UNIT AND REPLACE WITH NEW TIGHTLY SEALED FLASHING, END DAM FLASHING & WEEP HOLES. FILL PERIMETER OF WINDOW UNITS WITH NEW BACKER ROD AND SEALANT. RE: SHEET A7.1-1.
14 REMOVE ALL HORIZONTAL SEALANT BELOW FLASHING AND BLACK ADHESIVE ABOVE FLASHING AT EXISTING SHELF ANGLES AND FILL WITH NEW BACKER ROD AND SEALANT BELOW FLASHING AND NEW WEEP DRAINAGE HOLES.
15 PATCH & REPAIR PORTIONS OF INTERIOR GYP. BOARD CEILING AT WATER SPOT LOCATIONS, ONCE WATER LEAK REPAIRS ARE COMPLETE.
16 PATCH & REPAIR PORTIONS OF INTERIOR GYP. BOARD WALLS SURROUNDING WINDOW UNIT(S) AT WATER SPOT LOCATIONS, ONCE FLASHING REPAIRS ARE COMPLETE.
17 REPLACE WATER DAMAGED SILL. MATCH EXISTING.
18 REMOVE EXISTING EXPANSION JOINT SEALANT AND FILL WITH NEW BACKER ROD AND SEALANT. MATCH EXISTING SEALANT COLOR.
19 FILL OPEN JOINT WITH NEW BACKER ROD AND SEALANT.
20 REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF ALL ORGINAL COURTHOUSE STEEL WINDOW LINTELS, TYP. PAINT WITH NEW HIGH PERFORMANCE PAINT.
21 REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF EXISTING STAIR/RAMP RAILINGS. PAINT WITH NEW HIGH PERFORMANCE PAINT.
22 REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF EXISTING IRON DOOR FRAME. PAINT WITH NEW HIGH PERFORMANCE PAINT.
23 REMOVE ALL EXISTING SEALANT FROM GRANITE STEPS AT ALL JOINTS AND FILL WITH NEW SEALANT.
24 REMOVE ENTIRE MASONRY CHEEK WALL STRUCTURE FOR NEW CHEEK WALL STRUCTURE. RE: SHEET A2.1-1.
25 REMOVE ALL CRACKED SEALANT AND REPLACE WITH NEW SEALANT.
26 EXISTING SEALANT MAY CONTAIN HAZARDOUS MATERIALS AND SHOULD BE FURTHER TESTED.
28 NEW CONCRETE RAMP AND STAIR ON NEW SNOWMELT SYSTEM. REFER TO SHEET A4.1-1.
29 SAWCUT FULL DEPTH AND REMOVE ALL DEBRIS.
30 SAWCUT, REMOVE AND REPLACE WITH NEW LIMESTONE PANELS. MATCH EXISTING PROFILE.

NO.	REVISION	DATE
	ISSUED FOR BIDS	4-06-26

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WTA ARCHITECTS

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Saginaw, Michigan 48607
989 752 8107

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PROJECT TITLE

MASONRY REPAIRS TO:

GENESEE COUNTY COURTHOUSE & JAIL

900 & 1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE

COURTHOUSE FOURTH FLOOR PLAN

PROJECT NUMBER 2024083.1

PROJECT DATE APRIL 06, 2026

CHECKED BY K.C.L.

SHEET NUMBER A2.4-1

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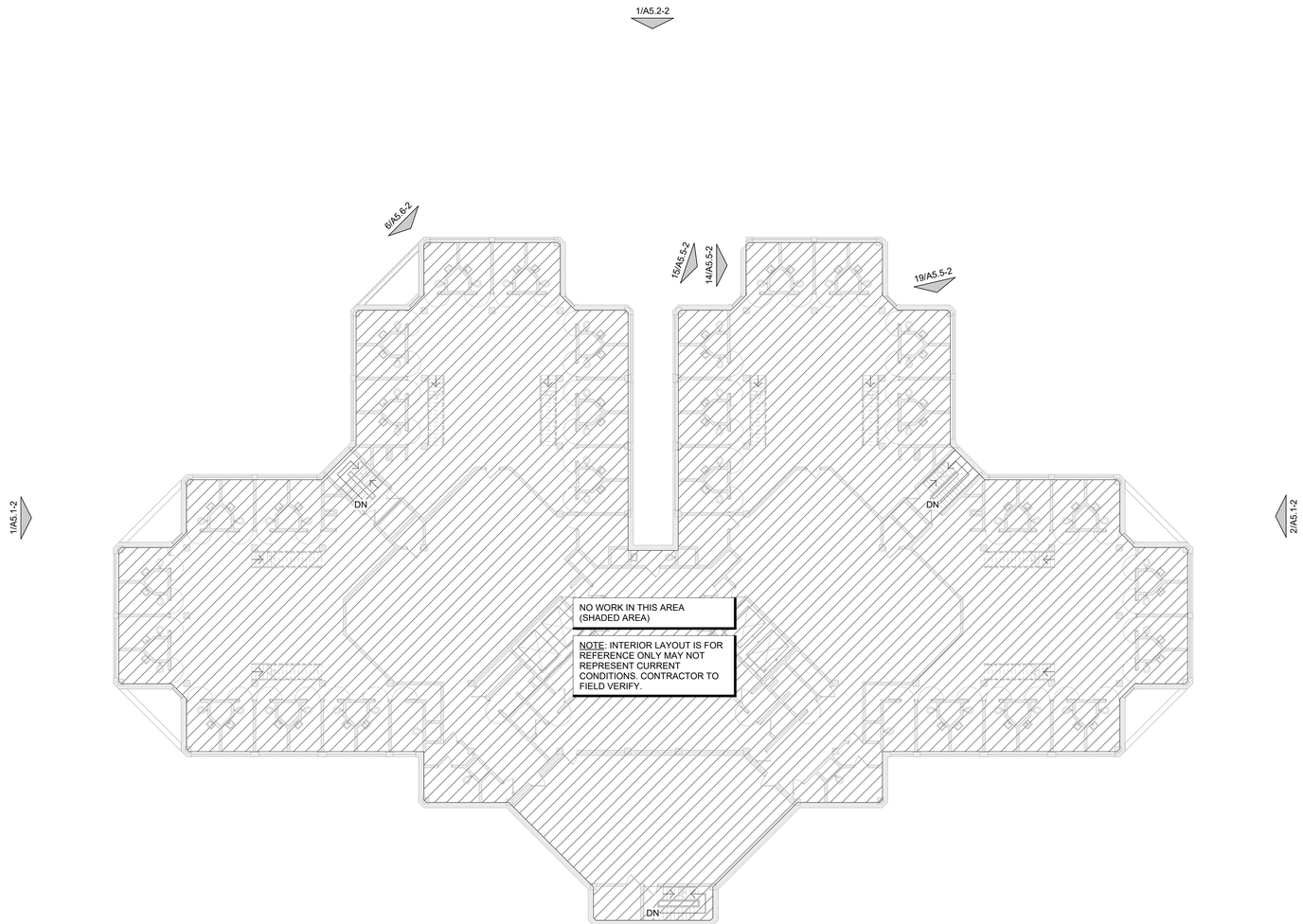

NORTH

LEVEL 4 CONSTRUCTION PLAN
SCALE: 1/16" = 1'-0"

EXTERIOR RESTORATION GENERAL NOTES:

1. INCLUDE AN ALLOWANCE FOR ONE THOUSAND (1000) LINEAL FEET OF NEW SEALANT JOINTS OF EXISTING DETERIORATED AND CRACKED JOINTS. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH ARCHITECT PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 2 AND 3.
2. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF TWO HUNDRED (200) INDIVIDUALLY DAMAGED BRICK UNITS. NEW BRICK SHALL MATCH EXISTING EXPOSED BRICK COURSING, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 5.
3. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF TWO HUNDRED (100) INDIVIDUALLY DAMAGED BRICK UNITS. NEW BRICK SHALL MATCH EXISTING EXPOSED BRICK COURSING, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 5.
4. WHERE ALL NEW FLASHINGS TERMINATE AGAINST A VERTICAL SURFACE - PROVIDE PROPER WATERTIGHT END DAMS THAT DIRECT WATER TO DRAINAGE WEEPS. COPPER PAN FLASHINGS SHALL HAVE EDGE TURNED UP WITH CORNERS SOLDERED WATERTIGHT. TYPICAL ALL LOCATIONS.
5. COLOR SCHEDULE FOR NEW SEALANTS SHALL BE AS FOLLOWS:
   A) VERTICAL BRICK TO BRICK = TAN TO MATCH BRICK
   B) HORIZONTAL BRICK TO BRICK = TAN TO MATCH BRICK

   PROVIDE ACTUAL IN WALL SEALANT MOCKUPS OF EACH TYPE, AND EACH COLOR FOR OWNER'S AND ARCHITECT'S REVIEW. MOCKUPS MAY BECOME PART OF THE PERMANENT WORK IF APPROVED.
6. AT NEW AND EXISTING STEEL PREPARATION AND PAINTING, ALL STEEL SHALL BE HAND TOOL CLEANED PER SSPC-SP2, REFERENCE SPECIFICATION SECTION 099600-HIGH PERFORMANCE COATINGS. PRIME RUST AND COAT WITH HIGH PERFORMANCE PAINT PRODUCTS AS SPECIFIED AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MINIMUM 6 MILS TOTAL WET FILM THICKNESS.
7. AT ALL LOCATIONS OF MASONRY REMOVAL AND REPLACEMENT, CONTRACTOR SHALL PROPERLY INSTALL SHORING TO SUPPORT EXISTING MASONRY TO REMAIN ABOVE OPENED AREA. FAILURE TO INSTALL ADEQUATE SHORING THAT RESULTS IN DAMAGE TO THE MASONRY TO REMAIN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND / OR REPLACE DAMAGED MASONRY AND / OR ADJACENT SURFACES, ROOFS, ETC.
8. ALL ROOF AREAS EFFECTED BY CONSTRUCTION ACTIVITY SHALL BE PROTECTED W/ 3/4" PLYWOOD ON 2" RIGID SLOTTED INSULATION ON 6 MIL. PLASTIC SHEETING OVER THE EXISTING ROOFING. THIS SHALL INCLUDE ROOFS BOTH ABOVE AND BELOW THE AREAS UNDER CONSTRUCTION. DO NOT BLOCK EXISTING ROOF DRAINS, MAINTAIN POSITIVE DRAINAGE TO THEM, PROTECT DRAINS FROM DAMAGE.
9. CLEAN ALL EXISTING ROOF DRAINS.
10. ALL WORK INDICATED ON DRAWINGS DOES NOT NECESSARILY HAVE A CORRESPONDING "RESTORATION KEYNOTE" ASSIGNED TO IT AND MAY BE INDICATED BY "GENERAL NOTES" OR DETAILS.
11. REFERENCE RESTORATION KEYNOTES AND GENERAL NOTES FOR DEMOLITION ITEMS ASSOCIATED WITH THE FACADE AND RENOVATION WORK.
12. COPING AND MASONRY REPAIR MOCKUPS: REFERENCE SPECIFICATION SECTION 040120-MASONRY PARAPET REPAIR FOR LOCATIONS, AND DESCRIPTION OF REQUIRED MOCKUPS.
13. ALONG WITH CLEANING ALL AREAS OF THE NEW MASONRY INSTALLATIONS AND WHERE SPECIFIC STAINING IS NOTED TO BE CLEANED, CONTRACTOR SHALL CLEAN ALL AREAS OF EXISTING MASONRY BELOW AND ADJACENT TO THE WORK AREA THAT MAY BE AFFECTED BY RUN-OFF OR OVER-SPRAY AT NO ADDITIONAL COST TO OWNER.
14. ALL WELDING ON THIS PROJECT TO BE PERFORMED BY CERTIFIED WELDERS (NO EXCEPTIONS). INDIVIDUAL WELDERS CERTIFICATES TO BE INCLUDED IN SUBMITTALS.
15. ALL WELDING WORK AND FLASHING PANS TO BE INSPECTED BY ARCHITECT, STRUCTURAL ENGINEER AND/OR TESTING COMPANY HIRED BY OWNER PRIOR TO COVERING WITH NEW MASONRY.
16. AFTER COMPLETION OF WORK, CONTRACTOR SHALL CLEAN ALL WINDOW UNITS WHERE CONSTRUCTION DUST, DIRT, MATERIAL RESIDUE, ETC. MAY BE PRESENT.

NOTE:
CONDITIONS INDICATED ON THESE DRAWINGS OCCUR THROUGHOUT ENTIRE BUILDING. CONTRACTOR TO FIELD VERIFY.

RESTORATION KEYNOTES

1. CLEAN RUST OFF ENTIRE EXISTING STEEL WINDOW FRAME AND PAINT WITH NEW HIGH PERFORMANCE PAINT, TYPICAL ALL WINDOWS.
2. REMOVE SEALANT AROUND ENTIRE PERIMETER OF EXISTING STEEL WINDOW AND FILL WITH NEW BACKER ROD AND SEALANT. REFER TO DETAIL 7/A7.1-2.
3. REMOVE ALL SEALANT AT EXISTING VERTICAL EXPANSION JOINT AND FILL WITH NEW BACKER ROD AND SEALANT. REFER TO DETAIL 11/A7.1-2.
4. CLEAN RUST OFF EXISTING STEEL DOOR AND PAINT WITH NEW HIGH PERFORMANCE PAINT.
5. REMOVE AND REPLACE PORTIONS OF CRACKED AND SPALLING BRICK WITH NEW BRICK TO MATCH EXISTING.
7. OPEN SOLDIER COURSING AND REMOVE ALL BRITTLE FLASHING AT SHELF ANGLES AND REPLACE WITH NEW CONTINUOUS FLASHING OVER THE ENTIRE SHELF ANGLE AND PROVIDE NEW WEEP SYSTEMS. REFER TO DETAIL 7/A7.1-2.
8. PROVIDE NEW END DAM FLASHING AT ALL SHELF ANGLES. REFER TO DETAIL 14/A7.1-2.
9. OPEN SOLDIER COURSING AND REMOVE ALL BRITTLE FLASHING AT SHELF ANGLES AND REPLACE WITH NEW CONTINUOUS FLASHING OVER ENTIRE SHELF ANGLE AND PROVIDE NEW WEEP SYSTEMS. REFER TO DETAIL 8/A7.1-2.
10. PROVIDE NEW HORIZONTAL EXPANSION JOINT BELOW ALL SHELF ANGLES SUPPORTING BRICK WYTHE.
11. PROVIDE NEW ISOLATION JOINT IN EXTERIOR BRICK VENEER AS INDICATED.
12. PROVIDE NEW CONTINUED EXPANSION JOINT VERTICALLY UP TO PARAPET.
13. REMOVE AND REPLACE DAMAGED/FAILING METAL COPING. RE: COPING SPLICE AND FLASHING DETAIL 2/A6.4-2.
14. REPLACE MISSING/DAMAGED COUNTERFLASHING WITH NEW COUNTERFLASHING. RE: DETAIL 1/A6.4-2.
15. SAWCUT FULL DEPTH AND REMOVE ALL DEBRIS.
16. REPAIR CONCRETE PER DETAIL 16/A7.1-2.
17. REPAIR CONCRETE COLUMN, RE: DETAIL 16/A7.1.2 FOR CONCRETE REPAIR PROCEDURES.

NO.	REVISION	DATE
	ISSUED FOR BIDS	4-06-26

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PROJECT TITLE
MASONRY REPAIRS TO:
GENESEE COUNTY JAIL
1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE
JAIL LEVEL 4 FLOOR PLAN

PROJECT NUMBER	SHEET NUMBER
2024083.1	A2.4-2
PROJECT DATE: APRIL 06, 2026	
CHECKED BY: K.C.L.	

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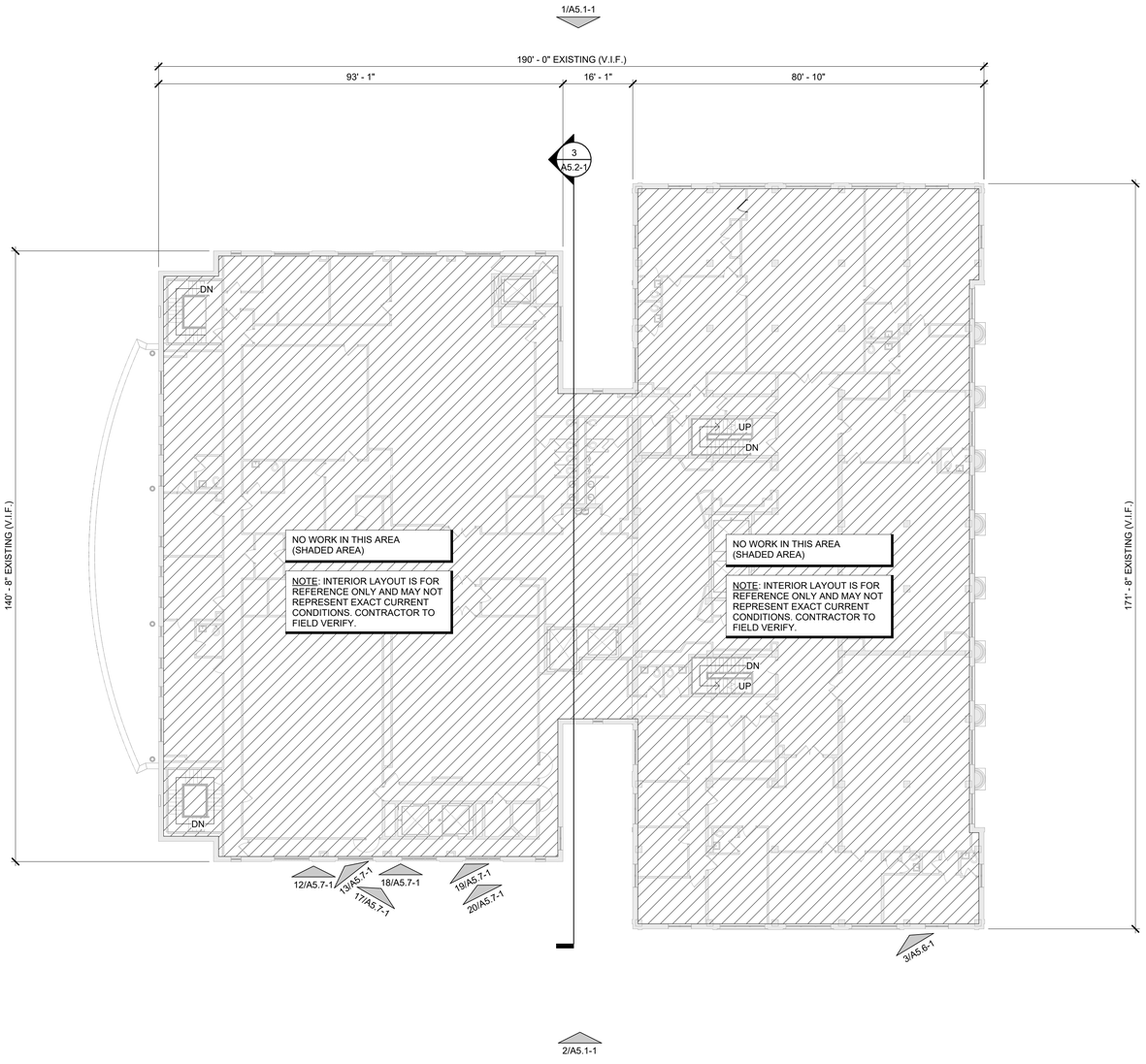

NORTH

FIFTH FLOOR CONSTRUCTION PLAN

SCALE: 1/16" = 1'-0"

EXTERIOR RESTORATION GENERAL NOTES:

1. INCLUDE AN ALLOWANCE FOR FIFTY (50) INJECTED EPOXY AND CEMENTITIOUS COMPOUND STONE CRACK REPAIRS. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 1.
2. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF ONE HUNDRED (100) SQUARE FEET OF DAMAGED LIMESTONE UNITS. NEW LIMESTONE SHALL MATCH EXISTING EXPOSED LIMESTONE, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED, AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT, AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 2.
3. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPOINTING OF TWO THOUSAND (2,000) LINEAL FEET OF DAMAGED MORTAR JOINTS, DEPTH OF NEW MORTAR SHALL BE 1 INCH MINIMUM. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 3 AND 7.
4. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF ONE HUNDRED (100) SQUARE FEET OF DAMAGED BRICK UNITS. NEW BRICK SHALL MATCH EXISTING EXPOSED BRICK COURSING, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED, AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT, AND CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 13.
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   C) BRICK TO STONE OR STONE TO STONE = LIMESTONE

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(#) RESTORATION KEYNOTES

1 FILL CRACKS IN LIMESTONE WITH AN INJECTED MASONRY EPOXY. PATCH FACE OF STONE AS REQUIRED TO BLEND WITH ADJACENT SURFACES.
2 PATCH SPALLED/VOIDS IN EXISTING LIMESTONE WITH CEMENTITIOUS COLORED PRODUCT. MATCH ADJACENT STONE TEXTURE AND COLOR. WHERE DAMAGED AREAS ARE TOO EXTENSIVE FOR PATCHING, REMOVE DAMAGED LIMESTONE PIECE(S) AND REPLACE WITH NEW LIMESTONE PIECE(S).
3 REMOVE EXISTING DAMAGED MORTAR FROM JOINTS TO A MINIMUM DEPTH OF ONE INCH, OR BACK TO SOUND MORTAR, AND REPLACE WITH NEW MORTAR BY REPOINTING METHOD. MATCH EXISTING COLOR.
4 CLEAN ALL EXISTING LIMESTONE SURFACES WITH A CHEMICAL PRODUCT AND LOW-PRESSURE WASH. PERFORM THIS AFTER ALL REPAIRS ARE COMPLETED.
5 PROVIDE NEW DRAINAGE WEEPS SPACED FROM 32" TO 48" ON CENTER AT THROUGH-WALL FLASHING.
6 PROVIDE NEW EXPANSION JOINT IN EXISTING MASONRY VENEER AS INDICATED AND FILL WITH NEW BACKER ROD AND SEALANT.
7 REMOVE ALL EXISTING HEAD JOINT MORTAR TO A DEPTH OF ONE INCH MINIMUM AT CULTURED STONE AND FILL WITH NEW BACKER ROD & SEALANT.
8 CHEMICALLY CLEAN ALL AREAS OF SOILED MASONRY SURFACES.
9 REMOVE ALL OPEN JOINT SEALANT AT EXISTING STAINLESS STEEL FLASHING AND REPLACE WITH NEW SEALANT BELOW EXISTING FLASHING.
10 REMOVE ALL EXISTING COPING HEAD JOINT SEALANT AND REPLACE WITH NEW JOINT SEALANT. RE: DETAIL 1/A6.4-1 AND 2/A6.4-1.
11 REMOVE ALL EXISTING LIMESTONE COPING, SALVAGE, CLEAN AND RE-INSTALL WITH NEW STAINLESS STEEL FLASHING AND FILL WITH NEW BACKER ROD AND SEALANT. RE: DETAIL 2/A6.4-1.
12 REMOVE AND REPLACE TERMINATION FLASHING. REFER TO SHEET A6.4-1.
13 REMOVE ENTIRE PERIMETER OF BRICK VENEER AT WINDOW UNIT AND REPLACE WITH NEW TIGHTLY SEALED FLASHING, END DAM FLASHING & WEEP HOLES. FILL PERIMETER OF WINDOW UNITS WITH NEW BACKER ROD AND SEALANT. RE: SHEET A7.1-1.
14 REMOVE ALL HORIZONTAL SEALANT BELOW FLASHING AND BLACK ADHESIVE ABOVE FLASHING AT EXISTING SHELF ANGLES AND FILL WITH NEW BACKER ROD AND SEALANT BELOW FLASHING AND NEW WEEP DRAINAGE HOLES.
15 PATCH & REPAIR PORTIONS OF INTERIOR GYP. BOARD CEILING AT WATER SPOT LOCATIONS, ONCE WATER LEAK REPAIRS ARE COMPLETE.
16 PATCH & REPAIR PORTIONS OF INTERIOR GYP. BOARD WALLS SURROUNDING WINDOW UNIT(S) AT WATER SPOT LOCATIONS, ONCE FLASHING REPAIRS ARE COMPLETE.
17 REPLACE WATER DAMAGED SILL. MATCH EXISTING.
18 REMOVE EXISTING EXPANSION JOINT SEALANT AND FILL WITH NEW BACKER ROD AND SEALANT. MATCH EXISTING SEALANT COLOR.
19 FILL OPEN JOINT WITH NEW BACKER ROD AND SEALANT.
20 REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF ALL ORGINAL COURTHOUSE STEEL WINDOW LINTELS, TYP. PAINT WITH NEW HIGH PERFORMANCE PAINT.
21 REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF EXISTING STAIR/RAMP RAILINGS. PAINT WITH NEW HIGH PERFORMANCE PAINT.
22 REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF EXISTING IRON DOOR FRAME. PAINT WITH NEW HIGH PERFORMANCE PAINT.
23 REMOVE ALL EXISTING SEALANT FROM GRANITE STEPS AT ALL JOINTS AND FILL WITH NEW SEALANT.
24 REMOVE ENTIRE MASONRY CHEEK WALL STRUCTURE FOR NEW CHEEK WALL STRUCTURE. RE: SHEET A2.1-1.
25 REMOVE ALL CRACKED SEALANT AND REPLACE WITH NEW SEALANT.
26 EXISTING SEALANT MAY CONTAIN HAZARDOUS MATERIALS AND SHOULD BE FURTHER TESTED.
28 NEW CONCRETE RAMP AND STAIR ON NEW SNOWMELT SYSTEM. REFER TO SHEET A4.1-1.
29 SAWCUT FULL DEPTH AND REMOVE ALL DEBRIS.
30 SAWCUT, REMOVE AND REPLACE WITH NEW LIMESTONE PANELS. MATCH EXISTING PROFILE.

NO.	REVISION	DATE
	ISSUED FOR BIDS	4-06-26

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PROJECT TITLE

MASONRY REPAIRS TO:

GENESEE COUNTY COURTHOUSE & JAIL

900 & 1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE

COURTHOUSE FIFTH FLOOR PLAN

PROJECT NUMBER	SHEET NUMBER
2024083.1	A2.5-1
PROJECT DATE	
APRIL 06, 2026	
CHECKED BY	
K.C.L.	

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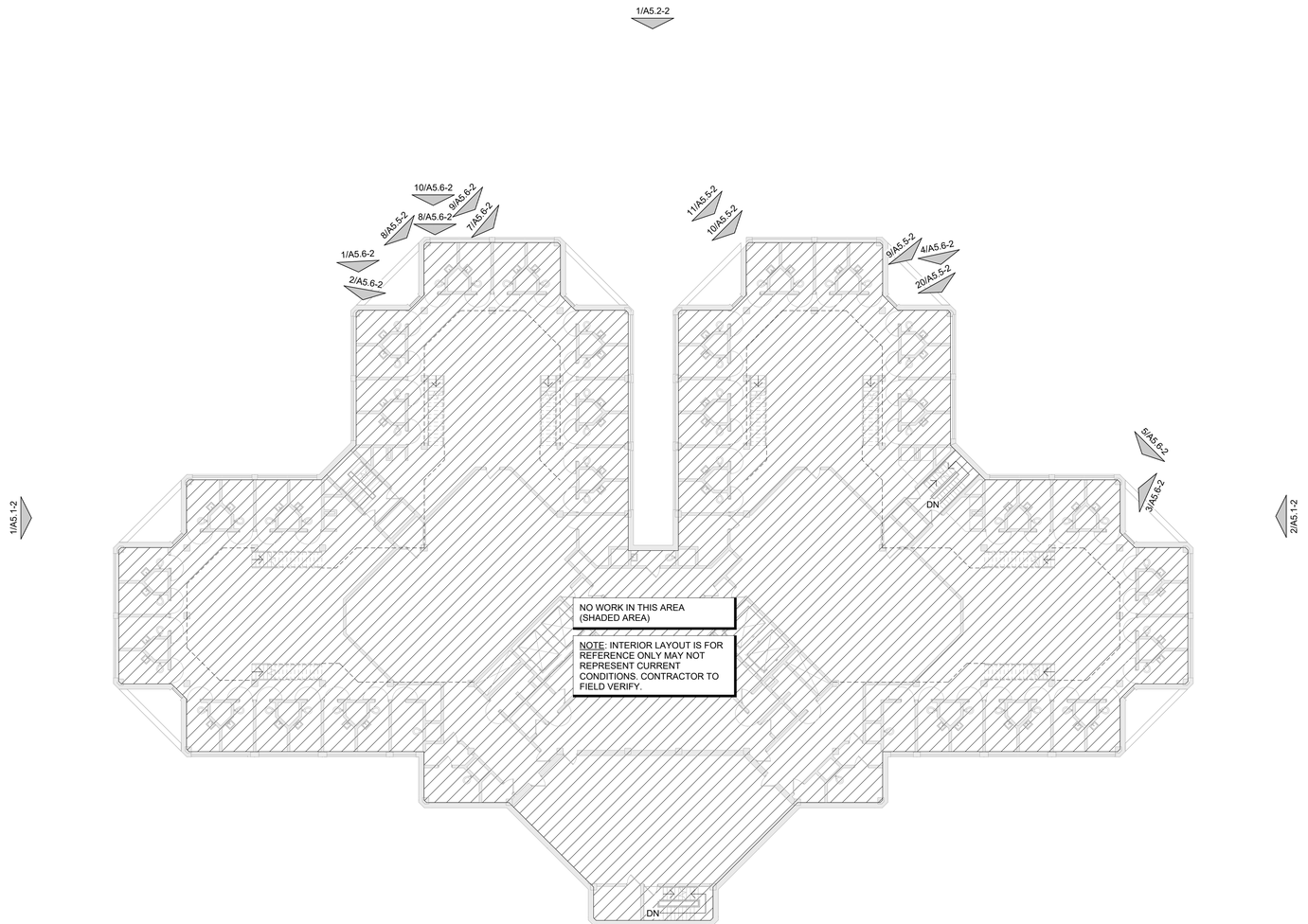

NORTH

LEVEL 5 CONSTRUCTION PLAN

SCALE: 1/16" = 1'-0"

EXTERIOR RESTORATION GENERAL NOTES:

1. INCLUDE AN ALLOWANCE FOR ONE THOUSAND (1000) LINEAL FEET OF NEW SEALANT JOINTS OF EXISTING DETERIORATED AND CRACKED JOINTS. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH ARCHITECT PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 2 AND 3.
2. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF TWO HUNDRED (200) INDIVIDUALLY DAMAGED BRICK UNITS. NEW BRICK SHALL MATCH EXISTING EXPOSED BRICK COURSING, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 5.
3. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF TWO HUNDRED (100) INDIVIDUALLY DAMAGED BRICK UNITS. NEW BRICK SHALL MATCH EXISTING EXPOSED BRICK COURSING, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 5.
4. WHERE ALL NEW FLASHINGS TERMINATE AGAINST A VERTICAL SURFACE - PROVIDE PROPER WATERTIGHT END DAMS THAT DIRECT WATER TO DRAINAGE WEEPS. COPPER PAN FLASHINGS SHALL HAVE EDGE TURNED UP WITH CORNERS SOLDERED WATERTIGHT. TYPICAL ALL LOCATIONS.
5. COLOR SCHEDULE FOR NEW SEALANTS SHALL BE AS FOLLOWS:
   A) VERTICAL BRICK TO BRICK = TAN TO MATCH BRICK
   B) HORIZONTAL BRICK TO BRICK = TAN TO MATCH BRICK

   PROVIDE ACTUAL IN WALL SEALANT MOCKUPS OF EACH TYPE, AND EACH COLOR FOR OWNER'S AND ARCHITECT'S REVIEW. MOCKUPS MAY BECOME PART OF THE PERMANENT WORK IF APPROVED.
6. AT NEW AND EXISTING STEEL PREPARATION AND PAINTING, ALL STEEL SHALL BE HAND TOOL CLEANED PER SSPC-SP2, REFERENCE SPECIFICATION SECTION 099600-HIGH PERFORMANCE COATINGS. PRIME RUST AND COAT WITH HIGH PERFORMANCE PAINT PRODUCTS AS SPECIFIED AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MINIMUM 6 MILS TOTAL WET FILM THICKNESS.
7. AT ALL LOCATIONS OF MASONRY REMOVAL AND REPLACEMENT, CONTRACTOR SHALL PROPERLY INSTALL SHORING TO SUPPORT EXISTING MASONRY TO REMAIN ABOVE OPENED AREA. FAILURE TO INSTALL ADEQUATE SHORING THAT RESULTS IN DAMAGE TO THE MASONRY TO REMAIN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND / OR REPLACE DAMAGED MASONRY AND / OR ADJACENT SURFACES, ROOFS, ETC.
8. ALL ROOF AREAS EFFECTED BY CONSTRUCTION ACTIVITY SHALL BE PROTECTED W/ 3/4" PLYWOOD ON 2" RIGID SLOTTED INSULATION ON 6 MIL. PLASTIC SHEETING OVER THE EXISTING ROOFING. THIS SHALL INCLUDE ROOFS BOTH ABOVE AND BELOW THE AREAS UNDER CONSTRUCTION. DO NOT BLOCK EXISTING ROOF DRAINS, MAINTAIN POSITIVE DRAINAGE TO THEM, PROTECT DRAINS FROM DAMAGE.
9. CLEAN ALL EXISTING ROOF DRAINS.
10. ALL WORK INDICATED ON DRAWINGS DOES NOT NECESSARILY HAVE A CORRESPONDING "RESTORATION KEYNOTE" ASSIGNED TO IT AND MAY BE INDICATED BY "GENERAL NOTES" OR DETAILS.
11. REFERENCE RESTORATION KEYNOTES AND GENERAL NOTES FOR DEMOLITION ITEMS ASSOCIATED WITH THE FACADE AND RENOVATION WORK.
12. COPING AND MASONRY REPAIR MOCKUPS: REFERENCE SPECIFICATION SECTION 040120-MASONRY PARAPET REPAIR FOR LOCATIONS, AND DESCRIPTION OF REQUIRED MOCKUPS.
13. ALONG WITH CLEANING ALL AREAS OF THE NEW MASONRY INSTALLATIONS AND WHERE SPECIFIC STAINING IS NOTED TO BE CLEANED, CONTRACTOR SHALL CLEAN ALL AREAS OF EXISTING MASONRY BELOW AND ADJACENT TO THE WORK AREA THAT MAY BE AFFECTED BY RUN-OFF OR OVER-SPRAY AT NO ADDITIONAL COST TO OWNER.
14. ALL WELDING ON THIS PROJECT TO BE PERFORMED BY CERTIFIED WELDERS (NO EXCEPTIONS). INDIVIDUAL WELDERS CERTIFICATES TO BE INCLUDED IN SUBMITTALS.
15. ALL WELDING WORK AND FLASHING PANS TO BE INSPECTED BY ARCHITECT, STRUCTURAL ENGINEER AND/OR TESTING COMPANY HIRED BY OWNER PRIOR TO COVERING WITH NEW MASONRY.
16. AFTER COMPLETION OF WORK, CONTRACTOR SHALL CLEAN ALL WINDOW UNITS WHERE CONSTRUCTION DUST, DIRT, MATERIAL RESIDUE, ETC. MAY BE PRESENT.

NOTE:
CONDITIONS INDICATED ON THESE DRAWINGS OCCUR THROUGHOUT ENTIRE BUILDING. CONTRACTOR TO FIELD VERIFY.

(#) RESTORATION KEYNOTES

1. CLEAN RUST OFF ENTIRE EXISTING STEEL WINDOW FRAME AND PAINT WITH NEW HIGH PERFORMANCE PAINT, TYPICAL ALL WINDOWS.
2. REMOVE SEALANT AROUND ENTIRE PERIMETER OF EXISTING STEEL WINDOW AND FILL WITH NEW BACKER ROD AND SEALANT. REFER TO DETAIL 7/A7.1-2.
3. REMOVE ALL SEALANT AT EXISTING VERTICAL EXPANSION JOINT AND FILL WITH NEW BACKER ROD AND SEALANT. REFER TO DETAIL 11/A7.1-2.
4. CLEAN RUST OFF EXISTING STEEL DOOR AND PAINT WITH NEW HIGH PERFORMANCE PAINT.
5. REMOVE AND REPLACE PORTIONS OF CRACKED AND SPALLING BRICK WITH NEW BRICK TO MATCH EXISTING.
7. OPEN SOLDIER COURSING AND REMOVE ALL BRITTLE FLASHING AT SHELF ANGLES AND REPLACE WITH NEW CONTINUOUS FLASHING OVER THE ENTIRE SHELF ANGLE AND PROVIDE NEW WEEP SYSTEMS. REFER TO DETAIL 7/A7.1-2.
8. PROVIDE NEW END DAM FLASHING AT ALL SHELF ANGLES. REFER TO DETAIL 14/A7.1-2.
9. OPEN SOLDIER COURSING AND REMOVE ALL BRITTLE FLASHING AT SHELF ANGLES AND REPLACE WITH NEW CONTINUOUS FLASHING OVER ENTIRE SHELF ANGLE AND PROVIDE NEW WEEP SYSTEMS. REFER TO DETAIL 8/A7.1-2.
10. PROVIDE NEW HORIZONTAL EXPANSION JOINT BELOW ALL SHELF ANGLES SUPPORTING BRICK WYTHE.
11. PROVIDE NEW ISOLATION JOINT IN EXTERIOR BRICK VENEER AS INDICATED.
12. PROVIDE NEW CONTINUED EXPANSION JOINT VERTICALLY UP TO PARAPET.
13. REMOVE AND REPLACE DAMAGED/FAILING METAL COPING. RE: COPING SPLICE AND FLASHING DETAIL 2/A6.4-2.
14. REPLACE MISSING/DAMAGED COUNTERFLASHING WITH NEW COUNTERFLASHING. RE: DETAIL 1/A6.4-2.
15. SAWCUT FULL DEPTH AND REMOVE ALL DEBRIS.
16. REPAIR CONCRETE PER DETAIL 16/A7.1-2.
17. REPAIR CONCRETE COLUMN, RE: DETAIL 16/A7.1.2 FOR CONCRETE REPAIR PROCEDURES.

NO.	REVISION	DATE
	ISSUED FOR BIDS	4-06-26

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PROJECT TITLE
MASONRY REPAIRS TO:
GENESEE COUNTY JAIL
1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE
JAIL LEVEL 5 FLOOR PLAN

PROJECT NUMBER	SHEET NUMBER
2024083.1	A2.5-2
PROJECT DATE: APRIL 06, 2026	
CHECKED BY: K.C.L.	

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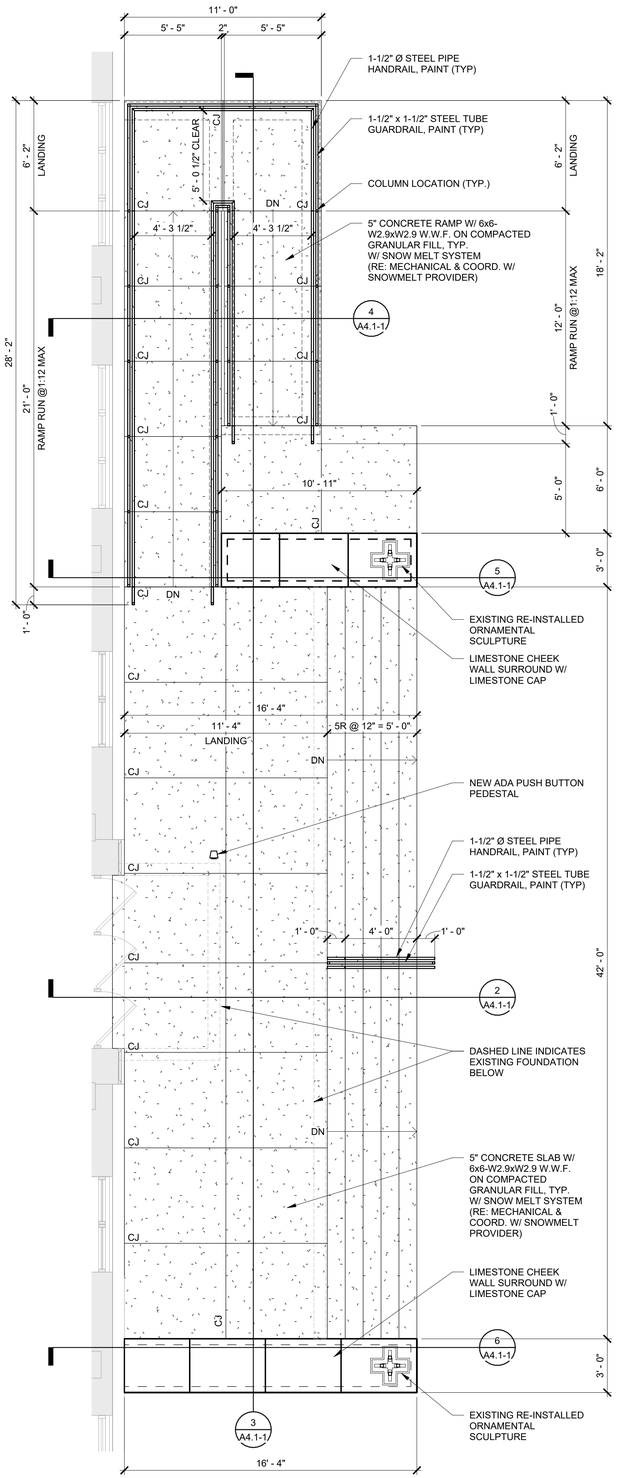
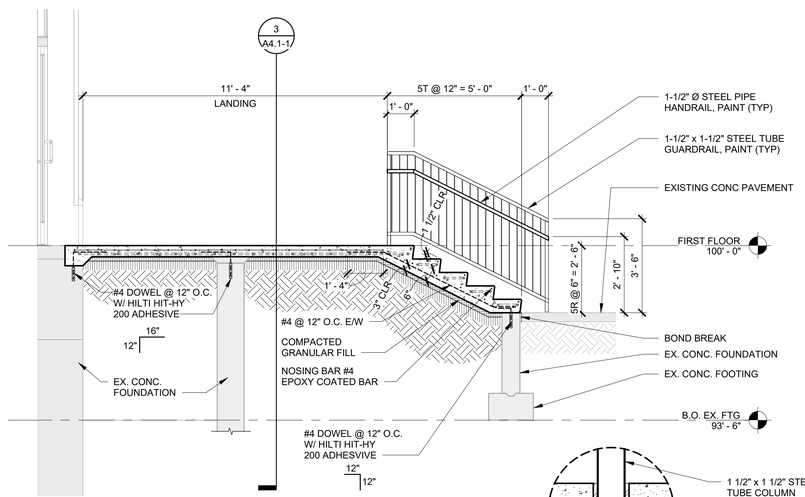
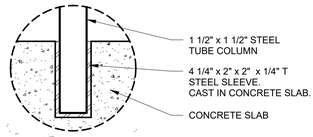


1 A4.1-1 — ENLARGED ORIGINAL EAST ENTRY STAIR/RAMP PLAN
SCALE: 1/4" = 1'-0"

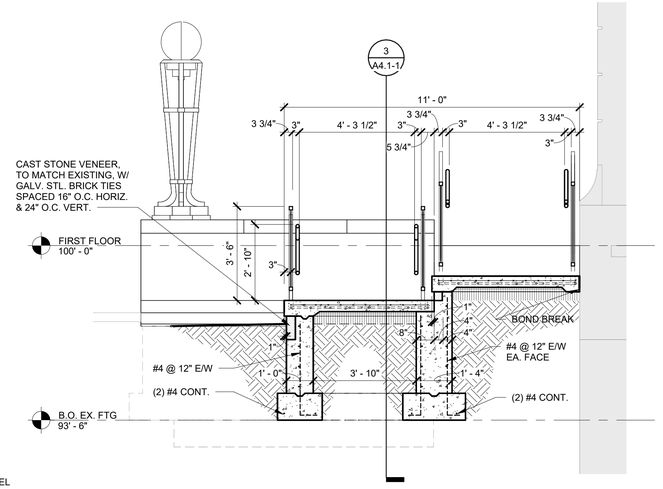
NORTH



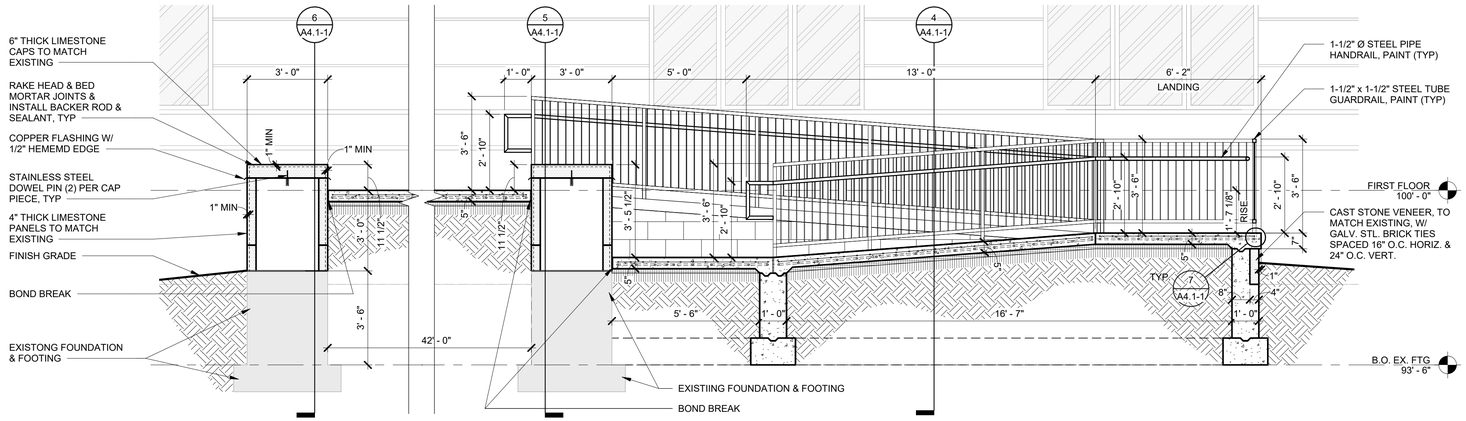
2 A4.1-1 — STAIR SECTION
SCALE: 3/8" = 1'-0"



7 A4.1-1 — TYP. RAILING BASE DETAIL
SCALE: 3" = 1'-0"



4 A4.1-1 — RAMP SECTION
SCALE: 3/8" = 1'-0"



3 A4.1-1 — RAMP SECTION
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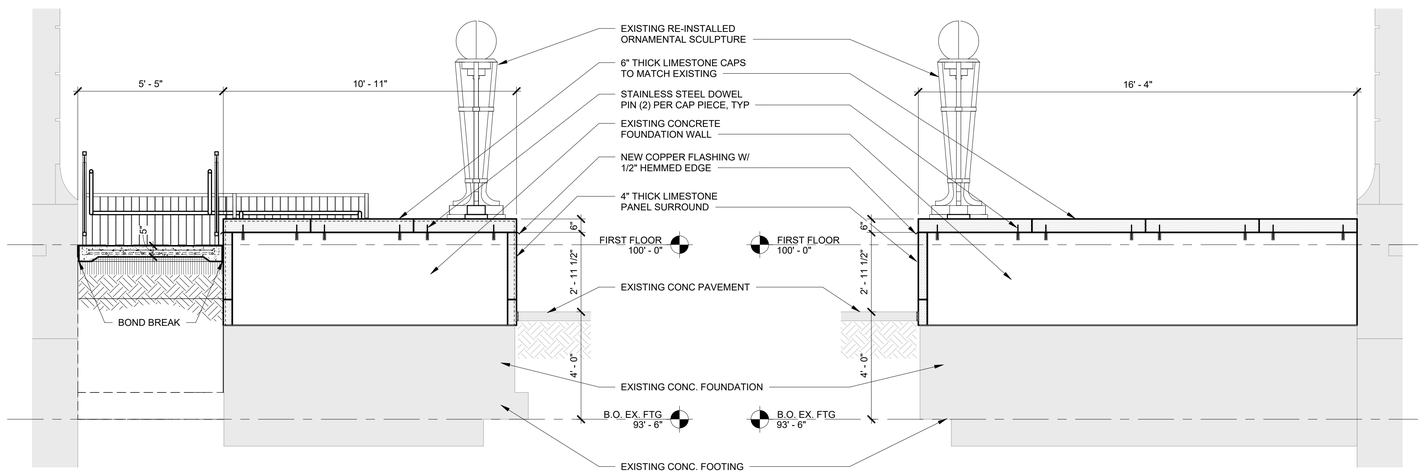

5 A4.1-1 — CHEEK WALL SECTION
SCALE: 3/8" = 1'-0"

6 A4.1-1 — CHEEK WALL SECTION
SCALE: 3/8" = 1'-0"

LEGEND:

CJ CONTROL JOINT, SEE DETAIL 7/A2.1-1

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	ISSUED FOR BIDS	4-06-26

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PROJECT TITLE

MASONRY REPAIRS TO:

GENESEE COUNTY COURTHOUSE & JAIL

900 & 1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE

ENLARGED STAIR & RAMP PLAN & SECTIONS

PROJECT NUMBER 2024083.1

PROJECT DATE APRIL 06, 2026

CHECKED BY K.C.L.

SHEET NUMBER A4.1-1

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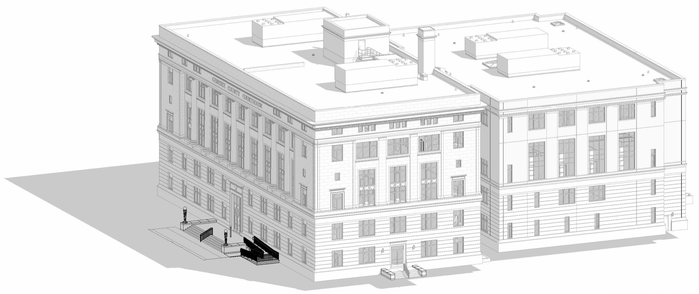

4 A5.1-1/ NORTH ISOMETRIC
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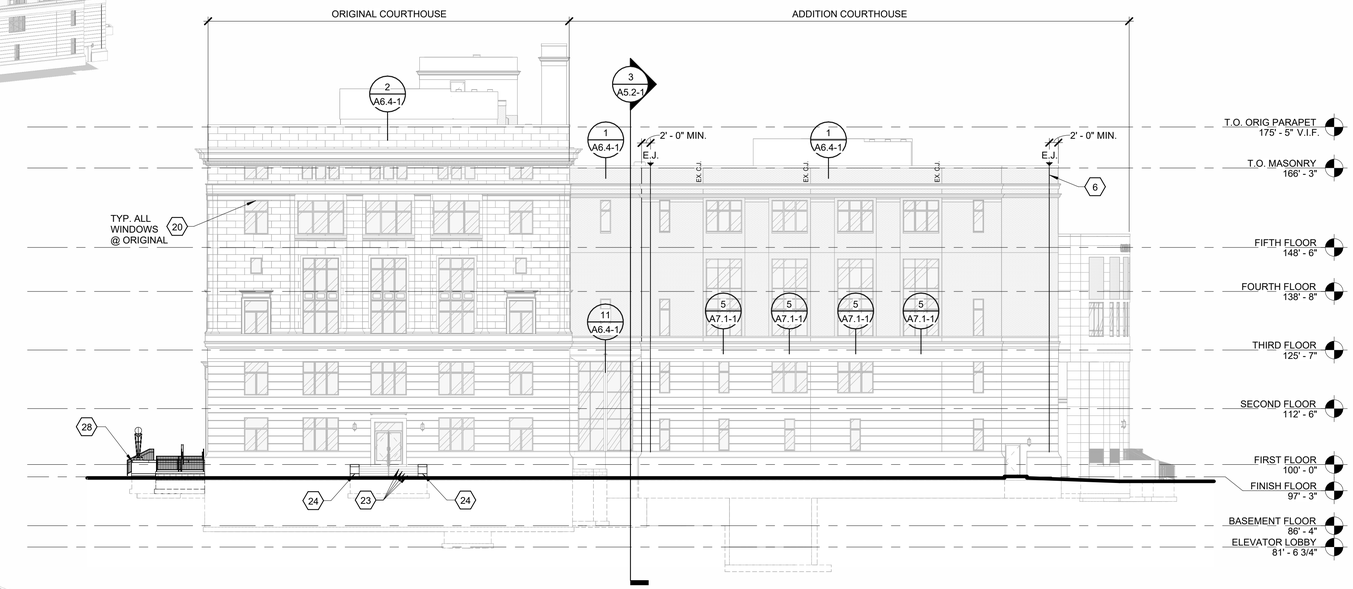
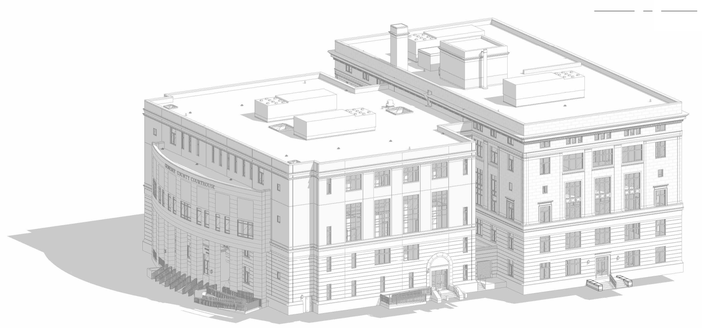
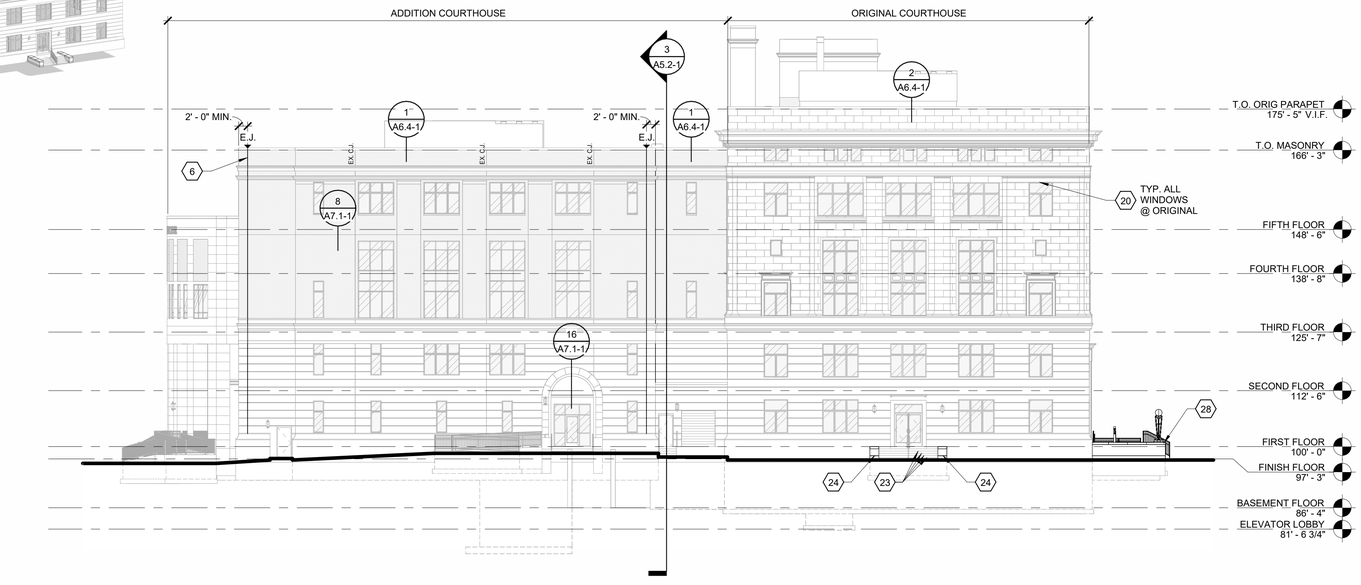


1/A5.1-1 NORTH ELEVATION
SCALE: 1/16" = 1'-0"



3 A5.1-1/ SOUTH ISOMETRIC
SCALE: N.T.S.



2/A5.1-1 SOUTH ELEVATION
SCALE: 1/16" = 1'-0"

EXTERIOR RESTORATION GENERAL NOTES:

1. INCLUDE AN ALLOWANCE FOR FIFTY (50) INJECTED EPOXY AND CEMENTITIOUS COMPOUND STONE CRACK REPAIRS. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 1.
2. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF ONE HUNDRED (100) SQUARE FEET OF DAMAGED LIMESTONE UNITS. NEW LIMESTONE SHALL MATCH EXISTING EXPOSED LIMESTONE, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED, AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT, AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 2.
3. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPOINTING OF TWO THOUSAND (2,000) LINEAL FEET OF DAMAGED MORTAR JOINTS, DEPTH OF NEW MORTAR SHALL BE 1 INCH MINIMUM. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 3 AND 7.
4. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF ONE HUNDRED (100) SQUARE FEET OF DAMAGED BRICK UNITS. NEW BRICK SHALL MATCH EXISTING EXPOSED BRICK COURSING, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED, AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT, AND CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 13.
5. INCLUDE AN ALLOWANCE FOR ONE THOUSAND (1000) LINEAL FEET OF NEW SEALANT JOINTS OF EXISTING DETERIORATED AND CRACKED JOINTS. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH ARCHITECT PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 9, 10, 14, 18, 23, AND 25.
6. WHERE ALL NEW FLASHING TERMINATE AGAINST A VERTICAL SURFACE - PROVIDE PROPER WATERTIGHT END DAMS THAT DIRECT WATER TO DRAINAGE WEEPS. COPPER PAN FLASHING SHALL HAVE EDGE TURNED UP WITH CORNERS SOLDERED WATERTIGHT. TYPICAL ALL LOCATIONS.
7. COLOR SCHEDULE FOR NEW SEALANTS SHALL BE AS FOLLOWS:
8. A) VERTICAL BRICK TO BRICK = BROWN TO MATCH BRICK
   B) HORIZONTAL BRICK OR STONE - LIMESTONE U.N.O.)
   C) BRICK TO STONE OR STONE TO STONE = LIMESTONE

   PROVIDE ACTUAL IN WALL SEALANT MOCKUPS OF EACH TYPE, AND EACH COLOR FOR OWNER'S AND ARCHITECT'S REVIEW. MOCKUPS MAY BECOME PART OF THE PERMANENT WORK IF APPROVED.
9. AT NEW AND EXISTING STEEL PREPARATION AND PAINTING, ALL STEEL SHALL BE HAND TOOL CLEANED PER SSPC-SP2, REFERENCE SPECIFICATION SECTION 099600-HIGH PERFORMANCE COATINGS. PRIME RUST AND COAT WITH HIGH PERFORMANCE PAINT PRODUCTS AS SPECIFIED AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MINIMUM 6 MILS TOTAL WET FILM THICKNESS.
10. AT ALL LOCATIONS OF MASONRY REMOVAL AND REPLACEMENT, CONTRACTOR SHALL PROPERLY INSTALL SHORING TO SUPPORT EXISTING MASONRY TO REMAIN ABOVE OPENED AREA. FAILURE TO INSTALL ADEQUATE SHORING THAT RESULTS IN DAMAGE TO THE MASONRY TO REMAIN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND / OR REPLACE DAMAGED MASONRY AND / OR ADJACENT SURFACES, ROOFS, ETC.
11. ALL ROOF AREAS EFFECTED BY CONSTRUCTION ACTIVITY SHALL BE PROTECTED W/ 3/4" PLYWOOD ON 2" RIGID SLOTTED INSULATION ON 6 MIL. PLASTIC SHEETING OVER THE EXISTING ROOFING. THIS SHALL INCLUDE ROOFS BOTH ABOVE AND BELOW THE AREAS UNDER CONSTRUCTION. DO NOT BLOCK EXISTING ROOF DRAINS, MAINTAIN POSITIVE DRAINAGE TO THEM, PROTECT DRAINS FROM DAMAGE.
12. CLEAN ALL EXISTING ROOF DRAINS.
13. ALL WORK INDICATED ON DRAWINGS DOES NOT NECESSARILY HAVE A CORRESPONDING "RESTORATION KEYNOTE" ASSIGNED TO IT AND MAY BE INDICATED BY "GENERAL NOTES" OR DETAILS.
14. REFERENCE RESTORATION KEYNOTES AND GENERAL NOTES FOR DEMOLITION ITEMS ASSOCIATED WITH THE FACADE AND RENOVATION WORK.
15. COPING AND MASONRY REPAIR MOCKUPS: REFERENCE SPECIFICATION SECTION 040120-MASONRY PARAPET REPAIR FOR LOCATIONS, AND DESCRIPTION OF REQUIRED MOCKUPS.
16. ALONG WITH CLEANING ALL AREAS OF THE NEW MASONRY INSTALLATIONS AND WHERE SPECIFIC STAINING IS NOTED TO BE CLEANED, CONTRACTOR SHALL CLEAN ALL AREAS OF EXISTING MASONRY BELOW AND ADJACENT TO THE WORK AREA THAT MAY BE AFFECTED BY RUN-OFF OR OVER-SPRAY AT NO ADDITIONAL COST TO OWNER.
17. ALL WELDING ON THIS PROJECT TO BE PERFORMED BY CERTIFIED WELDERS (NO EXCEPTIONS). INDIVIDUAL WELDERS CERTIFICATES TO BE INCLUDED IN SUBMITTALS.
18. ALL WELDING WORK AND FLASHING PANS TO BE INSPECTED BY ARCHITECT, STRUCTURAL ENGINEER AND/OR TESTING COMPANY HIRED BY OWNER PRIOR TO COVERING WITH NEW MASONRY.
19. AFTER COMPLETION OF WORK, CONTRACTOR SHALL CLEAN ALL WINDOW UNITS WHERE CONSTRUCTION DUST, DIRT, MATERIAL RESIDUE, ETC. MAY BE PRESENT.

RESTORATION KEYNOTES

1. FILL CRACKS IN LIMESTONE WITH AN INJECTED MASONRY EPOXY. PATCH FACE OF STONE AS REQUIRED TO BLEND WITH ADJACENT SURFACES.
2. PATCH SPALLED/VOIDS IN EXISTING LIMESTONE WITH CEMENTITIOUS COLORED PRODUCT. MATCH ADJACENT STONE TEXTURE AND COLOR. WHERE DAMAGED AREAS ARE TOO EXTENSIVE FOR PATCHING, REMOVE DAMAGED LIMESTONE PIECE(S) AND REPLACE WITH NEW LIMESTONE PIECE(S).
3. REMOVE EXISTING DAMAGED MORTAR FROM JOINTS TO A MINIMUM DEPTH OF ONE INCH, OR BACK TO SOUND MORTAR, AND REPLACE WITH NEW MORTAR BY REPOINTING METHOD. MATCH EXISTING COLOR.
4. CLEAN ALL EXISTING LIMESTONE SURFACES WITH A CHEMICAL PRODUCT AND LOW-PRESSURE WASH. PERFORM THIS AFTER ALL REPAIRS ARE COMPLETED.
5. PROVIDE NEW DRAINAGE WEEPS SPACED FROM 32" TO 48" ON CENTER AT THROUGH-WALL FLASHING.
6. PROVIDE NEW EXPANSION JOINT IN EXISTING MASONRY VENEER AS INDICATED AND FILL WITH NEW BACKER ROD AND SEALANT.
7. REMOVE ALL EXISTING HEAD JOINT MORTAR TO A DEPTH OF ONE INCH MINIMUM AT CULTURED STONE AND FILL WITH NEW BACKER ROD & SEALANT.
8. CHEMICALLY CLEAN ALL AREAS OF SOILED MASONRY SURFACES.
9. REMOVE ALL OPEN JOINT SEALANT AT EXISTING STAINLESS STEEL FLASHING AND REPLACE WITH NEW SEALANT BELOW EXISTING FLASHING.
10. REMOVE ALL EXISTING COPING HEAD JOINT SEALANT AND REPLACE WITH NEW JOINT SEALANT. RE: DETAIL 1/A6.4-1 AND 2/A6.4-1.
11. REMOVE ALL EXISTING LIMESTONE COPING, SALVAGE, CLEAN AND RE-INSTALL WITH NEW STAINLESS STEEL FLASHING AND FILL WITH NEW BACKER ROD AND SEALANT. RE: DETAIL 2/A6.4-1.
12. REMOVE AND REPLACE TERMINATION FLASHING. REFER TO SHEET A6.4-1.
13. REMOVE ENTIRE PERIMETER OF BRICK VENEER AT WINDOW UNIT AND REPLACE WITH NEW TIGHTLY SEALED FLASHING, END DAM FLASHING & WEEP HOLES. FILL PERIMETER OF WINDOW UNITS WITH NEW BACKER ROD AND SEALANT. RE: SHEET A7.1-1.
14. REMOVE ALL HORIZONTAL SEALANT BELOW FLASHING AND BLACK ADHESIVE ABOVE FLASHING AT EXISTING SHELF ANGLES AND FILL WITH NEW BACKER ROD AND SEALANT BELOW FLASHING AND NEW WEEP DRAINAGE HOLES.
15. PATCH & REPAIR PORTIONS OF INTERIOR GYP. BOARD CEILING AT WATER SPOT LOCATIONS, ONCE WATER LEAK REPAIRS ARE COMPLETE.
16. PATCH & REPAIR PORTIONS OF INTERIOR GYP. BOARD WALLS SURROUNDING WINDOW UNIT(S) AT WATER SPOT LOCATIONS, ONCE FLASHING REPAIRS ARE COMPLETE.
17. REPLACE WATER DAMAGED SILL. MATCH EXISTING.
18. REMOVE EXISTING EXPANSION JOINT SEALANT AND FILL WITH NEW BACKER ROD AND SEALANT. MATCH EXISTING SEALANT COLOR.
19. FILL OPEN JOINT WITH NEW BACKER ROD AND SEALANT.
20. REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF ALL ORGINAL COURTHOUSE STEEL WINDOW LINTELS, TYP. PAINT WITH NEW HIGH PERFORMANCE PAINT.
21. REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF EXISTING STAIR/RAMP RAILINGS. PAINT WITH NEW HIGH PERFORMANCE PAINT.
22. REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF EXISTING IRON DOOR FRAME. PAINT WITH NEW HIGH PERFORMANCE PAINT.
23. REMOVE ALL EXISTING SEALANT FROM GRANITE STEPS AT ALL JOINTS AND FILL WITH NEW SEALANT.
24. REMOVE ENTIRE MASONRY CHEEK WALL STRUCTURE FOR NEW CHEEK WALL STRUCTURE. RE: SHEET A2.1-1.
25. REMOVE ALL CRACKED SEALANT AND REPLACE WITH NEW SEALANT.
26. EXISTING SEALANT MAY CONTAIN HAZARDOUS MATERIALS AND SHOULD BE FURTHER TESTED.
28. NEW CONCRETE RAMP AND STAIR ON NEW SNOWMELT SYSTEM. REFER TO SHEET A4.1-1.
29. SAWCUT FULL DEPTH AND REMOVE ALL DEBRIS.
30. SAWCUT, REMOVE AND REPLACE WITH NEW LIMESTONE PANELS. MATCH EXISTING PROFILE.

NO.	REVISION	DATE
	ISSUED FOR BIDS	4-06-26

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PROJECT TITLE
MASONRY REPAIRS TO:
GENESEE COUNTY COURTHOUSE & JAIL
900 & 1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE
COURTHOUSE EXTERIOR ELEVATIONS

PROJECT NUMBER	SHEET NUMBER
2024083.1	A5.1-1
PROJECT DATE: APRIL 06, 2026	
CHECKED BY: K.C.L.	

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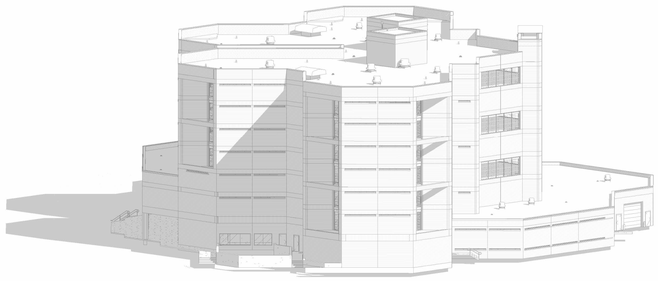

3 A5.1-2 NORTH ISOMETRIC
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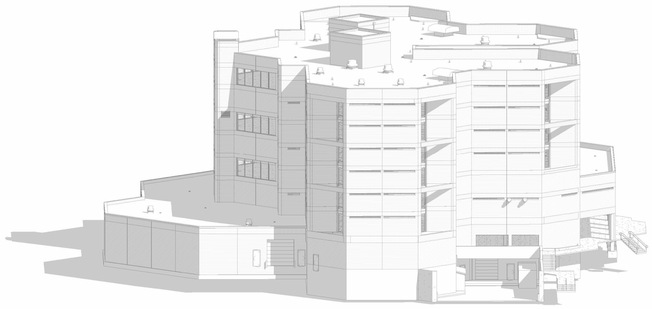

4 A5.1-2 SOUTH ISOMETRIC
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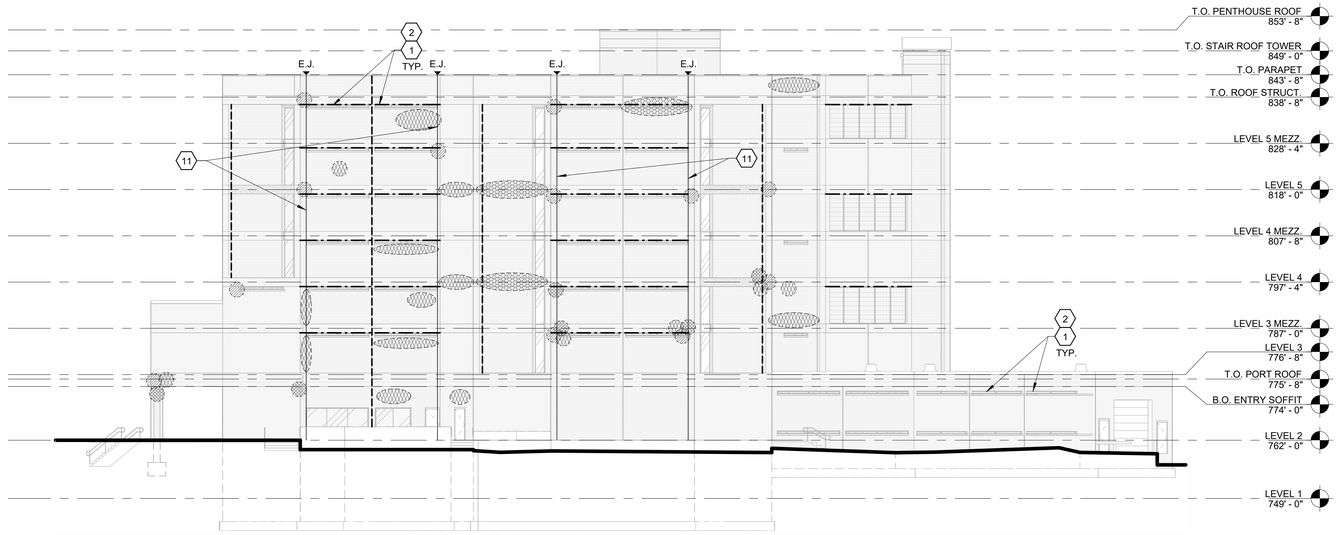
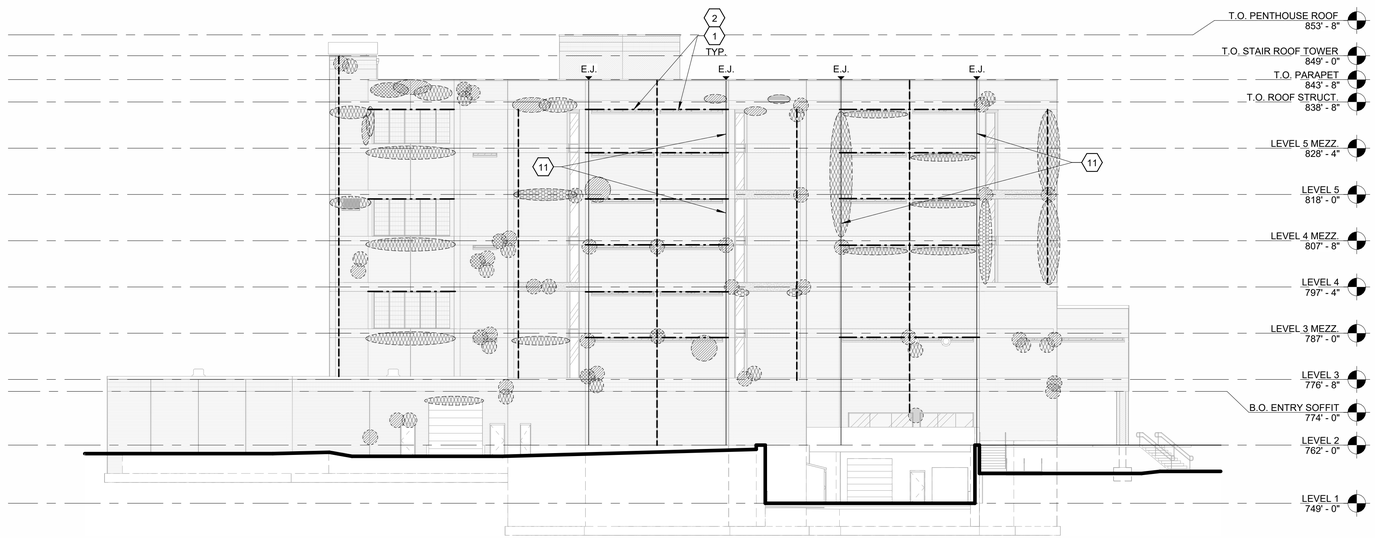


NORTH ELEVATION
1/A5.1-2 SCALE: 1/16" = 1'-0"



SOUTH ELEVATION
2/A5.1-2 SCALE: 1/16" = 1'-0"

CRACK MAPPING LEGEND:

- INDICATES MISSING BRICK
- INDICATES CRACKED BRICK
- INDICATES REPOINTING BRICK
- INDICATES ATTEMPTED CRACK FIX
- INDICATES SURFACE RUST
- INDICATES FAILED VERTICAL EXPANSION JOINT SEALANT
- INDICATES FAILED HORIZONTAL EXPANSION JOINT SEALANT

NOTE: ALL CRACK MAPPING THIS SHEET IS DIAGRAMMATIC AND SHOULD BE USED TO DETERMINE DESIGN INTENT. IT BY NO MEANS ILLUSTRATES EVERY CONDITION. CONTRACTOR TO FIELD VERIFY FULL EXTENT PRIOR TO BIDDING.

EXTERIOR RESTORATION GENERAL NOTES:

1. INCLUDE AN ALLOWANCE FOR ONE THOUSAND (1000) LINEAL FEET OF NEW SEALANT JOINTS OF EXISTING DETERIORATED AND CRACKED JOINTS. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH ARCHITECT PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 2 AND 3.
2. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF TWO HUNDRED (200) INDIVIDUALLY DAMAGED BRICK UNITS. NEW BRICK SHALL MATCH EXISTING EXPOSED BRICK COURSING, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 5.
3. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF TWO HUNDRED (100) INDIVIDUALLY DAMAGED BRICK UNITS. NEW BRICK SHALL MATCH EXISTING EXPOSED BRICK COURSING, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 5.
4. WHERE ALL NEW FLASHINGS TERMINATE AGAINST A VERTICAL SURFACE - PROVIDE PROPER WATERTIGHT END DAMS THAT DIRECT WATER TO DRAINAGE WEEPS. COPPER PAN FLASHINGS SHALL HAVE EDGE TURNED UP WITH CORNERS SOLDERED WATERTIGHT. TYPICAL ALL LOCATIONS.
5. COLOR SCHEDULE FOR NEW SEALANTS SHALL BE AS FOLLOWS:
   A) VERTICAL BRICK TO BRICK = TAN TO MATCH BRICK
   B) HORIZONTAL BRICK TO BRICK = TAN TO MATCH BRICK

   PROVIDE ACTUAL IN WALL SEALANT MOCKUPS OF EACH TYPE, AND EACH COLOR FOR OWNER'S AND ARCHITECT'S REVIEW. MOCKUPS MAY BECOME PART OF THE PERMANENT WORK IF APPROVED.
6. AT NEW AND EXISTING STEEL PREPARATION AND PAINTING, ALL STEEL SHALL BE HAND TOOL CLEANED PER SSPC-SP2, REFERENCE SPECIFICATION SECTION 099600-HIGH PERFORMANCE COATINGS. PRIME RUST AND COAT WITH HIGH PERFORMANCE PAINT PRODUCTS AS SPECIFIED AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MINIMUM 6 MILS TOTAL WET FILM THICKNESS.
7. AT ALL LOCATIONS OF MASONRY REMOVAL AND REPLACEMENT, CONTRACTOR SHALL PROPERLY INSTALL SHORING TO SUPPORT EXISTING MASONRY TO REMAIN ABOVE OPENED AREA. FAILURE TO INSTALL ADEQUATE SHORING THAT RESULTS IN DAMAGE TO THE MASONRY TO REMAIN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND / OR REPLACE DAMAGED MASONRY AND / OR ADJACENT SURFACES, ROOFS, ETC.
8. ALL ROOF AREAS EFFECTED BY CONSTRUCTION ACTIVITY SHALL BE PROTECTED W/ 3/4" PLYWOOD ON 2" RIGID SLOTTED INSULATION ON 6 MIL. PLASTIC SHEETING OVER THE EXISTING ROOFING. THIS SHALL INCLUDE ROOFS BOTH ABOVE AND BELOW THE AREAS UNDER CONSTRUCTION. DO NOT BLOCK EXISTING ROOF DRAINS, MAINTAIN POSITIVE DRAINAGE TO THEM, PROTECT DRAINS FROM DAMAGE.
9. CLEAN ALL EXISTING ROOF DRAINS.
10. ALL WORK INDICATED ON DRAWINGS DOES NOT NECESSARILY HAVE A CORRESPONDING "RESTORATION KEYNOTE" ASSIGNED TO IT AND MAY BE INDICATED BY "GENERAL NOTES" OR DETAILS.
11. REFERENCE RESTORATION KEYNOTES AND GENERAL NOTES FOR DEMOLITION ITEMS ASSOCIATED WITH THE FACADE AND RENOVATION WORK.
12. COPING AND MASONRY REPAIR MOCKUPS: REFERENCE SPECIFICATION SECTION 040120-MASONRY PARAPET REPAIR FOR LOCATIONS, AND DESCRIPTION OF REQUIRED MOCKUPS.
13. ALONG WITH CLEANING ALL AREAS OF THE NEW MASONRY INSTALLATIONS AND WHERE SPECIFIC STAINING IS NOTED TO BE CLEANED, CONTRACTOR SHALL CLEAN ALL AREAS OF EXISTING MASONRY BELOW AND ADJACENT TO THE WORK AREA THAT MAY BE AFFECTED BY RUN-OFF OR OVER-SPRAY AT NO ADDITIONAL COST TO OWNER.
14. ALL WELDING ON THIS PROJECT TO BE PERFORMED BY CERTIFIED WELDERS (NO EXCEPTIONS). INDIVIDUAL WELDERS CERTIFICATES TO BE INCLUDED IN SUBMITTALS.
15. ALL WELDING WORK AND FLASHING PANS TO BE INSPECTED BY ARCHITECT, STRUCTURAL ENGINEER AND/OR TESTING COMPANY HIRED BY OWNER PRIOR TO COVERING WITH NEW MASONRY.
16. AFTER COMPLETION OF WORK, CONTRACTOR SHALL CLEAN ALL WINDOW UNITS WHERE CONSTRUCTION DUST, DIRT, MATERIAL RESIDUE, ETC. MAY BE PRESENT.

(#) RESTORATION KEYNOTES

1. CLEAN RUST OFF ENTIRE EXISTING STEEL WINDOW FRAME AND PAINT WITH NEW HIGH PERFORMANCE PAINT. TYPICAL ALL WINDOWS.
2. REMOVE SEALANT AROUND ENTIRE PERIMETER OF EXISTING STEEL WINDOW AND FILL WITH NEW BACKER ROD AND SEALANT. REFER TO DETAIL 7/A7.1-2.
3. REMOVE ALL SEALANT AT EXISTING VERTICAL EXPANSION JOINT AND FILL WITH NEW BACKER ROD AND SEALANT. REFER TO DETAIL 11/A7.1-2.
4. CLEAN RUST OFF EXISTING STEEL DOOR AND PAINT WITH NEW HIGH PERFORMANCE PAINT.
5. REMOVE AND REPLACE PORTIONS OF CRACKED AND SPALLING BRICK WITH NEW BRICK TO MATCH EXISTING.
7. OPEN SOLDIER COURSING AND REMOVE ALL BRITTLE FLASHING AT SHELF ANGLES AND REPLACE WITH NEW CONTINUOUS FLASHING OVER THE ENTIRE SHELF ANGLE AND PROVIDE NEW WEEP SYSTEMS. REFER TO DETAIL 7/A7.1-2.
8. PROVIDE NEW END DAM FLASHING AT ALL SHELF ANGLES. REFER TO DETAIL 14/A7.1-2.
9. OPEN SOLDIER COURSING AND REMOVE ALL BRITTLE FLASHING AT SHELF ANGLES AND REPLACE WITH NEW CONTINUOUS FLASHING OVER ENTIRE SHELF ANGLE AND PROVIDE NEW WEEP SYSTEMS. REFER TO DETAIL 8/A7.1-2.
10. PROVIDE NEW HORIZONTAL EXPANSION JOINT BELOW ALL SHELF ANGLES SUPPORTING BRICK WYTHE.
11. PROVIDE NEW ISOLATION JOINT IN EXTERIOR BRICK VENEER AS INDICATED.
12. PROVIDE NEW CONTINUED EXPANSION JOINT VERTICALLY UP TO PARAPET.
13. REMOVE AND REPLACE DAMAGED/FAILING METAL COPING. RE: COPING SPLICE AND FLASHING DETAIL 2/A6.4-2.
14. REPLACE MISSING/DAMAGED COUNTERFLASHING WITH NEW COUNTERFLASHING. RE: DETAIL 1/A6.4-2.
15. SAWCUT FULL DEPTH AND REMOVE ALL DEBRIS.
16. REPAIR CONCRETE PER DETAIL 16/A7.1-2.
17. REPAIR CONCRETE COLUMN. RE: DETAIL 16/A7.1.2 FOR CONCRETE REPAIR PROCEDURES.

NO.	REVISION	DATE
	ISSUED FOR BIDS	4-06-26

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PROJECT TITLE
MASONRY REPAIRS TO:
GENESEE COUNTY JAIL
1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE
JAIL EXTERIOR ELEVATIONS

PROJECT NUMBER	SHEET NUMBER
2024083.1	A5.1-2
PROJECT DATE: APRIL 06, 2026	
CHECKED BY: K.C.L.	

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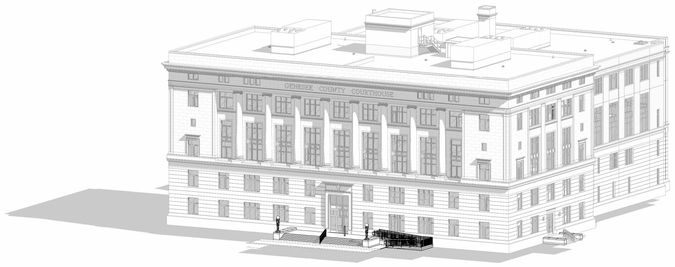

7 A5.2-1 EAST ISOMETRIC
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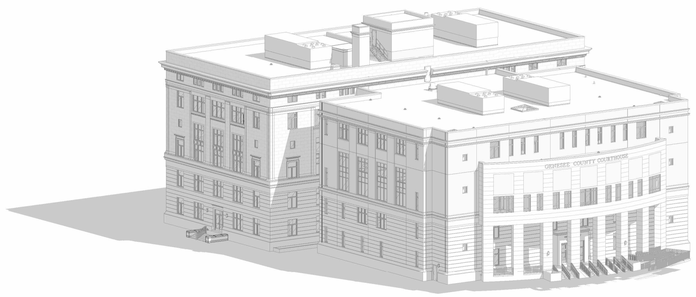

6 A5.2-1 WEST ISOMETRIC
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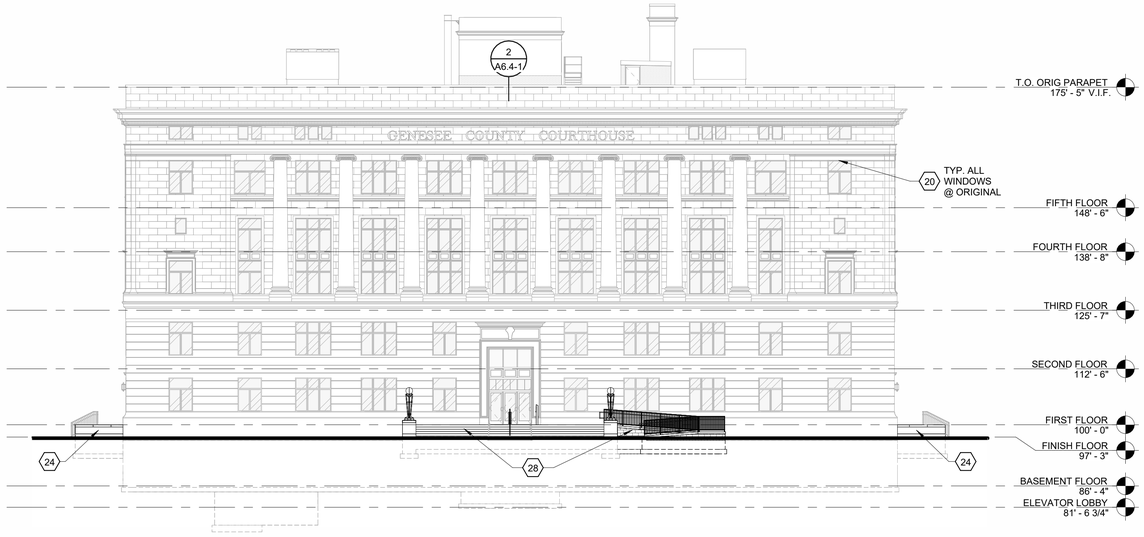
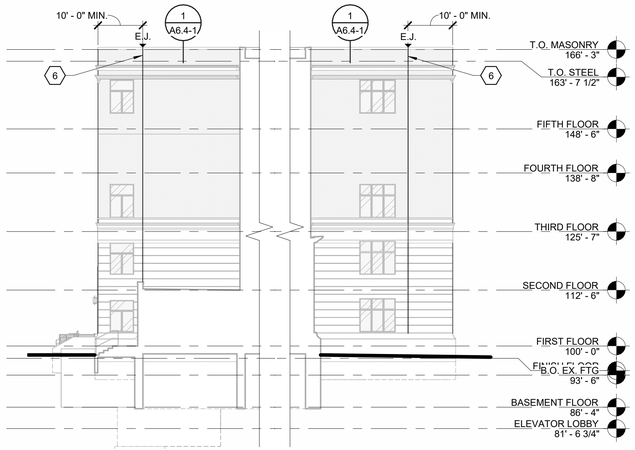


EAST ELEVATION
1/A5.2-1 SCALE: 1/16" = 1'-0"



3 A5.2-1 BUILDING SECTION - ADDITION SIDE
SCALE: 1/16" = 1'-0"

WEST ELEVATION
2/A5.2-1 SCALE: 1/16" = 1'-0"

EXTERIOR RESTORATION GENERAL NOTES:

1. INCLUDE AN ALLOWANCE FOR FIFTY (50) INJECTED EPOXY AND CEMENTITIOUS COMPOUND STONE CRACK REPAIRS. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 1.
2. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF ONE HUNDRED (100) SQUARE FEET OF DAMAGED LIMESTONE UNITS. NEW LIMESTONE SHALL MATCH EXISTING EXPOSED LIMESTONE, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED, AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT, AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 2.
3. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPOINTING OF TWO THOUSAND (2,000) LINEAL FEET OF DAMAGED MORTAR JOINTS, DEPTH OF NEW MORTAR SHALL BE 1 INCH MINIMUM. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 3 AND 7.
4. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF ONE HUNDRED (100) SQUARE FEET OF DAMAGED BRICK UNITS. NEW BRICK SHALL MATCH EXISTING EXPOSED BRICK COURSING, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED, AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT, AND CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 13.
5. INCLUDE AN ALLOWANCE FOR ONE THOUSAND (1000) LINEAL FEET OF NEW SEALANT JOINTS OF EXISTING DETERIORATED AND CRACKED JOINTS. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH ARCHITECT PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 9, 10, 14, 18, 23, AND 25.
6. WHERE ALL NEW FLASHING TERMINATE AGAINST A VERTICAL SURFACE - PROVIDE PROPER WATERTIGHT END DAMS THAT DIRECT WATER TO DRAINAGE WEEPS. COPPER PAN FLASHING SHALL HAVE EDGE TURNED UP WITH CORNERS SOLDERED WATERTIGHT. TYPICAL ALL LOCATIONS.
7. COLOR SCHEDULE FOR NEW SEALANTS SHALL BE AS FOLLOWS:
8. A) VERTICAL BRICK TO BRICK = BROWN TO MATCH BRICK
   B) HORIZONTAL BRICK OR STONE - LIMESTONE U.N.O.)
   C) BRICK TO STONE OR STONE TO STONE = LIMESTONE

   PROVIDE ACTUAL IN WALL SEALANT MOCKUPS OF EACH TYPE, AND EACH COLOR FOR OWNER'S AND ARCHITECT'S REVIEW. MOCKUPS MAY BECOME PART OF THE PERMANENT WORK IF APPROVED.
9. AT NEW AND EXISTING STEEL PREPARATION AND PAINTING, ALL STEEL SHALL BE HAND TOOL CLEANED PER SSPC-SP2, REFERENCE SPECIFICATION SECTION 099600-HIGH PERFORMANCE COATINGS. PRIME RUST AND COAT WITH HIGH PERFORMANCE PAINT PRODUCTS AS SPECIFIED AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MINIMUM 6 MILS TOTAL WET FILM THICKNESS.
10. AT ALL LOCATIONS OF MASONRY REMOVAL AND REPLACEMENT, CONTRACTOR SHALL PROPERLY INSTALL SHORING TO SUPPORT EXISTING MASONRY TO REMAIN ABOVE OPENED AREA. FAILURE TO INSTALL ADEQUATE SHORING THAT RESULTS IN DAMAGE TO THE MASONRY TO REMAIN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND / OR REPLACE DAMAGED MASONRY AND / OR ADJACENT SURFACES, ROOFS, ETC.
11. ALL ROOF AREAS EFFECTED BY CONSTRUCTION ACTIVITY SHALL BE PROTECTED W/ 3/4" PLYWOOD ON 2" RIGID SLOTTED INSULATION ON 6 MIL. PLASTIC SHEETING OVER THE EXISTING ROOFING. THIS SHALL INCLUDE ROOFS BOTH ABOVE AND BELOW THE AREAS UNDER CONSTRUCTION. DO NOT BLOCK EXISTING ROOF DRAINS, MAINTAIN POSITIVE DRAINAGE TO THEM, PROTECT DRAINS FROM DAMAGE.
12. CLEAN ALL EXISTING ROOF DRAINS.
13. ALL WORK INDICATED ON DRAWINGS DOES NOT NECESSARILY HAVE A CORRESPONDING "RESTORATION KEYNOTE" ASSIGNED TO IT AND MAY BE INDICATED BY "GENERAL NOTES" OR DETAILS.
14. REFERENCE RESTORATION KEYNOTES AND GENERAL NOTES FOR DEMOLITION ITEMS ASSOCIATED WITH THE FACADE AND RENOVATION WORK.
15. COPING AND MASONRY REPAIR MOCKUPS: REFERENCE SPECIFICATION SECTION 040120-MASONRY PARAPET REPAIR FOR LOCATIONS, AND DESCRIPTION OF REQUIRED MOCKUPS.
16. ALONG WITH CLEANING ALL AREAS OF THE NEW MASONRY INSTALLATIONS AND WHERE SPECIFIC STAINING IS NOTED TO BE CLEANED, CONTRACTOR SHALL CLEAN ALL AREAS OF EXISTING MASONRY BELOW AND ADJACENT TO THE WORK AREA THAT MAY BE AFFECTED BY RUN-OFF OR OVER-SPRAY AT NO ADDITIONAL COST TO OWNER.
17. ALL WELDING ON THIS PROJECT TO BE PERFORMED BY CERTIFIED WELDERS (NO EXCEPTIONS). INDIVIDUAL WELDERS CERTIFICATES TO BE INCLUDED IN SUBMITTALS.
18. ALL WELDING WORK AND FLASHING PANS TO BE INSPECTED BY ARCHITECT, STRUCTURAL ENGINEER AND/OR TESTING COMPANY HIRED BY OWNER PRIOR TO COVERING WITH NEW MASONRY.
19. AFTER COMPLETION OF WORK, CONTRACTOR SHALL CLEAN ALL WINDOW UNITS WHERE CONSTRUCTION DUST, DIRT, MATERIAL RESIDUE, ETC. MAY BE PRESENT.

RESTORATION KEYNOTES

1. FILL CRACKS IN LIMESTONE WITH AN INJECTED MASONRY EPOXY. PATCH FACE OF STONE AS REQUIRED TO BLEND WITH ADJACENT SURFACES.
2. PATCH SPALLED/VOIDS IN EXISTING LIMESTONE WITH CEMENTITIOUS COLORED PRODUCT. MATCH ADJACENT STONE TEXTURE AND COLOR. WHERE DAMAGED AREAS ARE TOO EXTENSIVE FOR PATCHING, REMOVE DAMAGED LIMESTONE PIECE(S) AND REPLACE WITH NEW LIMESTONE PIECE(S).
3. REMOVE EXISTING DAMAGED MORTAR FROM JOINTS TO A MINIMUM DEPTH OF ONE INCH, OR BACK TO SOUND MORTAR, AND REPLACE WITH NEW MORTAR BY REPOINTING METHOD. MATCH EXISTING COLOR.
4. CLEAN ALL EXISTING LIMESTONE SURFACES WITH A CHEMICAL PRODUCT AND LOW-PRESSURE WASH. PERFORM THIS AFTER ALL REPAIRS ARE COMPLETED.
5. PROVIDE NEW DRAINAGE WEEPS SPACED FROM 32" TO 48" ON CENTER AT THROUGH-WALL FLASHING.
6. PROVIDE NEW EXPANSION JOINT IN EXISTING MASONRY VENEER AS INDICATED AND FILL WITH NEW BACKER ROD AND SEALANT.
7. REMOVE ALL EXISTING HEAD JOINT MORTAR TO A DEPTH OF ONE INCH MINIMUM AT CULTURED STONE AND FILL WITH NEW BACKER ROD & SEALANT.
8. CHEMICALLY CLEAN ALL AREAS OF SOILED MASONRY SURFACES.
9. REMOVE ALL OPEN JOINT SEALANT AT EXISTING STAINLESS STEEL FLASHING AND REPLACE WITH NEW SEALANT BELOW EXISTING FLASHING.
10. REMOVE ALL EXISTING COPING HEAD JOINT SEALANT AND REPLACE WITH NEW JOINT SEALANT. RE: DETAIL 1/A6.4-1 AND 2/A6.4-1.
11. REMOVE ALL EXISTING LIMESTONE COPING, SALVAGE, CLEAN AND RE-INSTALL WITH NEW STAINLESS STEEL FLASHING AND FILL WITH NEW BACKER ROD AND SEALANT. RE: DETAIL 2/A6.4-1.
12. REMOVE AND REPLACE TERMINATION FLASHING. REFER TO SHEET A6.4-1.
13. REMOVE ENTIRE PERIMETER OF BRICK VENEER AT WINDOW UNIT AND REPLACE WITH NEW TIGHTLY SEALED FLASHING, END DAM FLASHING & WEEP HOLES. FILL PERIMETER OF WINDOW UNITS WITH NEW BACKER ROD AND SEALANT. RE: SHEET A7.1-1.
14. REMOVE ALL HORIZONTAL SEALANT BELOW FLASHING AND BLACK ADHESIVE ABOVE FLASHING AT EXISTING SHELF ANGLES AND FILL WITH NEW BACKER ROD AND SEALANT BELOW FLASHING AND NEW WEEP DRAINAGE HOLES.
15. PATCH & REPAIR PORTIONS OF INTERIOR GYP. BOARD CEILING AT WATER SPOT LOCATIONS, ONCE WATER LEAK REPAIRS ARE COMPLETE.
16. PATCH & REPAIR PORTIONS OF INTERIOR GYP. BOARD WALLS SURROUNDING WINDOW UNIT(S) AT WATER SPOT LOCATIONS, ONCE FLASHING REPAIRS ARE COMPLETE.
17. REPLACE WATER DAMAGED SILL. MATCH EXISTING.
18. REMOVE EXISTING EXPANSION JOINT SEALANT AND FILL WITH NEW BACKER ROD AND SEALANT. MATCH EXISTING SEALANT COLOR.
19. FILL OPEN JOINT WITH NEW BACKER ROD AND SEALANT.
20. REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF ALL ORGINAL COURTHOUSE STEEL WINDOW LINTELS, TYP. PAINT WITH NEW HIGH PERFORMANCE PAINT.
21. REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF EXISTING STAIR/RAMP RAILINGS. PAINT WITH NEW HIGH PERFORMANCE PAINT.
22. REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF EXISTING IRON DOOR FRAME. PAINT WITH NEW HIGH PERFORMANCE PAINT.
23. REMOVE ALL EXISTING SEALANT FROM GRANITE STEPS AT ALL JOINTS AND FILL WITH NEW SEALANT.
24. REMOVE ENTIRE MASONRY CHEEK WALL STRUCTURE FOR NEW CHEEK WALL STRUCTURE. RE: SHEET A2.1-1.
25. REMOVE ALL CRACKED SEALANT AND REPLACE WITH NEW SEALANT.
26. EXISTING SEALANT MAY CONTAIN HAZARDOUS MATERIALS AND SHOULD BE FURTHER TESTED.
28. NEW CONCRETE RAMP AND STAIR ON NEW SNOWMELT SYSTEM. REFER TO SHEET A4.1-1.
29. SAWCUT FULL DEPTH AND REMOVE ALL DEBRIS.
30. SAWCUT, REMOVE AND REPLACE WITH NEW LIMESTONE PANELS. MATCH EXISTING PROFILE.

NO.	REVISION	DATE
	ISSUED FOR BIDS	4-06-26

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MASONRY REPAIRS TO:
GENESEE COUNTY COURTHOUSE & JAIL
900 & 1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE
COURTHOUSE EXTERIOR ELEVATIONS

PROJECT NUMBER 2024083.1
PROJECT DATE APRIL 06, 2026
CHECKED BY K.C.L.
SHEET NUMBER A5.2-1

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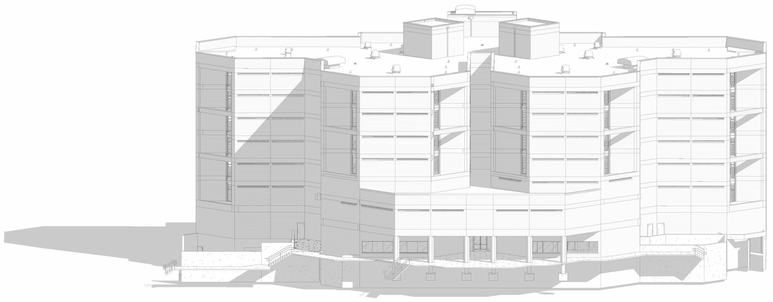

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4 A5.2-2 WEST ISOMETRIC
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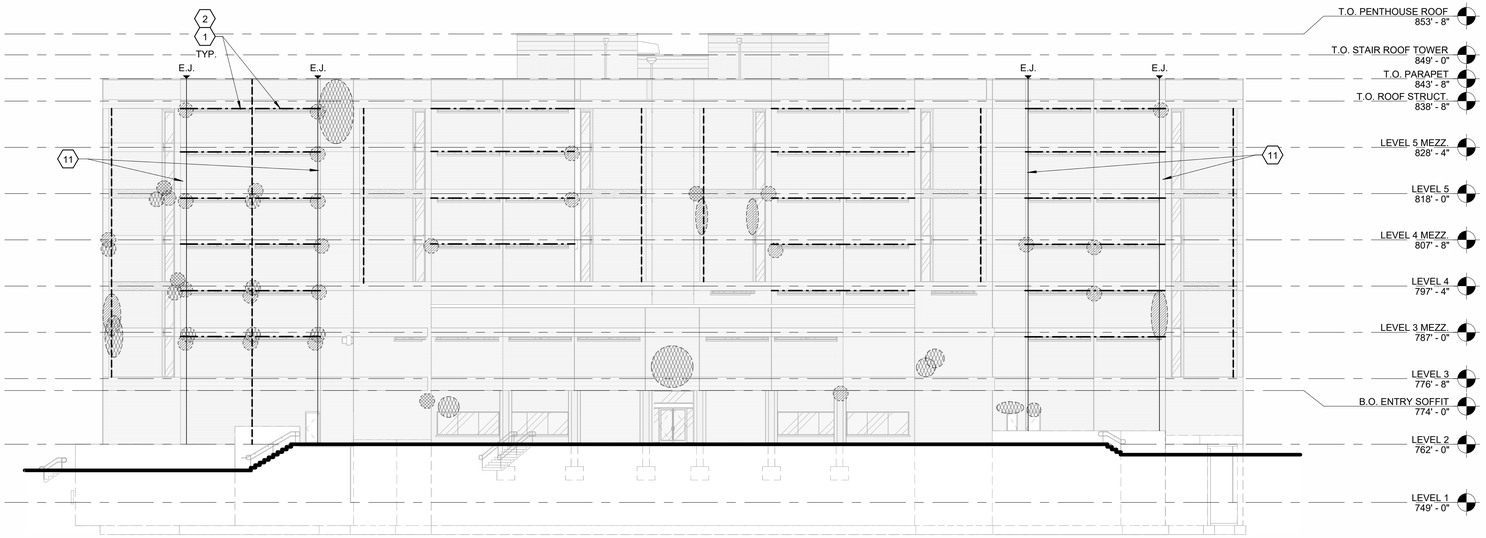
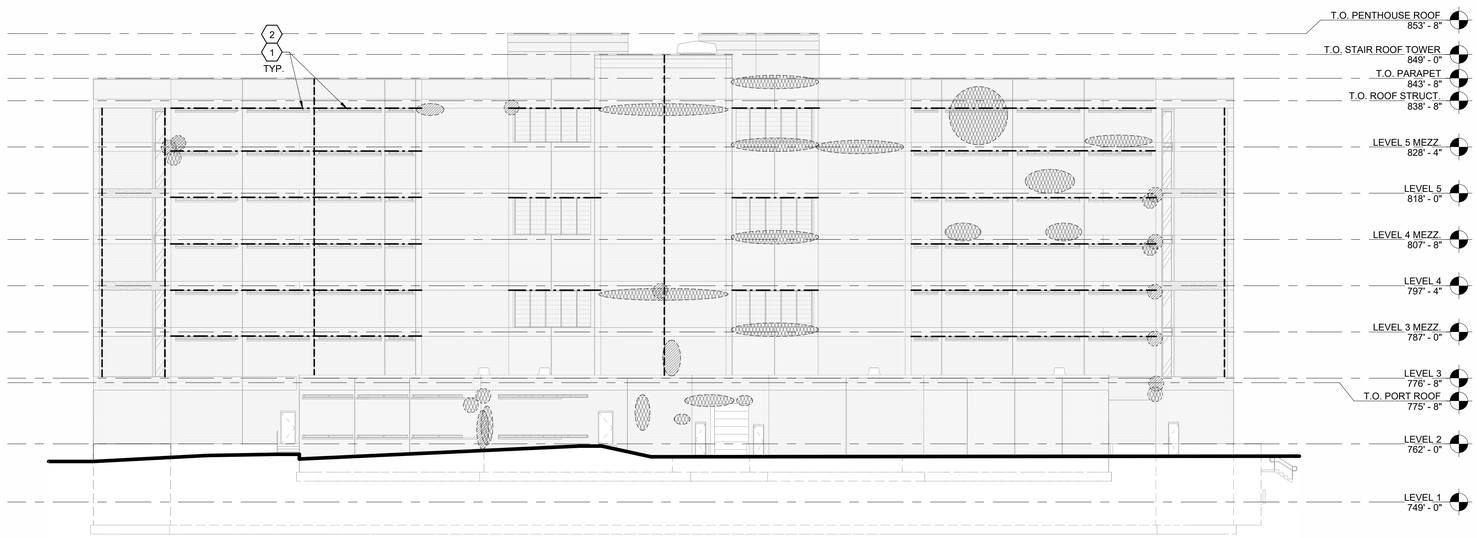


EAST ELEVATION
1/A5.2-2 SCALE: 1/16" = 1'-0"



WEST ELEVATION
2/A5.2-2 SCALE: 1/16" = 1'-0"

CRACK MAPPING LEGEND:

- INDICATES MISSING BRICK
- INDICATES CRACKED BRICK
- INDICATES REPOINTING BRICK
- INDICATES ATTEMPTED CRACK FIX
- INDICATES SURFACE RUST
- INDICATES FAILED VERTICAL EXPANSION JOINT SEALANT
- INDICATES FAILED HORIZONTAL EXPANSION JOINT SEALANT

NOTE: ALL CRACK MAPPING THIS SHEET IS DIAGRAMMATIC AND SHOULD BE USED TO DETERMINE DESIGN INTENT. IT BY NO MEANS ILLUSTRATES EVERY CONDITION. CONTRACTOR TO FIELD VERIFY FULL EXTENT PRIOR TO BIDDING.

EXTERIOR RESTORATION GENERAL NOTES:

1. INCLUDE AN ALLOWANCE FOR ONE THOUSAND (1000) LINEAL FEET OF NEW SEALANT JOINTS OF EXISTING DETERIORATED AND CRACKED JOINTS. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH ARCHITECT PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 2 AND 3.
2. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF TWO HUNDRED (200) INDIVIDUALLY DAMAGED BRICK UNITS. NEW BRICK SHALL MATCH EXISTING EXPOSED BRICK COURSING, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 5.
3. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF TWO HUNDRED (100) INDIVIDUALLY DAMAGED BRICK UNITS. NEW BRICK SHALL MATCH EXISTING EXPOSED BRICK COURSING, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 5.
4. WHERE ALL NEW FLASHINGS TERMINATE AGAINST A VERTICAL SURFACE - PROVIDE PROPER WATERTIGHT END DAMS THAT DIRECT WATER TO DRAINAGE WEEPS. COPPER PAN FLASHINGS SHALL HAVE EDGE TURNED UP WITH CORNERS SOLDERED WATERTIGHT. TYPICAL ALL LOCATIONS.
5. COLOR SCHEDULE FOR NEW SEALANTS SHALL BE AS FOLLOWS:
   A) VERTICAL BRICK TO BRICK = TAN TO MATCH BRICK
   B) HORIZONTAL BRICK TO BRICK = TAN TO MATCH BRICK

   PROVIDE ACTUAL IN WALL SEALANT MOCKUPS OF EACH TYPE, AND EACH COLOR FOR OWNER'S AND ARCHITECT'S REVIEW. MOCKUPS MAY BECOME PART OF THE PERMANENT WORK IF APPROVED.
6. AT NEW AND EXISTING STEEL PREPARATION AND PAINTING, ALL STEEL SHALL BE HAND TOOL CLEANED PER SSPC-SP2. REFERENCE SPECIFICATION SECTION 099600-HIGH PERFORMANCE COATINGS. PRIME RUST AND COAT WITH HIGH PERFORMANCE PAINT PRODUCTS AS SPECIFIED AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MINIMUM 6 MILS TOTAL WET FILM THICKNESS.
7. AT ALL LOCATIONS OF MASONRY REMOVAL AND REPLACEMENT, CONTRACTOR SHALL PROPERLY INSTALL SHORING TO SUPPORT EXISTING MASONRY TO REMAIN ABOVE OPENED AREA. FAILURE TO INSTALL ADEQUATE SHORING THAT RESULTS IN DAMAGE TO THE MASONRY TO REMAIN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND / OR REPLACE DAMAGED MASONRY AND / OR ADJACENT SURFACES, ROOFS, ETC.
8. ALL ROOF AREAS EFFECTED BY CONSTRUCTION ACTIVITY SHALL BE PROTECTED W/ 3/4" PLYWOOD ON 2" RIGID SLOTTED INSULATION ON 6 MIL PLASTIC SHEETING OVER THE EXISTING ROOFING. THIS SHALL INCLUDE ROOFS BOTH ABOVE AND BELOW THE AREAS UNDER CONSTRUCTION. DO NOT BLOCK EXISTING ROOF DRAINS, MAINTAIN POSITIVE DRAINAGE TO THEM, PROTECT DRAINS FROM DAMAGE.
9. CLEAN ALL EXISTING ROOF DRAINS.
10. ALL WORK INDICATED ON DRAWINGS DOES NOT NECESSARILY HAVE A CORRESPONDING "RESTORATION KEYNOTE" ASSIGNED TO IT AND MAY BE INDICATED BY "GENERAL NOTES" OR DETAILS.
11. REFERENCE RESTORATION KEYNOTES AND GENERAL NOTES FOR DEMOLITION ITEMS ASSOCIATED WITH THE FACADE AND RENOVATION WORK.
12. COPING AND MASONRY REPAIR MOCKUPS: REFERENCE SPECIFICATION SECTION 040120-MASONRY PARAPET REPAIR FOR LOCATIONS, AND DESCRIPTION OF REQUIRED MOCKUPS.
13. ALONG WITH CLEANING ALL AREAS OF THE NEW MASONRY INSTALLATIONS AND WHERE SPECIFIC STAINING IS NOTED TO BE CLEANED, CONTRACTOR SHALL CLEAN ALL AREAS OF EXISTING MASONRY BELOW AND ADJACENT TO THE WORK AREA THAT MAY BE AFFECTED BY RUN-OFF OR OVER-SPRAY AT NO ADDITIONAL COST TO OWNER.
14. ALL WELDING ON THIS PROJECT TO BE PERFORMED BY CERTIFIED WELDERS (NO EXCEPTIONS). INDIVIDUAL WELDERS CERTIFICATES TO BE INCLUDED IN SUBMITTALS.
15. ALL WELDING WORK AND FLASHING PANS TO BE INSPECTED BY ARCHITECT, STRUCTURAL ENGINEER AND/OR TESTING COMPANY HIRED BY OWNER PRIOR TO COVERING WITH NEW MASONRY.
16. AFTER COMPLETION OF WORK, CONTRACTOR SHALL CLEAN ALL WINDOW UNITS WHERE CONSTRUCTION DUST, DIRT, MATERIAL RESIDUE, ETC. MAY BE PRESENT.

(#) RESTORATION KEYNOTES

1. CLEAN RUST OFF ENTIRE EXISTING STEEL WINDOW FRAME AND PAINT WITH NEW HIGH PERFORMANCE PAINT. TYPICAL ALL WINDOWS.
2. REMOVE SEALANT AROUND ENTIRE PERIMETER OF EXISTING STEEL WINDOW AND FILL WITH NEW BACKER ROD AND SEALANT. REFER TO DETAIL 7/A7.1-2.
3. REMOVE ALL SEALANT AT EXISTING VERTICAL EXPANSION JOINT AND FILL WITH NEW BACKER ROD AND SEALANT. REFER TO DETAIL 11/A7.1-2.
4. CLEAN RUST OFF EXISTING STEEL DOOR AND PAINT WITH NEW HIGH PERFORMANCE PAINT.
5. REMOVE AND REPLACE PORTIONS OF CRACKED AND SPALLING BRICK WITH NEW BRICK TO MATCH EXISTING.
7. OPEN SOLDIER COURSING AND REMOVE ALL BRITTLE FLASHING AT SHELF ANGLES AND REPLACE WITH NEW CONTINUOUS FLASHING OVER THE ENTIRE SHELF ANGLE AND PROVIDE NEW WEEP SYSTEMS. REFER TO DETAIL 7/A7.1-2.
8. PROVIDE NEW END DAM FLASHING AT ALL SHELF ANGLES. REFER TO DETAIL 14/A7.1-2.
9. OPEN SOLDIER COURSING AND REMOVE ALL BRITTLE FLASHING AT SHELF ANGLES AND REPLACE WITH NEW CONTINUOUS FLASHING OVER ENTIRE SHELF ANGLE AND PROVIDE NEW WEEP SYSTEMS. REFER TO DETAIL 8/A7.1-2.
10. PROVIDE NEW HORIZONTAL EXPANSION JOINT BELOW ALL SHELF ANGLES SUPPORTING BRICK WYTHE.
11. PROVIDE NEW ISOLATION JOINT IN EXTERIOR BRICK VENEER AS INDICATED.
12. PROVIDE NEW CONTINUED EXPANSION JOINT VERTICALLY UP TO PARAPET.
13. REMOVE AND REPLACE DAMAGED/FAILING METAL COPING. RE: COPING SPLICE AND FLASHING DETAIL 2/A6.4-2.
14. REPLACE MISSING/DAMAGED COUNTERFLASHING WITH NEW COUNTERFLASHING. RE: DETAIL 1/A6.4-2.
15. SAWCUT FULL DEPTH AND REMOVE ALL DEBRIS.
16. REPAIR CONCRETE PER DETAIL 16/A7.1-2.
17. REPAIR CONCRETE COLUMN. RE: DETAIL 16/A7.1.2 FOR CONCRETE REPAIR PROCEDURES.

NO.	REVISION	DATE
	ISSUED FOR BIDS	4-06-26

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PROJECT TITLE
MASONRY REPAIRS TO:
GENESEE COUNTY JAIL
1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE
JAIL EXTERIOR ELEVATIONS

PROJECT NUMBER	SHEET NUMBER
2024083.1	A5.2-2
PROJECT DATE: APRIL 06, 2026	
CHECKED BY: K.C.L.	

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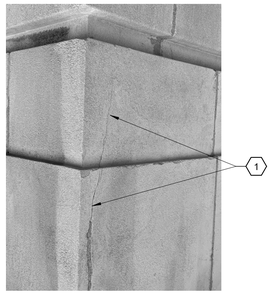

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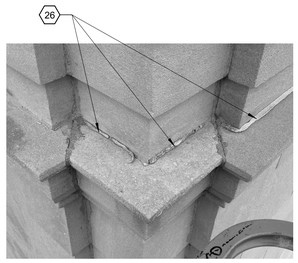

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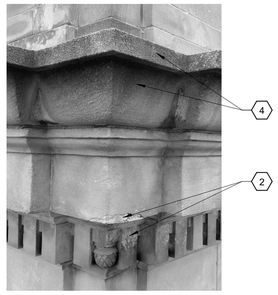

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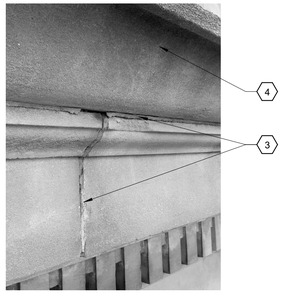

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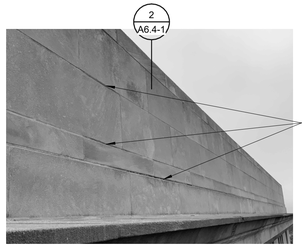

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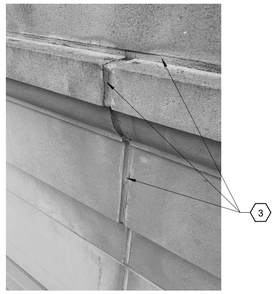

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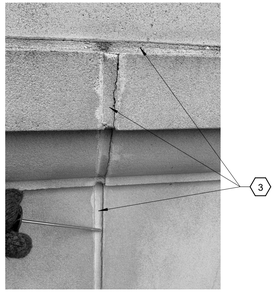

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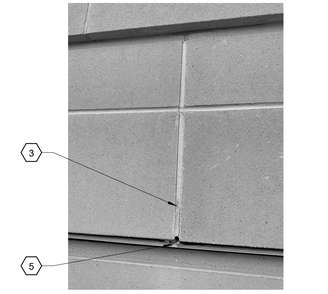

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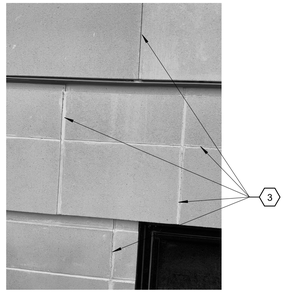

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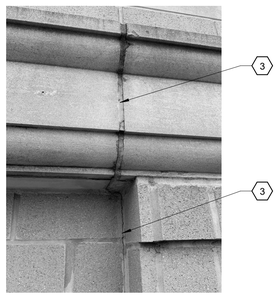

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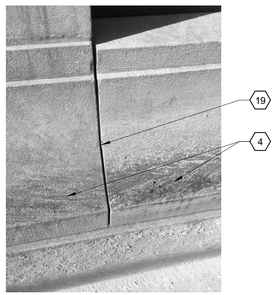

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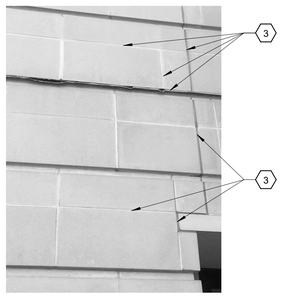

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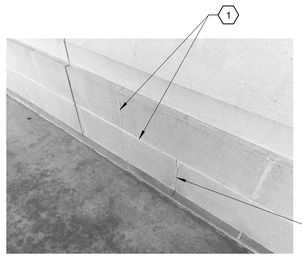

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20 A5.5-1 PHOTO DETAIL
SCALE: N.T.S.

RESTORATION KEYNOTES

1 FILL CRACKS IN LIMESTONE WITH AN INJECTED MASONRY EPOXY. PATCH FACE OF STONE AS REQUIRED TO BLEND WITH ADJACENT SURFACES.
2 PATCH SPALLED/VOIDS IN EXISTING LIMESTONE WITH CEMENTITIOUS COLORED PRODUCT. MATCH ADJACENT STONE TEXTURE AND COLOR. WHERE DAMAGED AREAS ARE TOO EXTENSIVE FOR PATCHING, REMOVE DAMAGED LIMESTONE PIECE(S) AND REPLACE WITH NEW LIMESTONE PIECE(S).
3 REMOVE EXISTING DAMAGED MORTAR FROM JOINTS TO A MINIMUM DEPTH OF ONE INCH, OR BACK TO SOUND MORTAR, AND REPLACE WITH NEW MORTAR BY REPOINTING METHOD. MATCH EXISTING COLOR.
4 CLEAN ALL EXISTING LIMESTONE SURFACES WITH A CHEMICAL PRODUCT AND LOW-PRESSURE WASH. PERFORM THIS AFTER ALL REPAIRS ARE COMPLETED.
5 PROVIDE NEW DRAINAGE WEEPS SPACED FROM 32" TO 48" ON CENTER AT THROUGH-WALL FLASHING.
6 PROVIDE NEW EXPANSION JOINT IN EXISTING MASONRY VENEER AS INDICATED AND FILL WITH NEW BACKER ROD AND SEALANT.
7 REMOVE ALL EXISTING HEAD JOINT MORTAR TO A DEPTH OF ONE INCH MINIMUM AT CULTURED STONE AND FILL WITH NEW BACKER ROD & SEALANT.
8 CHEMICALLY CLEAN ALL AREAS OF SOILED MASONRY SURFACES.
9 REMOVE ALL OPEN JOINT SEALANT AT EXISTING STAINLESS STEEL FLASHING AND REPLACE WITH NEW SEALANT BELOW EXISTING FLASHING.
10 REMOVE ALL EXISTING COPING HEAD JOINT SEALANT AND REPLACE WITH NEW JOINT SEALANT. RE: DETAIL 1/A6.4-1 AND 2/A6.4-1.
11 REMOVE ALL EXISTING LIMESTONE COPING, SALVAGE, CLEAN AND RE-INSTALL WITH NEW STAINLESS STEEL FLASHING AND FILL WITH NEW BACKER ROD AND SEALANT. RE: DETAIL 2/A6.4-1.
12 REMOVE AND REPLACE TERMINATION FLASHING. REFER TO SHEET A6.4-1.
13 REMOVE ENTIRE PERIMETER OF BRICK VENEER AT WINDOW UNIT AND REPLACE WITH NEW TIGHTLY SEALED FLASHING, END DAM FLASHING & WEEP HOLES. FILL PERIMETER OF WINDOW UNITS WITH NEW BACKER ROD AND SEALANT. RE: SHEET A7.1-1.
14 REMOVE ALL HORIZONTAL SEALANT BELOW FLASHING AND BLACK ADHESIVE ABOVE FLASHING AT EXISTING SHELF ANGLES AND FILL WITH NEW BACKER ROD AND SEALANT BELOW FLASHING AND NEW WEEP DRAINAGE HOLES.
15 PATCH & REPAIR PORTIONS OF INTERIOR GYP. BOARD CEILING AT WATER SPOT LOCATIONS, ONCE WATER LEAK REPAIRS ARE COMPLETE.
16 PATCH & REPAIR PORTIONS OF INTERIOR GYP. BOARD WALLS SURROUNDING WINDOW UNIT(S) AT WATER SPOT LOCATIONS, ONCE FLASHING REPAIRS ARE COMPLETE.
17 REPLACE WATER DAMAGED SILL. MATCH EXISTING.
18 REMOVE EXISTING EXPANSION JOINT SEALANT AND FILL WITH NEW BACKER ROD AND SEALANT. MATCH EXISTING SEALANT COLOR.
19 FILL OPEN JOINT WITH NEW BACKER ROD AND SEALANT.
20 REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF ALL ORGINAL COURTHOUSE STEEL WINDOW LINTELS, TYP. PAINT WITH NEW HIGH PERFORMANCE PAINT.
21 REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF EXISTING STAIR/RAMP RAILINGS. PAINT WITH NEW HIGH PERFORMANCE PAINT.
22 REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF EXISTING IRON DOOR FRAME. PAINT WITH NEW HIGH PERFORMANCE PAINT.
23 REMOVE ALL EXISTING SEALANT FROM GRANITE STEPS AT ALL JOINTS AND FILL WITH NEW SEALANT.
24 REMOVE ENTIRE MASONRY CHEEK WALL STRUCTURE FOR NEW CHEEK WALL STRUCTURE. RE: SHEET A2.1-1.
25 REMOVE ALL CRACKED SEALANT AND REPLACE WITH NEW SEALANT.
26 EXISTING SEALANT MAY CONTAIN HAZARDOUS MATERIALS AND SHOULD BE FURTHER TESTED.
28 NEW CONCRETE RAMP AND STAIR ON NEW SNOWMELT SYSTEM. REFER TO SHEET A4.1-1.
29 SAWCUT FULL DEPTH AND REMOVE ALL DEBRIS.
30 SAWCUT, REMOVE AND REPLACE WITH NEW LIMESTONE PANELS. MATCH EXISTING PROFILE.

NO.	REVISION	DATE
	ISSUED FOR BIDS	4-06-26

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PROJECT TITLE
MASONRY REPAIRS TO:
GENESEE COUNTY COURTHOUSE & JAIL
900 & 1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE
COURTHOUSE PHOTO DETAILS

PROJECT NUMBER 2024083.1
PROJECT DATE APRIL 06, 2026
CHECKED BY K.C.L.
SHEET NUMBER A5.5-1

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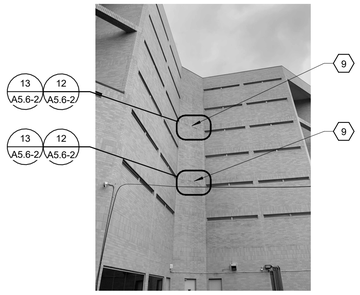

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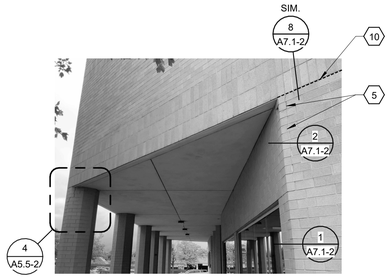

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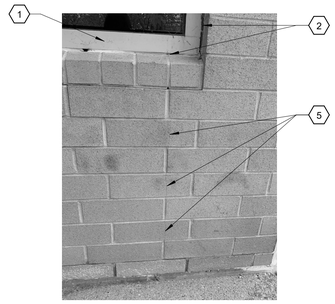

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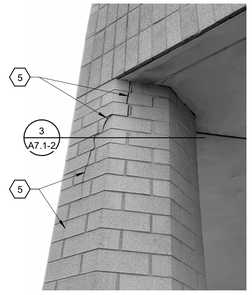

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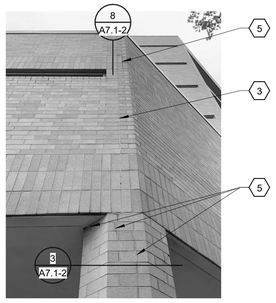

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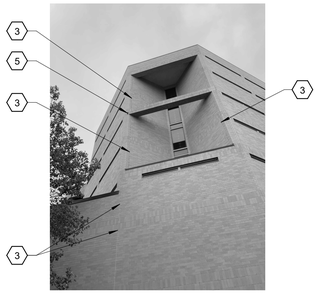

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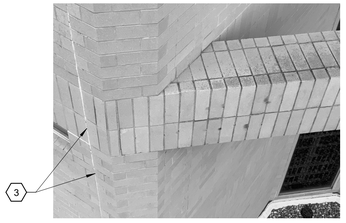

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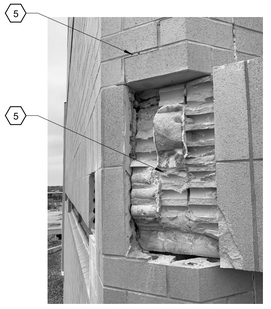

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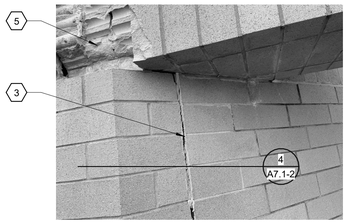

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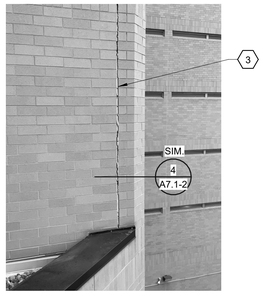

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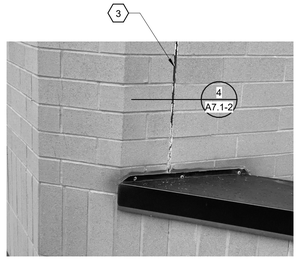

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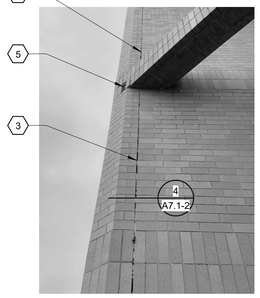

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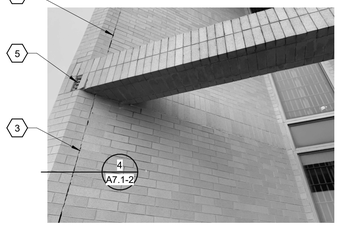

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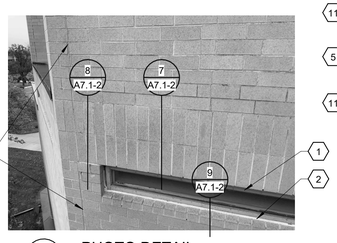

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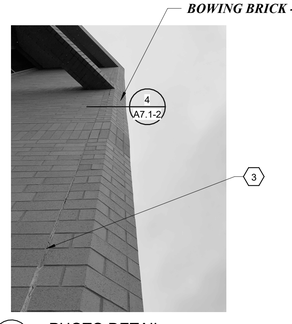
BOWING BRICK - KEYNOTE?



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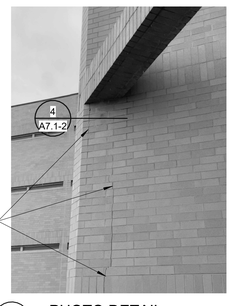

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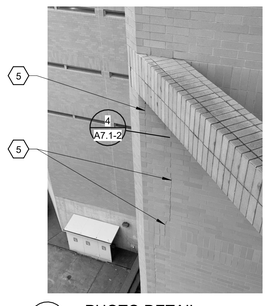

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NOTE:
CONDITIONS INDICATED ON THESE DRAWINGS OCCUR THROUGHOUT ENTIRE BUILDING. CONTRACTOR TO FIELD VERIFY.

RESTORATION KEYNOTES

1. CLEAN RUST OFF ENTIRE EXISTING STEEL WINDOW FRAME AND PAINT WITH NEW HIGH PERFORMANCE PAINT, TYPICAL ALL WINDOWS.
2. REMOVE SEALANT AROUND ENTIRE PERIMETER OF EXISTING STEEL WINDOW AND FILL WITH NEW BACKER ROD AND SEALANT. REFER TO DETAIL 7/A7.1-2.
3. REMOVE ALL SEALANT AT EXISTING VERTICAL EXPANSION JOINT AND FILL WITH NEW BACKER ROD AND SEALANT. REFER TO DETAIL 11/A7.1-2.
4. CLEAN RUST OFF EXISTING STEEL DOOR AND PAINT WITH NEW HIGH PERFORMANCE PAINT.
5. REMOVE AND REPLACE PORTIONS OF CRACKED AND SPALLING BRICK WITH NEW BRICK TO MATCH EXISTING.
7. OPEN SOLDIER COURSING AND REMOVE ALL BRITTLE FLASHING AT SHELF ANGLES AND REPLACE WITH NEW CONTINUOUS FLASHING OVER THE ENTIRE SHELF ANGLE AND PROVIDE NEW WEEP SYSTEMS. REFER TO DETAIL 7/A7.1-2.
8. PROVIDE NEW END DAM FLASHING AT ALL SHELF ANGLES. REFER TO DETAIL 14/A7.1-2.
9. OPEN SOLDIER COURSING AND REMOVE ALL BRITTLE FLASHING AT SHELF ANGLES AND REPLACE WITH NEW CONTINUOUS FLASHING OVER ENTIRE SHELF ANGLE AND PROVIDE NEW WEEP SYSTEMS. REFER TO DETAIL 8/A7.1-2.
10. PROVIDE NEW HORIZONTAL EXPANSION JOINT BELOW ALL SHELF ANGLES SUPPORTING BRICK WYTHE.
11. PROVIDE NEW ISOLATION JOINT IN EXTERIOR BRICK VENEER AS INDICATED.
12. PROVIDE NEW CONTINUED EXPANSION JOINT VERTICALLY UP TO PARAPET.
13. REMOVE AND REPLACE DAMAGED/FAILING METAL COPING. RE: COPING SPLICE AND FLASHING DETAIL 2/A6.4-2.
14. REPLACE MISSING/DAMAGED COUNTERFLASHING WITH NEW COUNTERFLASHING. RE: DETAIL 1/A6.4-2.
15. SAWCUT FULL DEPTH AND REMOVE ALL DEBRIS.
16. REPAIR CONCRETE PER DETAIL 16/A7.1-2.
17. REPAIR CONCRETE COLUMN, RE: DETAIL 16/A7.1.2 FOR CONCRETE REPAIR PROCEDURES.

NO.	REVISION	DATE
	ISSUED FOR BIDS	4-06-26

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PROJECT TITLE
MASONRY REPAIRS TO:
GENESEE COUNTY JAIL
1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE
JAIL PHOTO DETAILS

PROJECT NUMBER 2024083.1
PROJECT DATE APRIL 06, 2026
CHECKED BY K.C.L.
SHEET NUMBER A5.5-2

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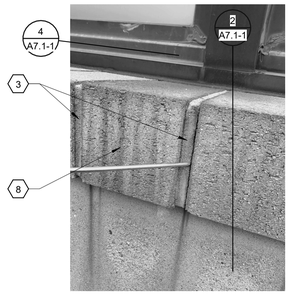

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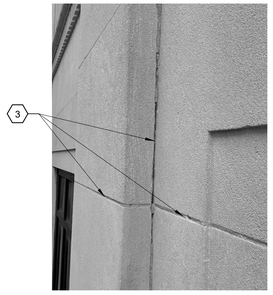

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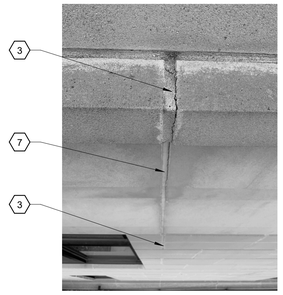

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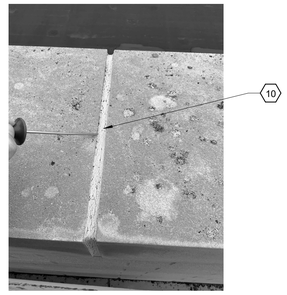

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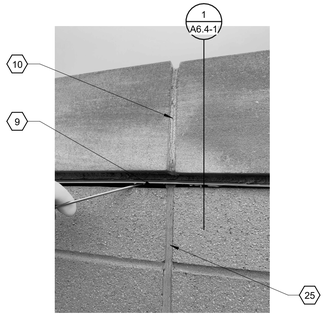

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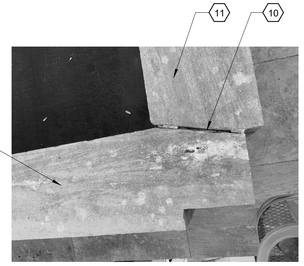

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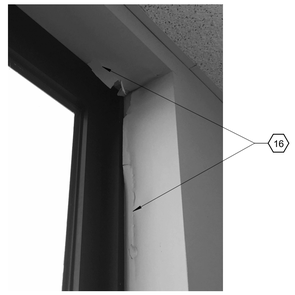

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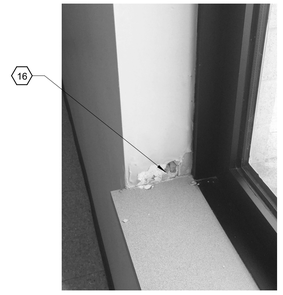

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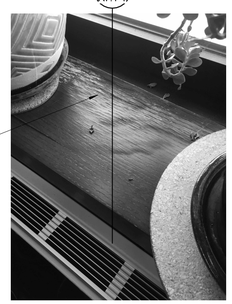

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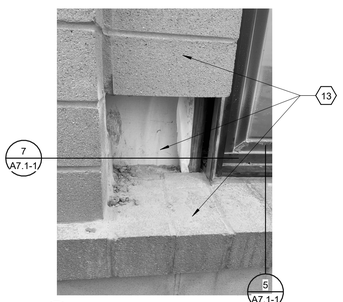

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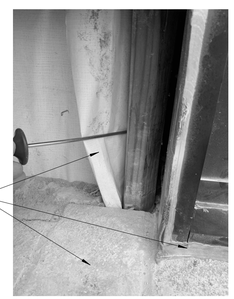

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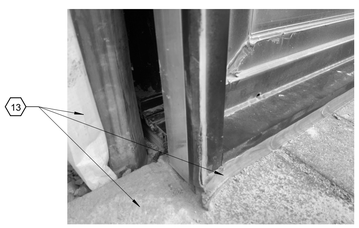

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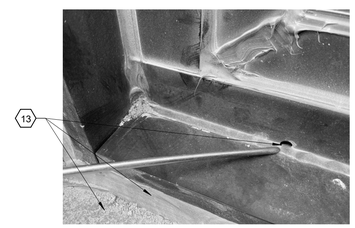

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RESTORATION KEYNOTES

1 FILL CRACKS IN LIMESTONE WITH AN INJECTED MASONRY EPOXY. PATCH FACE OF STONE AS REQUIRED TO BLEND WITH ADJACENT SURFACES.
2 PATCH SPALLED/VOIDS IN EXISTING LIMESTONE WITH CEMENTITIOUS COLORED PRODUCT. MATCH ADJACENT STONE TEXTURE AND COLOR. WHERE DAMAGED AREAS ARE TOO EXTENSIVE FOR PATCHING, REMOVE DAMAGED LIMESTONE PIECE(S) AND REPLACE WITH NEW LIMESTONE PIECE(S).
3 REMOVE EXISTING DAMAGED MORTAR FROM JOINTS TO A MINIMUM DEPTH OF ONE INCH, OR BACK TO SOUND MORTAR, AND REPLACE WITH NEW MORTAR BY REPOINTING METHOD. MATCH EXISTING COLOR.
4 CLEAN ALL EXISTING LIMESTONE SURFACES WITH A CHEMICAL PRODUCT AND LOW-PRESSURE WASH. PERFORM THIS AFTER ALL REPAIRS ARE COMPLETED.
5 PROVIDE NEW DRAINAGE WEEPS SPACED FROM 32" TO 48" ON CENTER AT THROUGH-WALL FLASHING.
6 PROVIDE NEW EXPANSION JOINT IN EXISTING MASONRY VENEER AS INDICATED AND FILL WITH NEW BACKER ROD AND SEALANT.
7 REMOVE ALL EXISTING HEAD JOINT MORTAR TO A DEPTH OF ONE INCH MINIMUM AT CULTURED STONE AND FILL WITH NEW BACKER ROD & SEALANT.
8 CHEMICALLY CLEAN ALL AREAS OF SOILED MASONRY SURFACES.
9 REMOVE ALL OPEN JOINT SEALANT AT EXISTING STAINLESS STEEL FLASHING AND REPLACE WITH NEW SEALANT BELOW EXISTING FLASHING.
10 REMOVE ALL EXISTING COPING HEAD JOINT SEALANT AND REPLACE WITH NEW JOINT SEALANT. RE: DETAIL 1/A6.4-1 AND 2/A6.4-1.
11 REMOVE ALL EXISTING LIMESTONE COPING, SALVAGE, CLEAN AND RE-INSTALL WITH NEW STAINLESS STEEL FLASHING AND FILL WITH NEW BACKER ROD AND SEALANT. RE: DETAIL 2/A6.4-1.
12 REMOVE AND REPLACE TERMINATION FLASHING. REFER TO SHEET A6.4-1.
13 REMOVE ENTIRE PERIMETER OF BRICK VENEER AT WINDOW UNIT AND REPLACE WITH NEW TIGHTLY SEALED FLASHING, END DAM FLASHING & WEEP HOLES. FILL PERIMETER OF WINDOW UNITS WITH NEW BACKER ROD AND SEALANT. RE: SHEET A7.1-1.
14 REMOVE ALL HORIZONTAL SEALANT BELOW FLASHING AND BLACK ADHESIVE ABOVE FLASHING AT EXISTING SHELF ANGLES AND FILL WITH NEW BACKER ROD AND SEALANT BELOW FLASHING AND NEW WEEP DRAINAGE HOLES.
15 PATCH & REPAIR PORTIONS OF INTERIOR GYP. BOARD CEILING AT WATER SPOT LOCATIONS, ONCE WATER LEAK REPAIRS ARE COMPLETE.
16 PATCH & REPAIR PORTIONS OF INTERIOR GYP. BOARD WALLS SURROUNDING WINDOW UNIT(S) AT WATER SPOT LOCATIONS, ONCE FLASHING REPAIRS ARE COMPLETE.
17 REPLACE WATER DAMAGED SILL. MATCH EXISTING.
18 REMOVE EXISTING EXPANSION JOINT SEALANT AND FILL WITH NEW BACKER ROD AND SEALANT. MATCH EXISTING SEALANT COLOR.
19 FILL OPEN JOINT WITH NEW BACKER ROD AND SEALANT.
20 REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF ALL ORGINAL COURTHOUSE STEEL WINDOW LINTELS, TYP. PAINT WITH NEW HIGH PERFORMANCE PAINT.
21 REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF EXISTING STAIR/RAMP RAILINGS. PAINT WITH NEW HIGH PERFORMANCE PAINT.
22 REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF EXISTING IRON DOOR FRAME. PAINT WITH NEW HIGH PERFORMANCE PAINT.
23 REMOVE ALL EXISTING SEALANT FROM GRANITE STEPS AT ALL JOINTS AND FILL WITH NEW SEALANT.
24 REMOVE ENTIRE MASONRY CHEEK WALL STRUCTURE FOR NEW CHEEK WALL STRUCTURE. RE: SHEET A2.1-1.
25 REMOVE ALL CRACKED SEALANT AND REPLACE WITH NEW SEALANT.
26 EXISTING SEALANT MAY CONTAIN HAZARDOUS MATERIALS AND SHOULD BE FURTHER TESTED.
28 NEW CONCRETE RAMP AND STAIR ON NEW SNOWMELT SYSTEM. REFER TO SHEET A4.1-1.
29 SAWCUT FULL DEPTH AND REMOVE ALL DEBRIS.
30 SAWCUT, REMOVE AND REPLACE WITH NEW LIMESTONE PANELS. MATCH EXISTING PROFILE.

NO.	REVISION	DATE
	ISSUED FOR BIDS	4-06-26

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PROJECT TITLE
MASONRY REPAIRS TO:
GENESEE COUNTY COURTHOUSE & JAIL
900 & 1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE
COURTHOUSE PHOTO DETAILS

PROJECT NUMBER 2024083.1
PROJECT DATE APRIL 06, 2026
CHECKED BY K.C.L.
SHEET NUMBER A5.6-1

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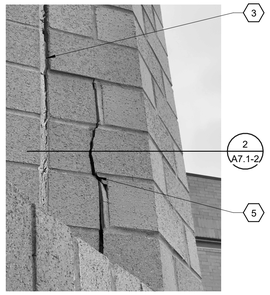

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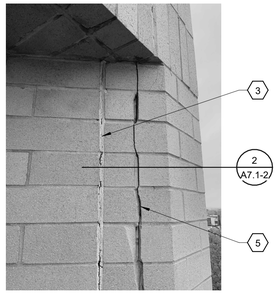

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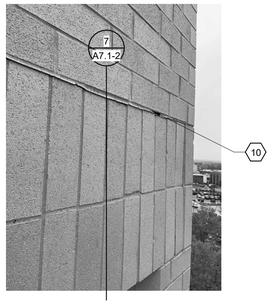

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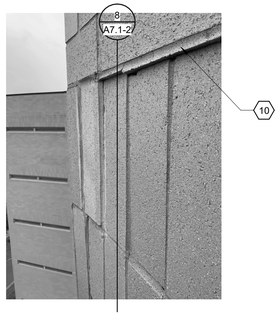

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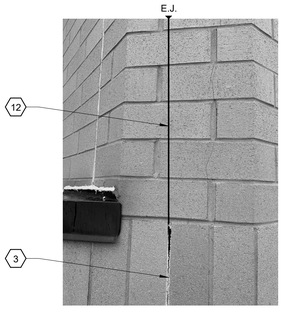

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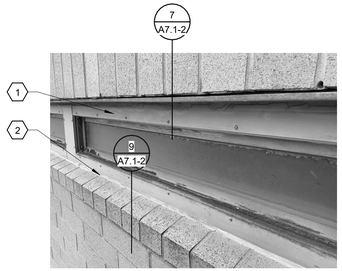

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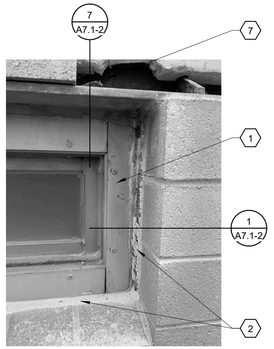

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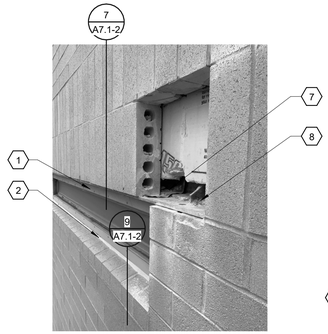

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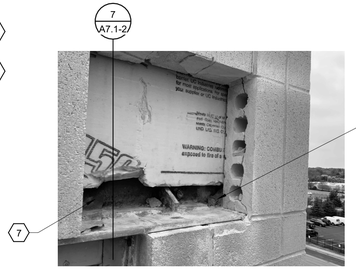

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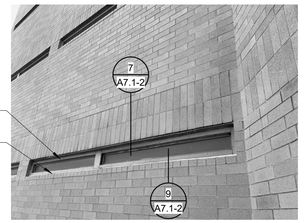

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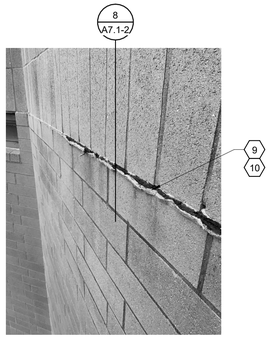

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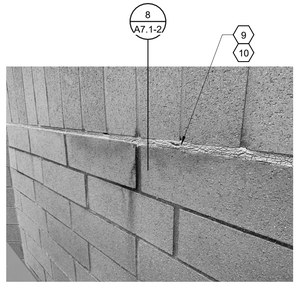

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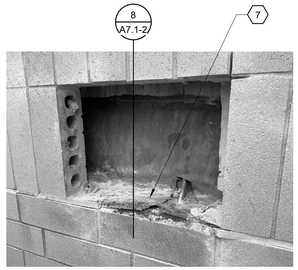

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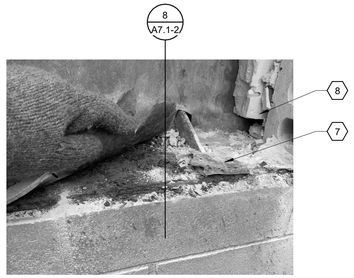

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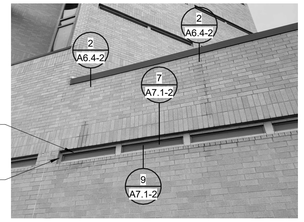

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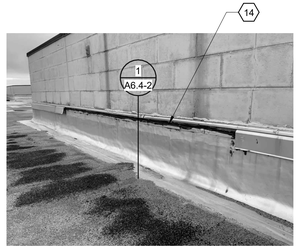

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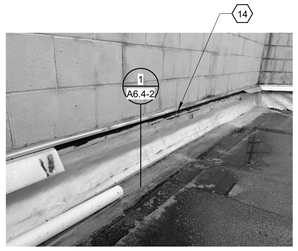

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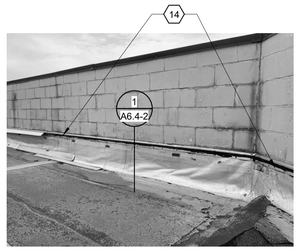

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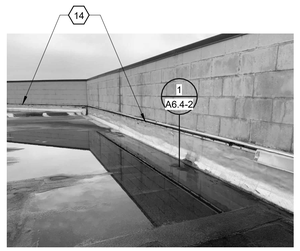

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NOTE:
CONDITIONS INDICATED ON THESE DRAWINGS OCCUR THROUGHOUT ENTIRE BUILDING. CONTRACTOR TO FIELD VERIFY.

RESTORATION KEYNOTES

1. CLEAN RUST OFF ENTIRE EXISTING STEEL WINDOW FRAME AND PAINT WITH NEW HIGH PERFORMANCE PAINT, TYPICAL ALL WINDOWS.
2. REMOVE SEALANT AROUND ENTIRE PERIMETER OF EXISTING STEEL WINDOW AND FILL WITH NEW BACKER ROD AND SEALANT. REFER TO DETAIL 7/A7.1-2.
3. REMOVE ALL SEALANT AT EXISTING VERTICAL EXPANSION JOINT AND FILL WITH NEW BACKER ROD AND SEALANT. REFER TO DETAIL 11/A7.1-2.
4. CLEAN RUST OFF EXISTING STEEL DOOR AND PAINT WITH NEW HIGH PERFORMANCE PAINT.
5. REMOVE AND REPLACE PORTIONS OF CRACKED AND SPALLING BRICK WITH NEW BRICK TO MATCH EXISTING.
7. OPEN SOLDIER COURSING AND REMOVE ALL BRITTLE FLASHING AT SHELF ANGLES AND REPLACE WITH NEW CONTINUOUS FLASHING OVER THE ENTIRE SHELF ANGLE AND PROVIDE NEW WEEP SYSTEMS. REFER TO DETAIL 7/A7.1-2.
8. PROVIDE NEW END DAM FLASHING AT ALL SHELF ANGLES. REFER TO DETAIL 14/A7.1-2.
9. OPEN SOLDIER COURSING AND REMOVE ALL BRITTLE FLASHING AT SHELF ANGLES AND REPLACE WITH NEW CONTINUOUS FLASHING OVER ENTIRE SHELF ANGLE AND PROVIDE NEW WEEP SYSTEMS. REFER TO DETAIL 8/A7.1-2.
10. PROVIDE NEW HORIZONTAL EXPANSION JOINT BELOW ALL SHELF ANGLES SUPPORTING BRICK WYTHE.
11. PROVIDE NEW ISOLATION JOINT IN EXTERIOR BRICK VENEER AS INDICATED.
12. PROVIDE NEW CONTINUED EXPANSION JOINT VERTICALLY UP TO PARAPET.
13. REMOVE AND REPLACE DAMAGED/FAILING METAL COPING. RE: COPING SPLICE AND FLASHING DETAIL 2/A6.4-2.
14. REPLACE MISSING/DAMAGED COUNTERFLASHING WITH NEW COUNTERFLASHING. RE: DETAIL 1/A6.4-2.
15. SAWCUT FULL DEPTH AND REMOVE ALL DEBRIS.
16. REPAIR CONCRETE PER DETAIL 16/A7.1-2.
17. REPAIR CONCRETE COLUMN, RE: DETAIL 16/A7.1.2 FOR CONCRETE REPAIR PROCEDURES.

NO.	REVISION	DATE
	ISSUED FOR BIDS	4-06-26

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Saginaw, Michigan 48607
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PROJECT TITLE
MASONRY REPAIRS TO:
GENESEE COUNTY JAIL
1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE
JAIL PHOTO DETAILS

PROJECT NUMBER 2024083.1
PROJECT DATE APRIL 06, 2026
CHECKED BY K.C.L.
SHEET NUMBER A5.6-2

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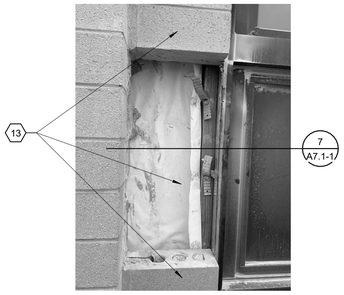

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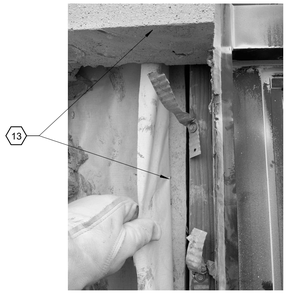

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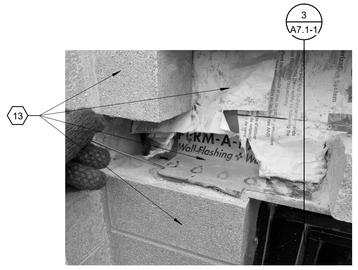

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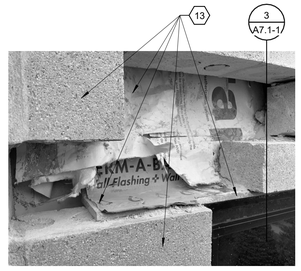

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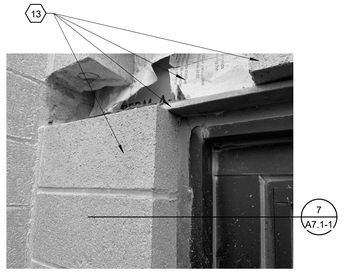

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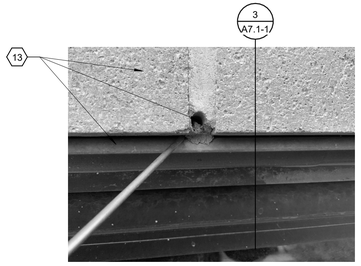

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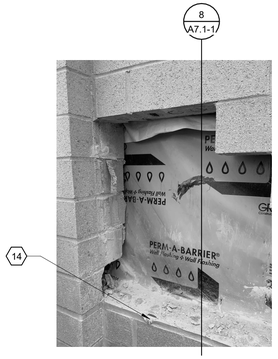

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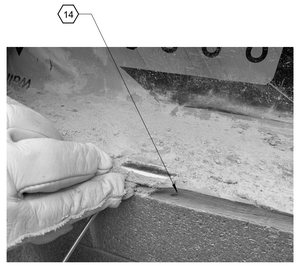

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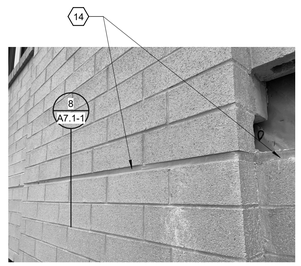

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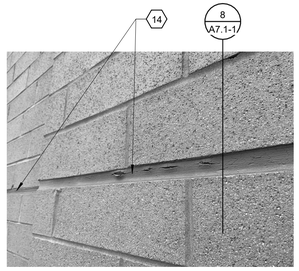

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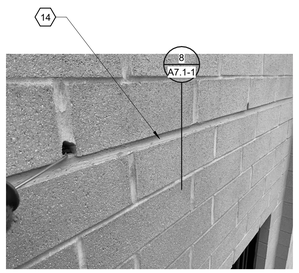

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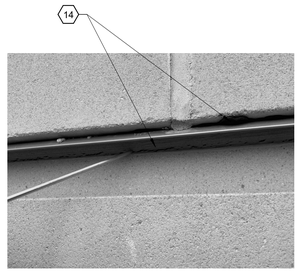

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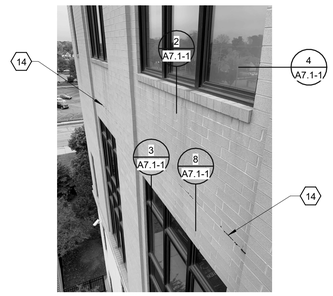

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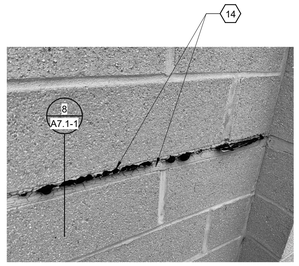

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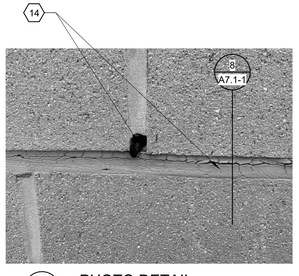

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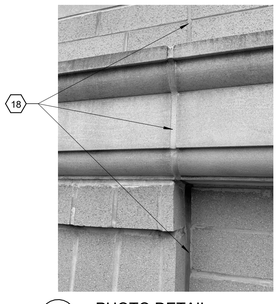

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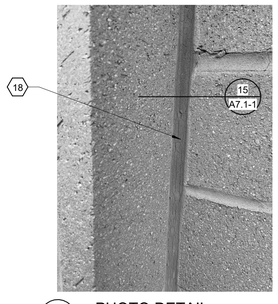

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RESTORATION KEYNOTES

1 FILL CRACKS IN LIMESTONE WITH AN INJECTED MASONRY EPOXY. PATCH FACE OF STONE AS REQUIRED TO BLEND WITH ADJACENT SURFACES.
2 PATCH SPALLED/VOIDS IN EXISTING LIMESTONE WITH CEMENTITIOUS COLORED PRODUCT. MATCH ADJACENT STONE TEXTURE AND COLOR. WHERE DAMAGED AREAS ARE TOO EXTENSIVE FOR PATCHING, REMOVE DAMAGED LIMESTONE PIECE(S) AND REPLACE WITH NEW LIMESTONE PIECE(S).
3 REMOVE EXISTING DAMAGED MORTAR FROM JOINTS TO A MINIMUM DEPTH OF ONE INCH, OR BACK TO SOUND MORTAR, AND REPLACE WITH NEW MORTAR BY REPOINTING METHOD. MATCH EXISTING COLOR.
4 CLEAN ALL EXISTING LIMESTONE SURFACES WITH A CHEMICAL PRODUCT AND LOW-PRESSURE WASH. PERFORM THIS AFTER ALL REPAIRS ARE COMPLETED.
5 PROVIDE NEW DRAINAGE WEEPS SPACED FROM 32" TO 48" ON CENTER AT THROUGH-WALL FLASHING.
6 PROVIDE NEW EXPANSION JOINT IN EXISTING MASONRY VENEER AS INDICATED AND FILL WITH NEW BACKER ROD AND SEALANT.
7 REMOVE ALL EXISTING HEAD JOINT MORTAR TO A DEPTH OF ONE INCH MINIMUM AT CULTURED STONE AND FILL WITH NEW BACKER ROD & SEALANT.
8 CHEMICALLY CLEAN ALL AREAS OF SOILED MASONRY SURFACES.
9 REMOVE ALL OPEN JOINT SEALANT AT EXISTING STAINLESS STEEL FLASHING AND REPLACE WITH NEW SEALANT BELOW EXISTING FLASHING.
10 REMOVE ALL EXISTING COPING HEAD JOINT SEALANT AND REPLACE WITH NEW JOINT SEALANT. RE: DETAIL 1/A6.4-1 AND 2/A6.4-1.
11 REMOVE ALL EXISTING LIMESTONE COPING, SALVAGE, CLEAN AND RE-INSTALL WITH NEW STAINLESS STEEL FLASHING AND FILL WITH NEW BACKER ROD AND SEALANT. RE: DETAIL 2/A6.4-1.
12 REMOVE AND REPLACE TERMINATION FLASHING. REFER TO SHEET A6.4-1.
13 REMOVE ENTIRE PERIMETER OF BRICK VENEER AT WINDOW UNIT AND REPLACE WITH NEW TIGHTLY SEALED FLASHING, END DAM FLASHING & WEEP HOLES. FILL PERIMETER OF WINDOW UNITS WITH NEW BACKER ROD AND SEALANT. RE: SHEET A7.1-1.
14 REMOVE ALL HORIZONTAL SEALANT BELOW FLASHING AND BLACK ADHESIVE ABOVE FLASHING AT EXISTING SHELF ANGLES AND FILL WITH NEW BACKER ROD AND SEALANT BELOW FLASHING AND NEW WEEP DRAINAGE HOLES.
15 PATCH & REPAIR PORTIONS OF INTERIOR GYP. BOARD CEILING AT WATER SPOT LOCATIONS, ONCE WATER LEAK REPAIRS ARE COMPLETE.
16 PATCH & REPAIR PORTIONS OF INTERIOR GYP. BOARD WALLS SURROUNDING WINDOW UNIT(S) AT WATER SPOT LOCATIONS, ONCE FLASHING REPAIRS ARE COMPLETE.
17 REPLACE WATER DAMAGED SILL. MATCH EXISTING.
18 REMOVE EXISTING EXPANSION JOINT SEALANT AND FILL WITH NEW BACKER ROD AND SEALANT. MATCH EXISTING SEALANT COLOR.
19 FILL OPEN JOINT WITH NEW BACKER ROD AND SEALANT.
20 REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF ALL ORGINAL COURTHOUSE STEEL WINDOW LINTELS, TYP. PAINT WITH NEW HIGH PERFORMANCE PAINT.
21 REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF EXISTING STAIR/RAMP RAILINGS. PAINT WITH NEW HIGH PERFORMANCE PAINT.
22 REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF EXISTING IRON DOOR FRAME. PAINT WITH NEW HIGH PERFORMANCE PAINT.
23 REMOVE ALL EXISTING SEALANT FROM GRANITE STEPS AT ALL JOINTS AND FILL WITH NEW SEALANT.
24 REMOVE ENTIRE MASONRY CHEEK WALL STRUCTURE FOR NEW CHEEK WALL STRUCTURE. RE: SHEET A2.1-1.
25 REMOVE ALL CRACKED SEALANT AND REPLACE WITH NEW SEALANT.
26 EXISTING SEALANT MAY CONTAIN HAZARDOUS MATERIALS AND SHOULD BE FURTHER TESTED.
28 NEW CONCRETE RAMP AND STAIR ON NEW SNOWMELT SYSTEM. REFER TO SHEET A4.1-1.
29 SAWCUT FULL DEPTH AND REMOVE ALL DEBRIS.
30 SAWCUT, REMOVE AND REPLACE WITH NEW LIMESTONE PANELS. MATCH EXISTING PROFILE.

NO.	REVISION	DATE
	ISSUED FOR BIDS	4-06-26

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PROJECT TITLE
MASONRY REPAIRS TO:
GENESEE COUNTY COURTHOUSE & JAIL
900 & 1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE
COURTHOUSE PHOTO DETAILS

PROJECT NUMBER 2024083.1
PROJECT DATE APRIL 06, 2026
CHECKED BY K.C.L.
SHEET NUMBER A5.7-1

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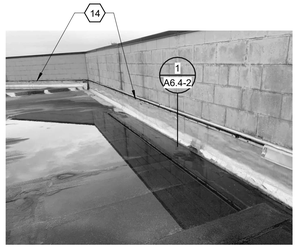

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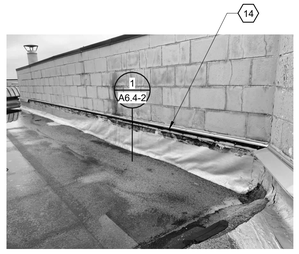

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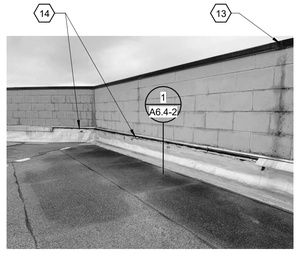

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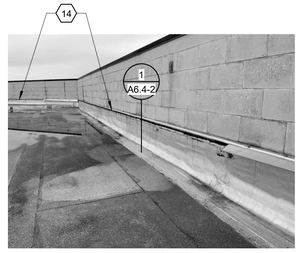

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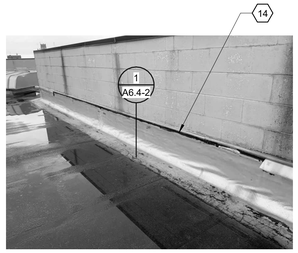

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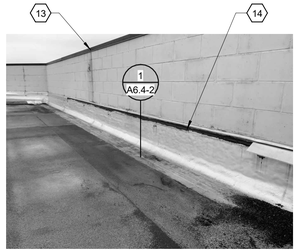

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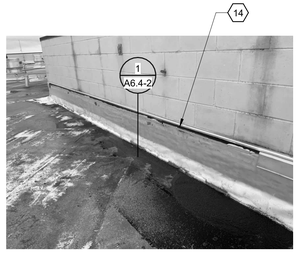

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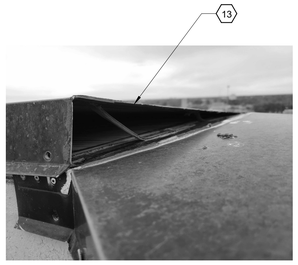

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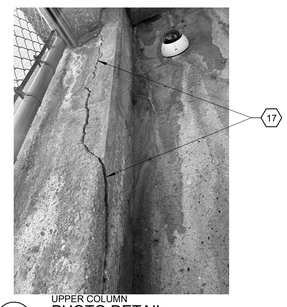

UPPER COLUMN
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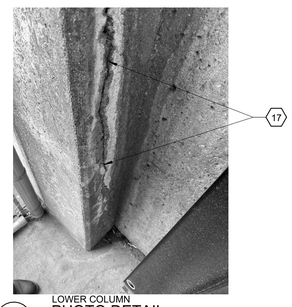

LOWER COLUMN
19 A5.7-2 PHOTO DETAIL
SCALE: N.T.S.

NOTE:
CONDITIONS INDICATED ON THESE DRAWINGS OCCUR THROUGHOUT ENTIRE BUILDING. CONTRACTOR TO FIELD VERIFY.

RESTORATION KEYNOTES

1 CLEAN RUST OFF ENTIRE EXISTING STEEL WINDOW FRAME AND PAINT WITH NEW HIGH PERFORMANCE PAINT, TYPICAL ALL WINDOWS.
2 REMOVE SEALANT AROUND ENTIRE PERIMETER OF EXISTING STEEL WINDOW AND FILL WITH NEW BACKER ROD AND SEALANT. REFER TO DETAIL 7/A7.1-2.
3 REMOVE ALL SEALANT AT EXISTING VERTICAL EXPANSION JOINT AND FILL WITH NEW BACKER ROD AND SEALANT. REFER TO DETAIL 11/A7.1-2.
4 CLEAN RUST OFF EXISTING STEEL DOOR AND PAINT WITH NEW HIGH PERFORMANCE PAINT.
5 REMOVE AND REPLACE PORTIONS OF CRACKED AND SPALLING BRICK WITH NEW BRICK TO MATCH EXISTING.
7 OPEN SOLDIER COURSING AND REMOVE ALL BRITTLE FLASHING AT SHELF ANGLES AND REPLACE WITH NEW CONTINUOUS FLASHING OVER THE ENTIRE SHELF ANGLE AND PROVIDE NEW WEEP SYSTEMS. REFER TO DETAIL 7/A7.1-2.
8 PROVIDE NEW END DAM FLASHING AT ALL SHELF ANGLES. REFER TO DETAIL 14/A7.1-2.
9 OPEN SOLDIER COURSING AND REMOVE ALL BRITTLE FLASHING AT SHELF ANGLES AND REPLACE WITH NEW CONTINUOUS FLASHING OVER ENTIRE SHELF ANGLE AND PROVIDE NEW WEEP SYSTEMS. REFER TO DETAIL 8/A7.1-2.
10 PROVIDE NEW HORIZONTAL EXPANSION JOINT BELOW ALL SHELF ANGLES SUPPORTING BRICK WYTHE.
11 PROVIDE NEW ISOLATION JOINT IN EXTERIOR BRICK VENEER AS INDICATED.
12 PROVIDE NEW CONTINUED EXPANSION JOINT VERTICALLY UP TO PARAPET.
13 REMOVE AND REPLACE DAMAGED/FAILING METAL COPING. RE: COPING SPLICE AND FLASHING DETAIL 2/A6.4-2.
14 REPLACE MISSING/DAMAGED COUNTERFLASHING WITH NEW COUNTERFLASHING. RE: DETAIL 1/A6.4-2.
15 SAWCUT FULL DEPTH AND REMOVE ALL DEBRIS.
16 REPAIR CONCRETE PER DETAIL 16/A7.1-2.
17 REPAIR CONCRETE COLUMN, RE: DETAIL 16/A7.1.2 FOR CONCRETE REPAIR PROCEDURES.

NO.	REVISION	DATE
	ISSUED FOR BIDS	4-06-26

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PROJECT TITLE
MASONRY REPAIRS TO:
GENESEE COUNTY JAIL
1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE
JAIL PHOTO DETAILS

PROJECT NUMBER 2024083.1
PROJECT DATE APRIL 06, 2026
CHECKED BY K.C.L.
SHEET NUMBER A5.7-2

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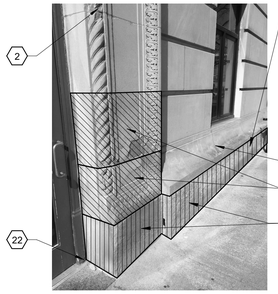

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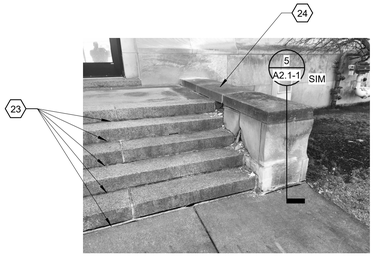

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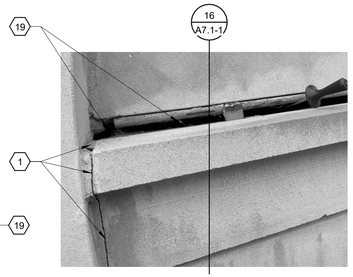

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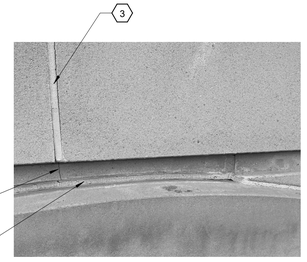

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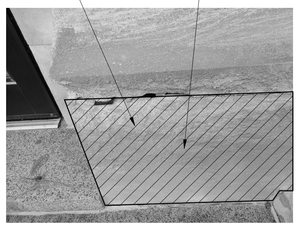

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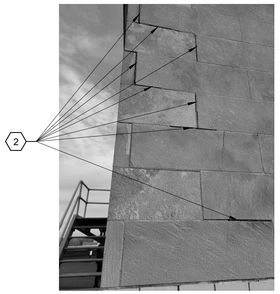

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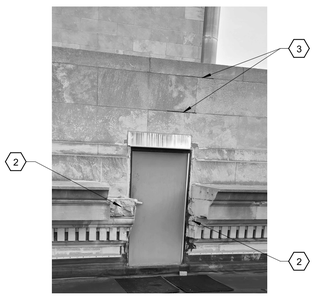

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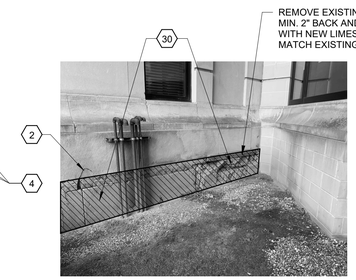

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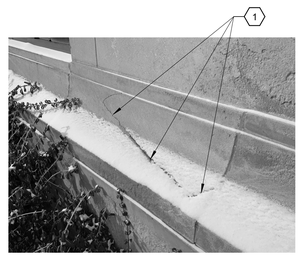

20 A5.8-1 PHOTO DETAIL
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RESTORATION KEYNOTES

1 FILL CRACKS IN LIMESTONE WITH AN INJECTED MASONRY EPOXY. PATCH FACE OF STONE AS REQUIRED TO BLEND WITH ADJACENT SURFACES.
2 PATCH SPALLED/VOIDS IN EXISTING LIMESTONE WITH CEMENTITIOUS COLORED PRODUCT. MATCH ADJACENT STONE TEXTURE AND COLOR. WHERE DAMAGED AREAS ARE TOO EXTENSIVE FOR PATCHING, REMOVE DAMAGED LIMESTONE PIECE(S) AND REPLACE WITH NEW LIMESTONE PIECE(S).
3 REMOVE EXISTING DAMAGED MORTAR FROM JOINTS TO A MINIMUM DEPTH OF ONE INCH, OR BACK TO SOUND MORTAR, AND REPLACE WITH NEW MORTAR BY REPOINTING METHOD. MATCH EXISTING COLOR.
4 CLEAN ALL EXISTING LIMESTONE SURFACES WITH A CHEMICAL PRODUCT AND LOW-PRESSURE WASH. PERFORM THIS AFTER ALL REPAIRS ARE COMPLETED.
5 PROVIDE NEW DRAINAGE WEEPS SPACED FROM 32" TO 48" ON CENTER AT THROUGH-WALL FLASHING.
6 PROVIDE NEW EXPANSION JOINT IN EXISTING MASONRY VENEER AS INDICATED AND FILL WITH NEW BACKER ROD AND SEALANT.
7 REMOVE ALL EXISTING HEAD JOINT MORTAR TO A DEPTH OF ONE INCH MINIMUM AT CULTURED STONE AND FILL WITH NEW BACKER ROD & SEALANT.
8 CHEMICALLY CLEAN ALL AREAS OF SOILED MASONRY SURFACES.
9 REMOVE ALL OPEN JOINT SEALANT AT EXISTING STAINLESS STEEL FLASHING AND REPLACE WITH NEW SEALANT BELOW EXISTING FLASHING.
10 REMOVE ALL EXISTING COPING HEAD JOINT SEALANT AND REPLACE WITH NEW JOINT SEALANT. RE: DETAIL 1/A6.4-1 AND 2/A6.4-1.
11 REMOVE ALL EXISTING LIMESTONE COPING, SALVAGE, CLEAN AND RE-INSTALL WITH NEW STAINLESS STEEL FLASHING AND FILL WITH NEW BACKER ROD AND SEALANT. RE: DETAIL 2/A6.4-1.
12 REMOVE AND REPLACE TERMINATION FLASHING. REFER TO SHEET A6.4-1.
13 REMOVE ENTIRE PERIMETER OF BRICK VENEER AT WINDOW UNIT AND REPLACE WITH NEW TIGHTLY SEALED FLASHING, END DAM FLASHING & WEEP HOLES. FILL PERIMETER OF WINDOW UNITS WITH NEW BACKER ROD AND SEALANT. RE: SHEET A7.1-1.
14 REMOVE ALL HORIZONTAL SEALANT BELOW FLASHING AND BLACK ADHESIVE ABOVE FLASHING AT EXISTING SHELF ANGLES AND FILL WITH NEW BACKER ROD AND SEALANT BELOW FLASHING AND NEW WEEP DRAINAGE HOLES.
15 PATCH & REPAIR PORTIONS OF INTERIOR GYP. BOARD CEILING AT WATER SPOT LOCATIONS, ONCE WATER LEAK REPAIRS ARE COMPLETE.
16 PATCH & REPAIR PORTIONS OF INTERIOR GYP. BOARD WALLS SURROUNDING WINDOW UNIT(S) AT WATER SPOT LOCATIONS, ONCE FLASHING REPAIRS ARE COMPLETE.
17 REPLACE WATER DAMAGED SILL. MATCH EXISTING.
18 REMOVE EXISTING EXPANSION JOINT SEALANT AND FILL WITH NEW BACKER ROD AND SEALANT. MATCH EXISTING SEALANT COLOR.
19 FILL OPEN JOINT WITH NEW BACKER ROD AND SEALANT.
20 REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF ALL ORGINAL COURTHOUSE STEEL WINDOW LINTELS, TYP. PAINT WITH NEW HIGH PERFORMANCE PAINT.
21 REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF EXISTING STAIR/RAMP RAILINGS. PAINT WITH NEW HIGH PERFORMANCE PAINT.
22 REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF EXISTING IRON DOOR FRAME. PAINT WITH NEW HIGH PERFORMANCE PAINT.
23 REMOVE ALL EXISTING SEALANT FROM GRANITE STEPS AT ALL JOINTS AND FILL WITH NEW SEALANT.
24 REMOVE ENTIRE MASONRY CHEEK WALL STRUCTURE FOR NEW CHEEK WALL STRUCTURE. RE: SHEET A2.1-1.
25 REMOVE ALL CRACKED SEALANT AND REPLACE WITH NEW SEALANT.
26 EXISTING SEALANT MAY CONTAIN HAZARDOUS MATERIALS AND SHOULD BE FURTHER TESTED.
28 NEW CONCRETE RAMP AND STAIR ON NEW SNOWMELT SYSTEM. REFER TO SHEET A4.1-1.
29 SAWCUT FULL DEPTH AND REMOVE ALL DEBRIS.
30 SAWCUT, REMOVE AND REPLACE WITH NEW LIMESTONE PANELS. MATCH EXISTING PROFILE.

NO.	REVISION	DATE
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PROJECT TITLE
MASONRY REPAIRS TO:
GENESEE COUNTY COURTHOUSE & JAIL
900 & 1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE
COURTHOUSE PHOTO DETAILS

PROJECT NUMBER 2024083.1
PROJECT DATE APRIL 06, 2026
CHECKED BY K.C.L.
SHEET NUMBER A5.8-1

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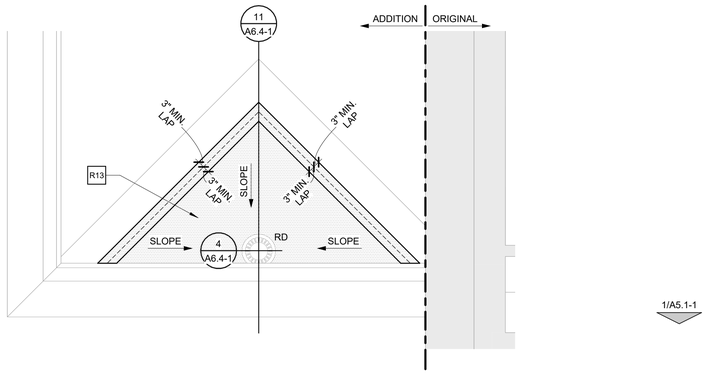


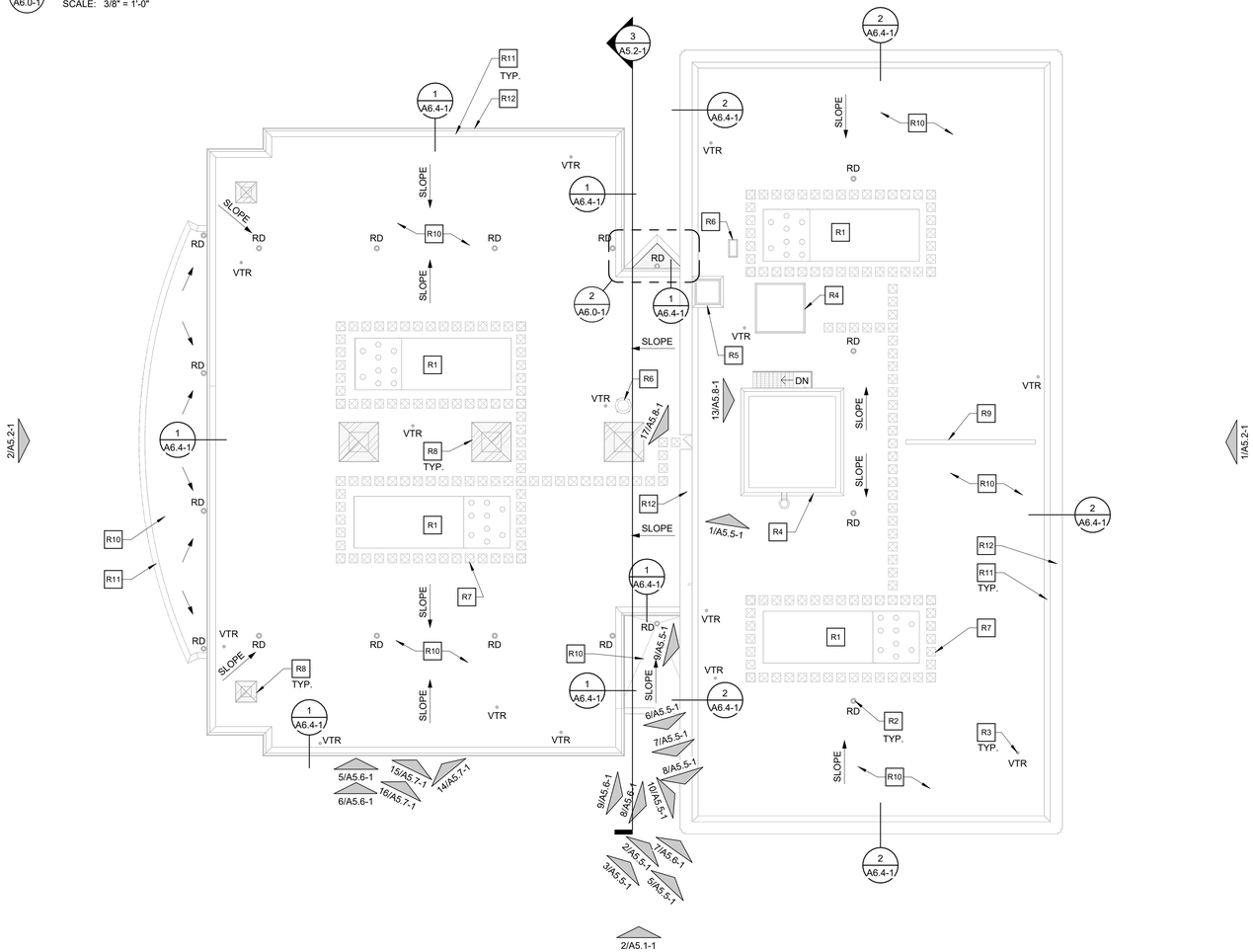
1/A5.1-1

NORTH

2 A6.0-1

ENLARGED ROOF PLAN @ MONUMENT STAIR

SCALE: 3/8" = 1'-0"



NORTH

1 A6.0-1

ROOF CONSTRUCTION PLAN

SCALE: 1/16" = 1'-0"

EXTERIOR RESTORATION GENERAL NOTES:

1. INCLUDE AN ALLOWANCE FOR FIFTY (50) INJECTED EPOXY AND CEMENTITIOUS COMPOUND STONE CRACK REPAIRS. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 1.

2. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF ONE HUNDRED (100) SQUARE FEET OF DAMAGED LIMESTONE UNITS. NEW LIMESTONE SHALL MATCH EXISTING EXPOSED LIMESTONE, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED, AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT, AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 2.

3. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPOINTING OF TWO THOUSAND (2,000) LINEAL FEET OF DAMAGED MORTAR JOINTS, DEPTH OF NEW MORTAR SHALL BE 1 INCH MINIMUM. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 3 AND 7.

4. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF ONE HUNDRED (100) SQUARE FEET OF DAMAGED BRICK UNITS. NEW BRICK SHALL MATCH EXISTING EXPOSED BRICK COURSING, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED, AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT, AND CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE EXTERIOR RESTORATION KEYNOTE NO. 13.

5. INCLUDE AN ALLOWANCE FOR ONE THOUSAND (1000) LINEAL FEET OF NEW SEALANT JOINTS OF EXISTING DETERIORATED AND CRACKED JOINTS. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH ARCHITECT PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 9, 10, 14, 18, 23, AND 25.

6. WHERE ALL NEW FLASHING TERMINATE AGAINST A VERTICAL SURFACE - PROVIDE PROPER WATERTIGHT END DAMS THAT DIRECT WATER TO DRAINAGE WEEPS. COPPER PAN FLASHING SHALL HAVE EDGE TURNED UP WITH CORNERS SOLDERED WATERTIGHT. TYPICAL ALL LOCATIONS.

7. COLOR SCHEDULE FOR NEW SEALANTS SHALL BE AS FOLLOWS:

8. A) VERTICAL BRICK TO BRICK = BROWN TO MATCH BRICK
   B) HORIZONTAL BRICK OR STONE - LIMESTONE U.N.O.)
   C) BRICK TO STONE OR STONE TO STONE = LIMESTONE

   PROVIDE ACTUAL IN WALL SEALANT MOCKUPS OF EACH TYPE, AND EACH COLOR FOR OWNER'S AND ARCHITECT'S REVIEW. MOCKUPS MAY BECOME PART OF THE PERMANENT WORK IF APPROVED.

9. AT NEW AND EXISTING STEEL PREPARATION AND PAINTING, ALL STEEL SHALL BE HAND TOOL CLEANED PER SSPC-SP2, REFERENCE SPECIFICATION SECTION 099600-HIGH PERFORMANCE COATINGS. PRIME RUST AND COAT WITH HIGH PERFORMANCE PAINT PRODUCTS AS SPECIFIED AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MINIMUM 6 MILS TOTAL WET FILM THICKNESS.

10. AT ALL LOCATIONS OF MASONRY REMOVAL AND REPLACEMENT, CONTRACTOR SHALL PROPERLY INSTALL SHORING TO SUPPORT EXISTING MASONRY TO REMAIN ABOVE OPENED AREA. FAILURE TO INSTALL ADEQUATE SHORING THAT RESULTS IN DAMAGE TO THE MASONRY TO REMAIN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND / OR REPLACE DAMAGED MASONRY AND / OR ADJACENT SURFACES, ROOFS, ETC.

11. ALL ROOF AREAS EFFECTED BY CONSTRUCTION ACTIVITY SHALL BE PROTECTED W/ 3/4" PLYWOOD ON 2" RIGID SLOTTED INSULATION ON 6 MIL. PLASTIC SHEETING OVER THE EXISTING ROOFING. THIS SHALL INCLUDE ROOFS BOTH ABOVE AND BELOW THE AREAS UNDER CONSTRUCTION. DO NOT BLOCK EXISTING ROOF DRAINS, MAINTAIN POSITIVE DRAINAGE TO THEM, PROTECT DRAINS FROM DAMAGE.

12. CLEAN ALL EXISTING ROOF DRAINS.

13. ALL WORK INDICATED ON DRAWINGS DOES NOT NECESSARILY HAVE A CORRESPONDING "RESTORATION KEYNOTE" ASSIGNED TO IT AND MAY BE INDICATED BY "GENERAL NOTES" OR DETAILS.

14. REFERENCE RESTORATION KEYNOTES AND GENERAL NOTES FOR DEMOLITION ITEMS ASSOCIATED WITH THE FACADE AND RENOVATION WORK.

15. COPING AND MASONRY REPAIR MOCKUPS: REFERENCE SPECIFICATION SECTION 040120-MASONRY PARAPET REPAIR FOR LOCATIONS, AND DESCRIPTION OF REQUIRED MOCKUPS.

16. ALONG WITH CLEANING ALL AREAS OF THE NEW MASONRY INSTALLATIONS AND WHERE SPECIFIC STAINING IS NOTED TO BE CLEANED, CONTRACTOR SHALL CLEAN ALL AREAS OF EXISTING MASONRY BELOW AND ADJACENT TO THE WORK AREA THAT MAY BE AFFECTED BY RUN-OFF OR OVER-SPRAY AT NO ADDITIONAL COST TO OWNER.

17. ALL WELDING ON THIS PROJECT TO BE PERFORMED BY CERTIFIED WELDERS (NO EXCEPTIONS). INDIVIDUAL WELDERS CERTIFICATES TO BE INCLUDED IN SUBMITTALS.

18. ALL WELDING WORK AND FLASHING PANS TO BE INSPECTED BY ARCHITECT, STRUCTURAL ENGINEER AND/OR TESTING COMPANY HIRED BY OWNER PRIOR TO COVERING WITH NEW MASONRY.

19. AFTER COMPLETION OF WORK, CONTRACTOR SHALL CLEAN ALL WINDOW UNITS WHERE CONSTRUCTION DUST, DIRT, MATERIAL RESIDUE, ETC. MAY BE PRESENT.

R## ROOF PLAN KEYNOTES

1 EXISTING ROOFTOP UNIT.
2 EXISTING ROOF DRAIN (RD).
3 EXISTING VENT THRU ROOF (VTR).
4 EXISTING MASONRY PENTHOUSE.
5 EXISTING MASONRY CHIMNEY.
6 EXISTING MECHANICAL EQUIPMENT.
7 EXISTING WALKPADS.
8 EXISTING PYRAMID FRAMED SKYLIGHT.
9 EXISTING PARTY WALL PARAPET.
10 EXISTING ROOF MEMBRANE.
11 EXISTING PARAPET COPING.
12 EXISTING CORNICE BELOW.
13 NEW ROOFING SYSTEM. INSTALL SINGLE-PLY MEMBRANE ROOFING OVER EXISTING RIGID INSULATION. INSTALL PER ROOFING MANUFACTURER'S RECOMMENDATIONS. FLASH AROUND ALL EXISTING MECHANICAL AND ELECTRICAL ITEMS AS REQUIRED.

NO.	REVISION	DATE
	ISSUED FOR BIDS	4-06-26

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PROJECT TITLE

MASONRY REPAIRS TO:

GENESEE COUNTY COURTHOUSE & JAIL

900 & 1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE

COURTHOUSE ROOF PLAN

PROJECT NUMBER 2024083.1

PROJECT DATE APRIL 06, 2026

CHECKED BY K.C.L.

SHEET NUMBER A6.0-1

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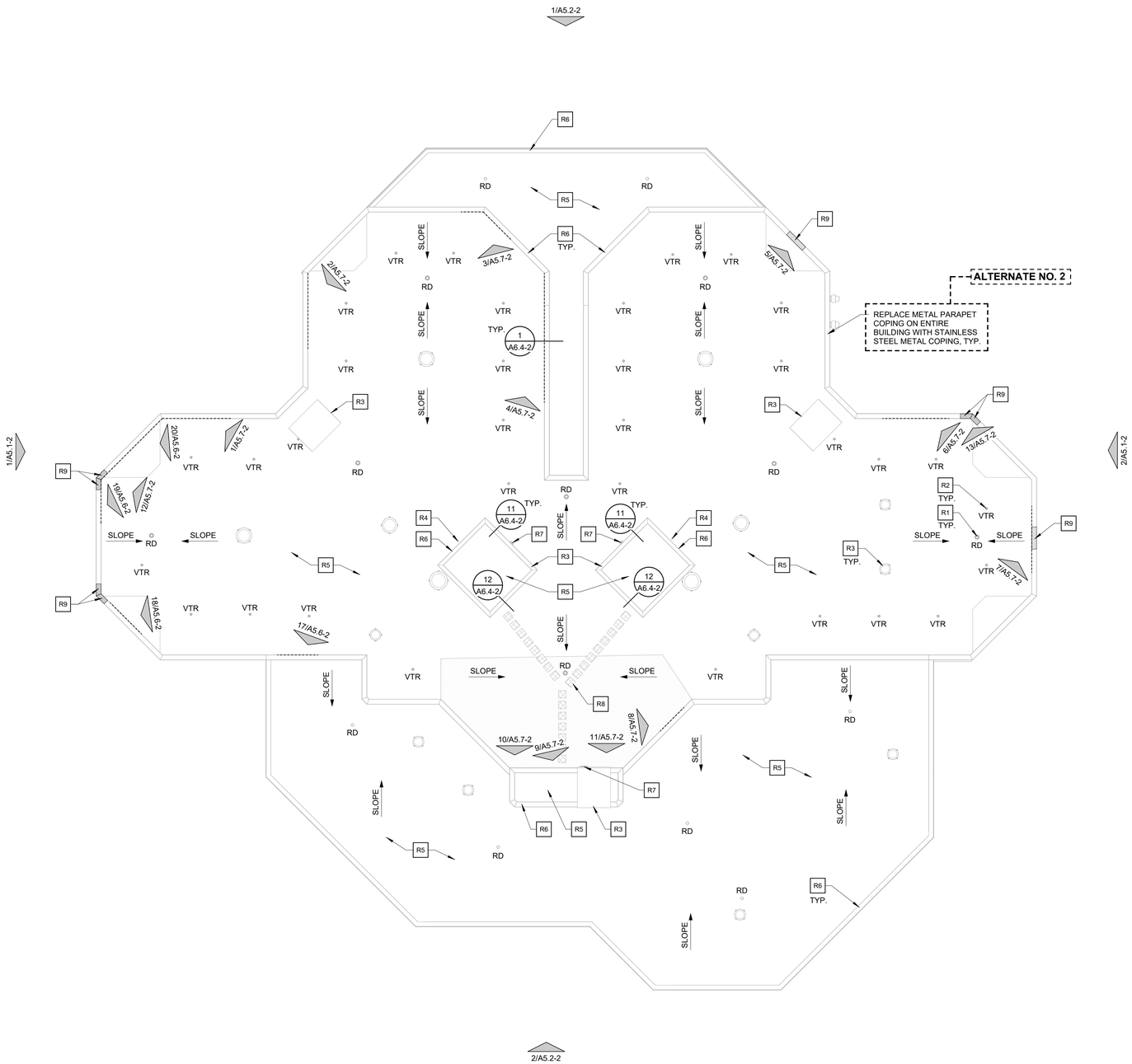

ROOF CONSTRUCTION PLAN

NORTH SCALE: 1/16" = 1'-0"

EXTERIOR RESTORATION GENERAL NOTES:

1. INCLUDE AN ALLOWANCE FOR ONE THOUSAND (1000) LINEAL FEET OF NEW SEALANT JOINTS OF EXISTING DETERIORATED AND CRACKED JOINTS. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH ARCHITECT PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 2 AND 3.
2. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF TWO HUNDRED (200) INDIVIDUALLY DAMAGED BRICK UNITS. NEW BRICK SHALL MATCH EXISTING EXPOSED BRICK COURSING, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 5.
3. INCLUDE AN ALLOWANCE FOR THE REMOVAL AND REPLACEMENT OF TWO HUNDRED (100) INDIVIDUALLY DAMAGED BRICK UNITS. NEW BRICK SHALL MATCH EXISTING EXPOSED BRICK COURSING, COLOR, COLOR VARIATION WITHIN UNITS, SURFACE TEXTURE, SIZE, AND SHAPE. LOCATIONS SHALL BE FIELD REVIEWED, VERIFIED AND DOCUMENTED WITH CONSTRUCTION MANAGER, ARCHITECT AND C.M.U. CONSTRUCTION REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED. SEE RESTORATION KEYNOTE NO. 5.
4. WHERE ALL NEW FLASHINGS TERMINATE AGAINST A VERTICAL SURFACE - PROVIDE PROPER WATERTIGHT END DAMS THAT DIRECT WATER TO DRAINAGE WEEPS. COPPER PAN FLASHINGS SHALL HAVE EDGE TURNED UP WITH CORNERS SOLDERED WATERTIGHT. TYPICAL ALL LOCATIONS.
5. COLOR SCHEDULE FOR NEW SEALANTS SHALL BE AS FOLLOWS:

   A) VERTICAL BRICK TO BRICK = TAN TO MATCH BRICK
   B) HORIZONTAL BRICK TO BRICK = TAN TO MATCH BRICK

   PROVIDE ACTUAL IN WALL SEALANT MOCKUPS OF EACH TYPE, AND EACH COLOR FOR OWNER'S AND ARCHITECT'S REVIEW. MOCKUPS MAY BECOME PART OF THE PERMANENT WORK IF APPROVED.
6. AT NEW AND EXISTING STEEL PREPARATION AND PAINTING, ALL STEEL SHALL BE HAND TOOL CLEANED PER SSPC-SP2, REFERENCE SPECIFICATION SECTION 099600-HIGH PERFORMANCE COATINGS. PRIME RUST AND COAT WITH HIGH PERFORMANCE PAINT PRODUCTS AS SPECIFIED AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MINIMUM 6 MILS TOTAL WET FILM THICKNESS.
7. AT ALL LOCATIONS OF MASONRY REMOVAL AND REPLACEMENT, CONTRACTOR SHALL PROPERLY INSTALL SHORING TO SUPPORT EXISTING MASONRY TO REMAIN ABOVE OPENED AREA. FAILURE TO INSTALL ADEQUATE SHORING THAT RESULTS IN DAMAGE TO THE MASONRY TO REMAIN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND / OR REPLACE DAMAGED MASONRY AND / OR ADJACENT SURFACES, ROOFS, ETC.
8. ALL ROOF AREAS EFFECTED BY CONSTRUCTION ACTIVITY SHALL BE PROTECTED W/ 3/4" PLYWOOD ON 2" RIGID SLOTTED INSULATION ON 6 MIL PLASTIC SHEETING OVER THE EXISTING ROOFING. THIS SHALL INCLUDE ROOFS BOTH ABOVE AND BELOW THE AREAS UNDER CONSTRUCTION. DO NOT BLOCK EXISTING ROOF DRAINS, MAINTAIN POSITIVE DRAINAGE TO THEM, PROTECT DRAINS FROM DAMAGE.
9. CLEAN ALL EXISTING ROOF DRAINS.
10. ALL WORK INDICATED ON DRAWINGS DOES NOT NECESSARILY HAVE A CORRESPONDING "RESTORATION KEYNOTE" ASSIGNED TO IT AND MAY BE INDICATED BY "GENERAL NOTES" OR DETAILS.
11. REFERENCE RESTORATION KEYNOTES AND GENERAL NOTES FOR DEMOLITION ITEMS ASSOCIATED WITH THE FACADE AND RENOVATION WORK.
12. COPING AND MASONRY REPAIR MOCKUPS: REFERENCE SPECIFICATION SECTION 040120-MASONRY PARAPET REPAIR FOR LOCATIONS, AND DESCRIPTION OF REQUIRED MOCKUPS.
13. ALONG WITH CLEANING ALL AREAS OF THE NEW MASONRY INSTALLATIONS AND WHERE SPECIFIC STAINING IS NOTED TO BE CLEANED, CONTRACTOR SHALL CLEAN ALL AREAS OF EXISTING MASONRY BELOW AND ADJACENT TO THE WORK AREA THAT MAY BE AFFECTED BY RUN-OFF OR OVER-SPRAY AT NO ADDITIONAL COST TO OWNER.
14. ALL WELDING ON THIS PROJECT TO BE PERFORMED BY CERTIFIED WELDERS (NO EXCEPTIONS). INDIVIDUAL WELDERS CERTIFICATES TO BE INCLUDED IN SUBMITTALS.
15. ALL WELDING WORK AND FLASHING PANS TO BE INSPECTED BY ARCHITECT, STRUCTURAL ENGINEER AND/OR TESTING COMPANY HIRED BY OWNER PRIOR TO COVERING WITH NEW MASONRY.
16. AFTER COMPLETION OF WORK, CONTRACTOR SHALL CLEAN ALL WINDOW UNITS WHERE CONSTRUCTION DUST, DIRT, MATERIAL RESIDUE, ETC. MAY BE PRESENT.

R# ROOF PLAN KEYNOTES

1. EXISTING ROOF DRAIN (RD).
2. EXISTING VENT THRU ROOF (VTR).
3. EXISTING MECHANICAL EQUIPMENT.
4. EXISTING MASONRY PENTHOUSE.
5. EXISTING ROOF MEMBRANE.
6. EXISTING PARAPET METAL COPING TO REMAIN.
7. EXISTING ROOF SCUPPER.
8. EXISTING WALKPADS.
9. REMOVE AND REPLACE DAMAGED/FAILING METAL COPING (HATCHED AREA). RE: COPING SPLICE AND FLASHING DETAIL 2/A6.4-2.

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PROJECT TITLE
MASONRY REPAIRS TO:
GENESEE COUNTY JAIL
1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE
JAIL ROOF PLAN

PROJECT NUMBER 2024083.1
PROJECT DATE APRIL 06, 2026
CHECKED BY K.C.L.
SHEET NUMBER A6.0-2

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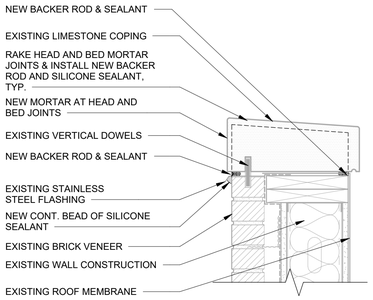
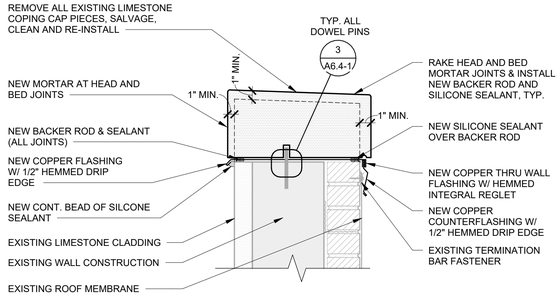


1 A6.4-1 PARAPET COPING @ ADDITION

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



2 A6.4-1 PARAPET COPING @ ORIGINAL

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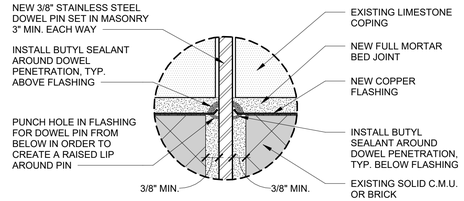
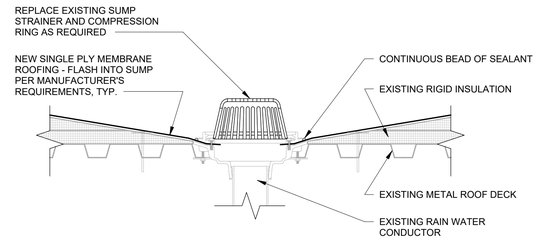


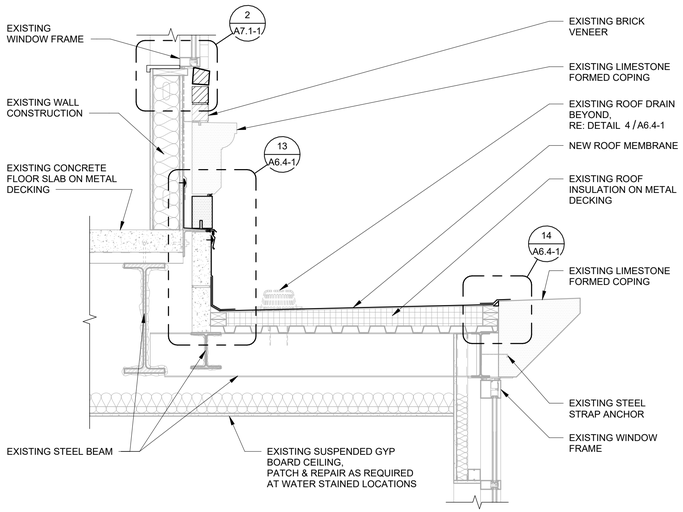
3 A6.4-1 DOWEL PENETRATION DETAIL

SCALE: N.T.S.



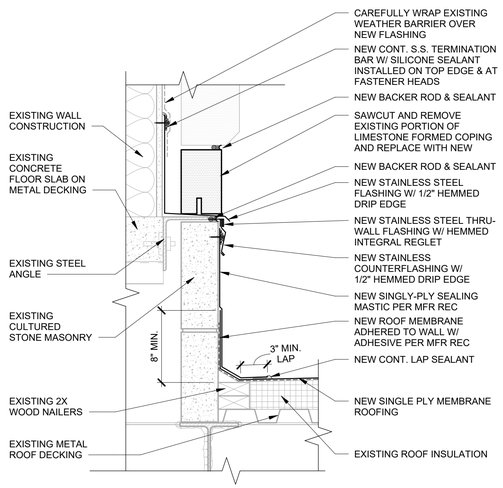
4 A6.4-1 ROOF DRAIN FLASHING DTL @ ADDITION

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



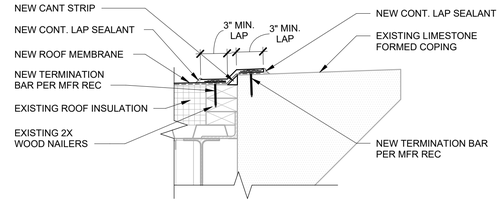
11 A6.4-1 ROOF FLASHING @ MONUMENT STAIR @ ADDITION

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



13 A6.4-1 ROOF TERMINATION BAR FLASHING DETAIL & ADDITION

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



14 A6.4-1 ROOF LAP DETAIL @ ADDITION

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

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PROJECT TITLE

MASONRY REPAIRS TO:

GENESEE COUNTY COURTHOUSE & JAIL

900 & 1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE

COURTHOUSE ROOF DETAILS

PROJECT NUMBER	SHEET NUMBER
2024083.1	A6.4-1
PROJECT DATE: APRIL 06, 2026	
CHECKED BY: K.C.L.	

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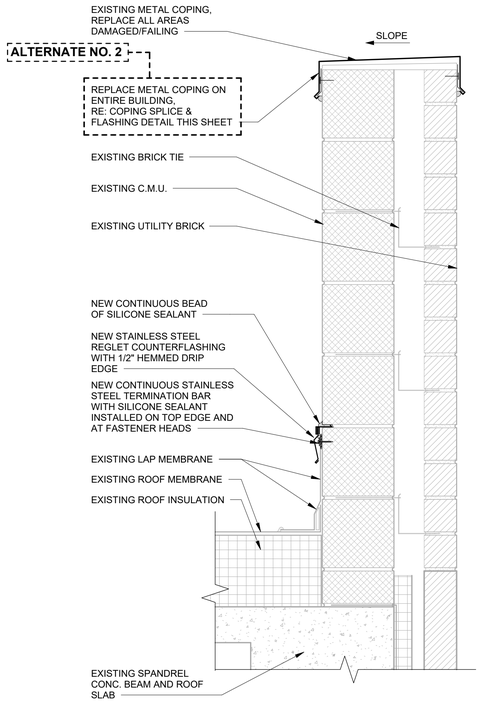
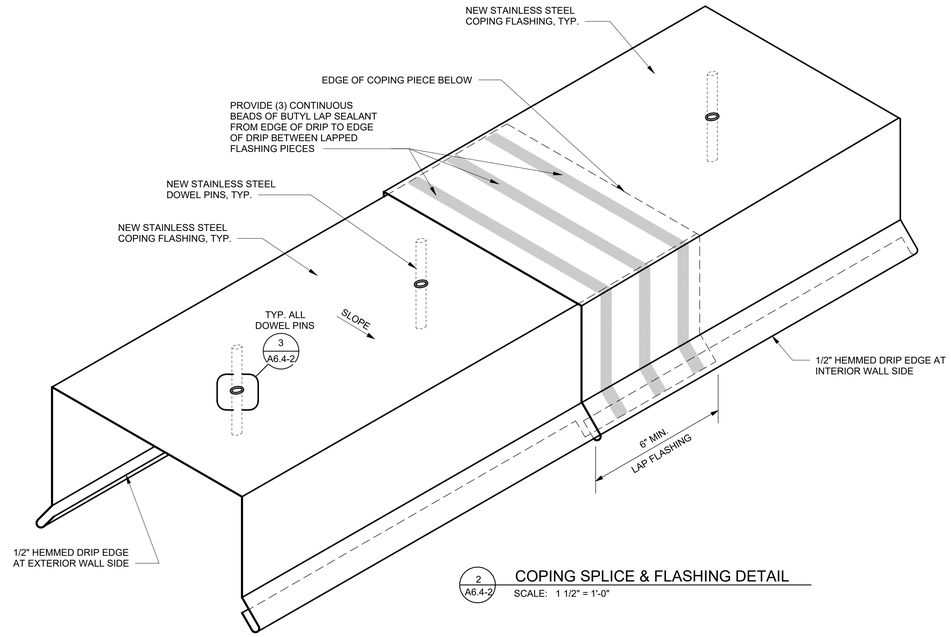


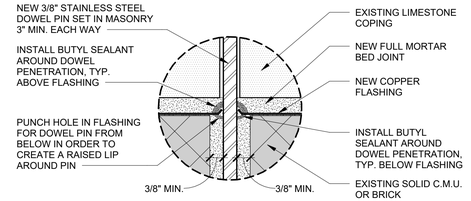
1 A6.4-2 PARAPET COUNTERFLASHING DETAIL

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



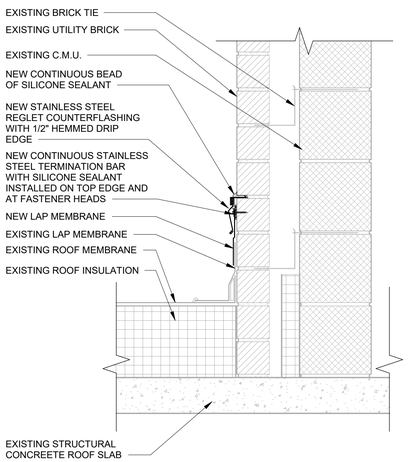
2 A6.4-2 COPING SPLICE & FLASHING DETAIL

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



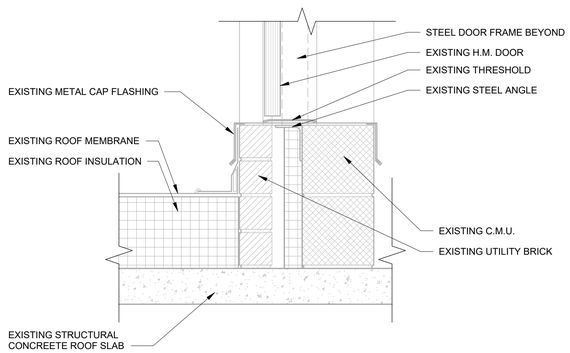
3 A6.4-2 DOWEL PENETRATION DETAIL

SCALE: N.T.S.



11 A6.4-2 PENTHOUSE WALL FLASHING DETAIL

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



12 A6.4-2 PENTHOUSE DOOR FLASHING DETAIL

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

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PROJECT TITLE

MASONRY REPAIRS TO:

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FLINT, MI 48502

SHEET TITLE

JAIL ROOF DETAILS

PROJECT NUMBER 2024083.1

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SHEET NUMBER A6.4-2

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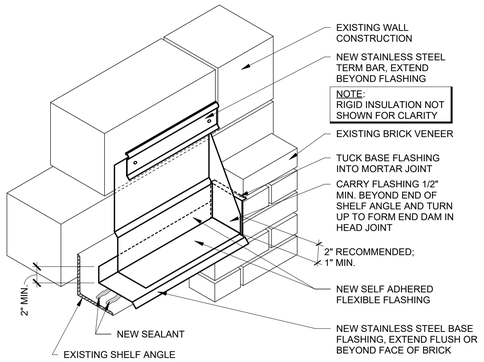
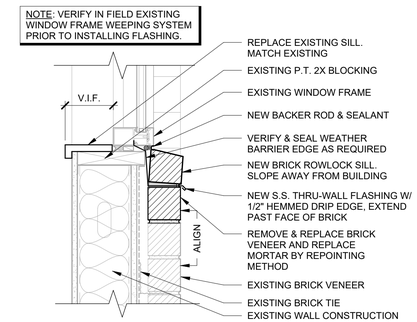


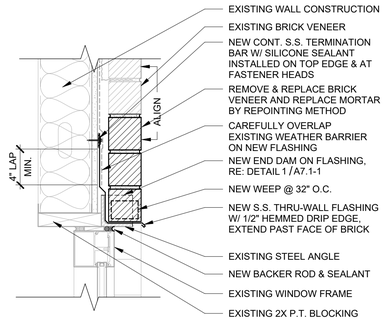
1 A7.1-1 — END DAM ISOMETRIC FLASHING DETAIL @ ADDITION

SCALE: 1" = 1'-0"



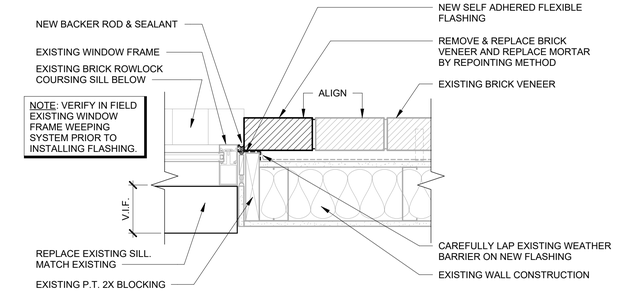
2 A7.1-1 — WDW SILL FLASHING DETAIL @ ADDITION

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



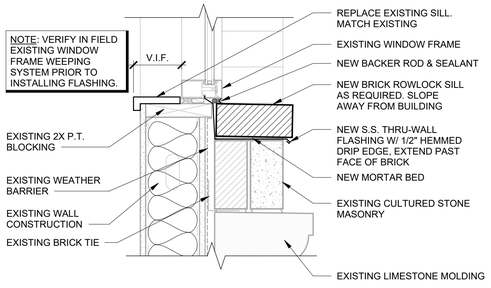
3 A7.1-1 — WDW HEAD FLASHING DETAIL @ ADDITION

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



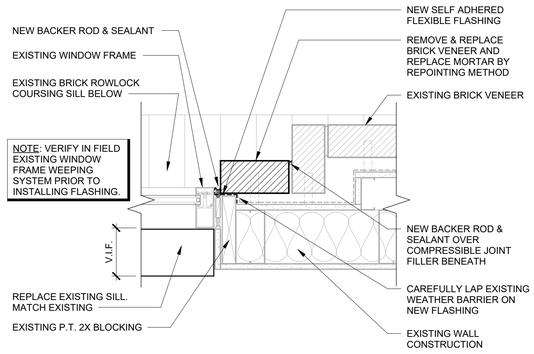
4 A7.1-1 — WDW JAMB FLASHING DETAIL @ ADDITION

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



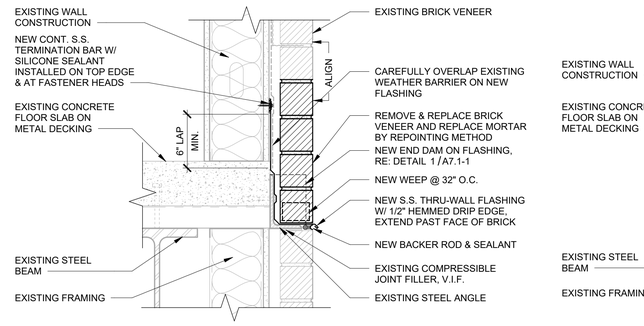
5 A7.1-1 — WDW SILL FLASHING DETAIL @ THIRD FLR @ ADDITION

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



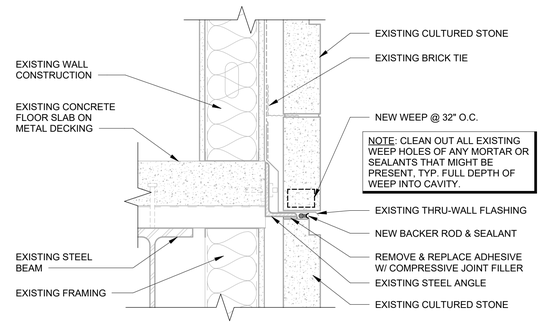
7 A7.1-1 — WDW JAMB FLASHING DETAIL @ THIRD FLR @ ADDITION

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



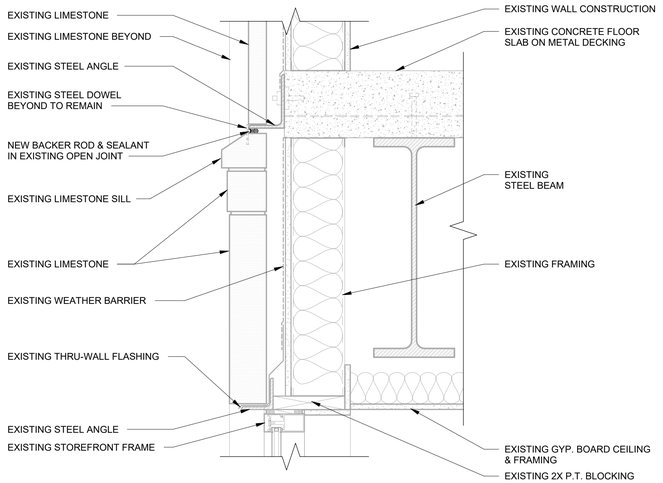
8 A7.1-1 — BRICK SHELF ANGLE FLASHING DETAIL @ ADDITION

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



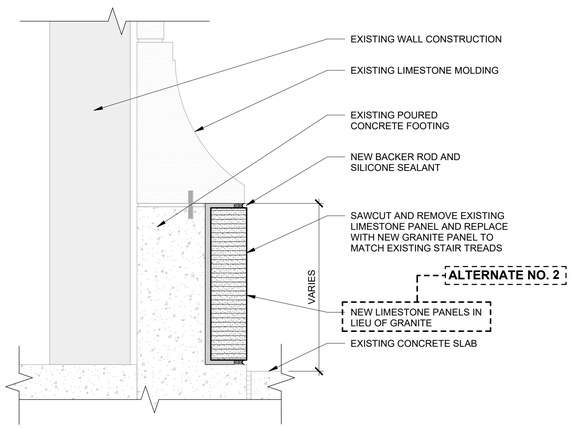
11 A7.1-1 — LIMESTONE SHELF ANGLE FLASHING DETAIL @ ADDITION

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



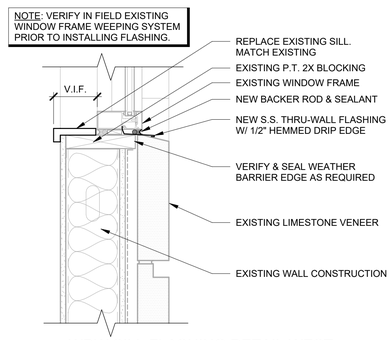
16 A7.1-1 — SOUTH ENTRY ARCH FLASHING DETAIL @ ADDITION

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



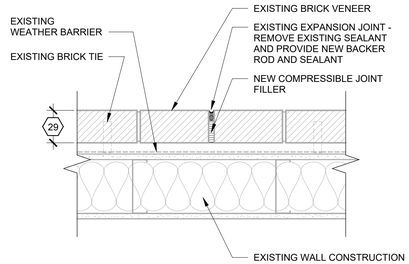
17 A7.1-1 — BASE MOLDING REPAIR DETAIL @ ORIGINAL

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



19 A7.1-1 — WDW SILL FLASHING DETAIL WEST @ ADDITION

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



15 A7.1-1 — TYP. VERTICAL EXPANSION JOINT DETAIL @ ADDITION

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

RESTORATION KEYNOTES

1 FILL CRACKS IN LIMESTONE WITH AN INJECTED MASONRY EPOXY. PATCH FACE OF STONE AS REQUIRED TO BLEND WITH ADJACENT SURFACES.
2 PATCH SPALLED/VOIDS IN EXISTING LIMESTONE WITH CEMENTITIOUS COLORED PRODUCT. MATCH ADJACENT STONE TEXTURE AND COLOR. WHERE DAMAGED AREAS ARE TOO EXTENSIVE FOR PATCHING, REMOVE DAMAGED LIMESTONE PIECE(S) AND REPLACE WITH NEW LIMESTONE PIECE(S).
3 REMOVE EXISTING DAMAGED MORTAR FROM JOINTS TO A MINIMUM DEPTH OF ONE INCH, OR BACK TO SOUND MORTAR, AND REPLACE WITH NEW MORTAR BY REPOINTING METHOD. MATCH EXISTING COLOR.
4 CLEAN ALL EXISTING LIMESTONE SURFACES WITH A CHEMICAL PRODUCT AND LOW-PRESSURE WASH. PERFORM THIS AFTER ALL REPAIRS ARE COMPLETED.
5 PROVIDE NEW DRAINAGE WEEPS SPACED FROM 32" TO 48" ON CENTER AT THROUGH-WALL FLASHING.
6 PROVIDE NEW EXPANSION JOINT IN EXISTING MASONRY VENEER AS INDICATED AND FILL WITH NEW BACKER ROD AND SEALANT.
7 REMOVE ALL EXISTING HEAD JOINT MORTAR TO A DEPTH OF ONE INCH MINIMUM AT CULTURED STONE AND FILL WITH NEW BACKER ROD & SEALANT.
8 CHEMICALLY CLEAN ALL AREAS OF SOILED MASONRY SURFACES.
9 REMOVE ALL OPEN JOINT SEALANT AT EXISTING STAINLESS STEEL FLASHING AND REPLACE WITH NEW SEALANT BELOW EXISTING FLASHING.
10 REMOVE ALL EXISTING COPING HEAD JOINT SEALANT AND REPLACE WITH NEW JOINT SEALANT. RE: DETAIL 1/A6.4-1 AND 2/A6.4-1.
11 REMOVE ALL EXISTING LIMESTONE COPING, SALVAGE, CLEAN AND RE-INSTALL WITH NEW STAINLESS STEEL FLASHING AND FILL WITH NEW BACKER ROD AND SEALANT. RE: DETAIL 2/A6.4-1.
12 REMOVE AND REPLACE TERMINATION FLASHING. REFER TO SHEET A6.4-1.
13 REMOVE ENTIRE PERIMETER OF BRICK VENEER AT WINDOW UNIT AND REPLACE WITH NEW TIGHTLY SEALED FLASHING, END DAM FLASHING & WEEP HOLES. FILL PERIMETER OF WINDOW UNITS WITH NEW BACKER ROD AND SEALANT. RE: SHEET A7.1-1.
14 REMOVE ALL HORIZONTAL SEALANT BELOW FLASHING AND BLACK ADHESIVE ABOVE FLASHING AT EXISTING SHELF ANGLES AND FILL WITH NEW BACKER ROD AND SEALANT BELOW FLASHING AND NEW WEEP DRAINAGE HOLES.
15 PATCH & REPAIR PORTIONS OF INTERIOR GYP. BOARD CEILING AT WATER SPOT LOCATIONS, ONCE WATER LEAK REPAIRS ARE COMPLETE.
16 PATCH & REPAIR PORTIONS OF INTERIOR GYP. BOARD WALLS SURROUNDING WINDOW UNIT(S) AT WATER SPOT LOCATIONS, ONCE FLASHING REPAIRS ARE COMPLETE.
17 REPLACE WATER DAMAGED SILL. MATCH EXISTING.
18 REMOVE EXISTING EXPANSION JOINT SEALANT AND FILL WITH NEW BACKER ROD AND SEALANT. MATCH EXISTING SEALANT COLOR.
19 FILL OPEN JOINT WITH NEW BACKER ROD AND SEALANT.
20 REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF ALL ORGINAL COURTHOUSE STEEL WINDOW LINTELS, TYP. PAINT WITH NEW HIGH PERFORMANCE PAINT.
21 REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF EXISTING STAIR/RAMP RAILINGS. PAINT WITH NEW HIGH PERFORMANCE PAINT.
22 REMOVE ALL FLAKING PAINT ALONG SURFACE RUST OF EXISTING IRON DOOR FRAME. PAINT WITH NEW HIGH PERFORMANCE PAINT.
23 REMOVE ALL EXISTING SEALANT FROM GRANITE STEPS AT ALL JOINTS AND FILL WITH NEW SEALANT.
24 REMOVE ENTIRE MASONRY CHEEK WALL STRUCTURE FOR NEW CHEEK WALL STRUCTURE. RE: SHEET A2.1-1.
25 REMOVE ALL CRACKED SEALANT AND REPLACE WITH NEW SEALANT.
26 EXISTING SEALANT MAY CONTAIN HAZARDOUS MATERIALS AND SHOULD BE FURTHER TESTED.
28 NEW CONCRETE RAMP AND STAIR ON NEW SNOWMELT SYSTEM. REFER TO SHEET A4.1-1.
29 SAWCUT FULL DEPTH AND REMOVE ALL DEBRIS.
30 SAWCUT, REMOVE AND REPLACE WITH NEW LIMESTONE PANELS. MATCH EXISTING PROFILE.

NO.	REVISION	DATE
	ISSUED FOR BIDS	4-06-26

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PROJECT TITLE
MASONRY REPAIRS TO:
GENESEE COUNTY COURTHOUSE & JAIL
900 & 1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE
COURTHOUSE EXTERIOR DETAILS

PROJECT NUMBER 2024083.1
PROJECT DATE APRIL 06, 2026
CHECKED BY K.C.L.
SHEET NUMBER A7.1-1

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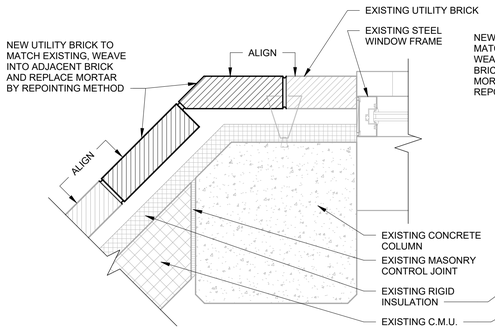
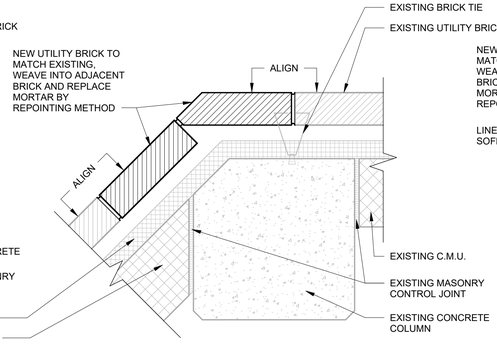
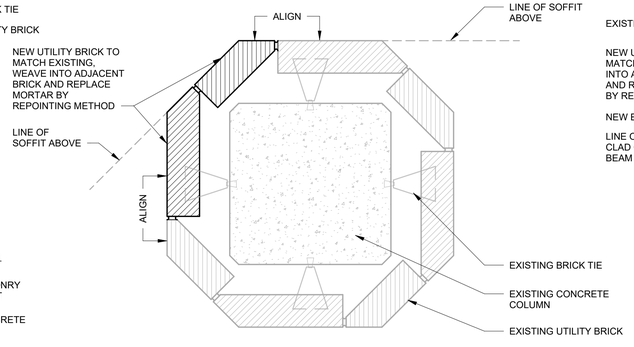


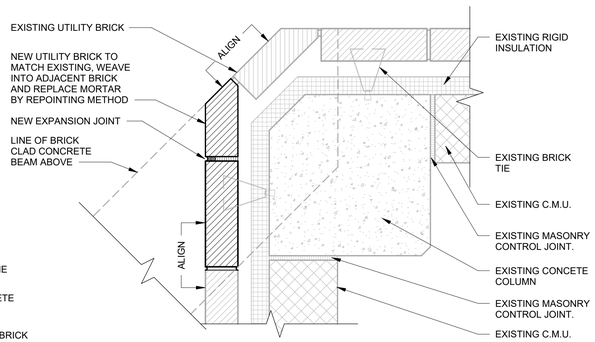
1 A7.1-2 **CORNER WDW TUCKPOINT DETAIL**
SCALE: 1 1/2" = 1'-0"



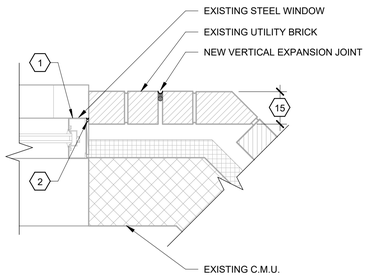
2 A7.1-2 **CORNER HEAD TUCKPOINT DETAIL**
SCALE: 1 1/2" = 1'-0"



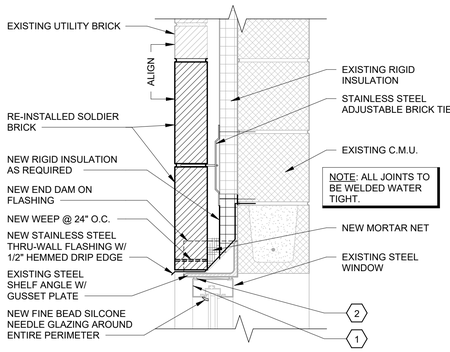
3 A7.1-2 **COLUMN DETAIL**
SCALE: 1 1/2" = 1'-0"



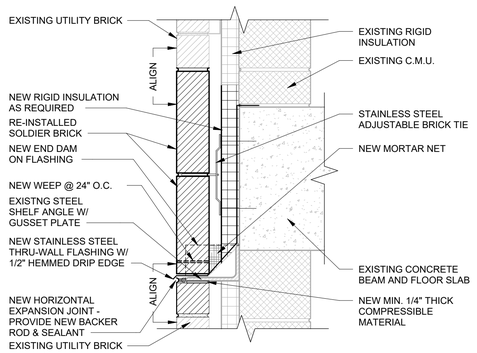
4 A7.1-2 **CORNER BELOW BRICK CLAD CONC BEAM**
SCALE: 1 1/2" = 1'-0"



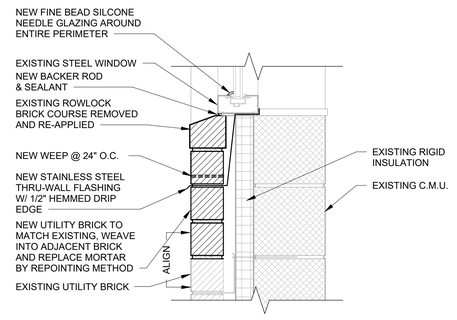
6 A7.1-2 **VERTICAL EXPANSION JOINT @ WDW**
SCALE: 1 1/2" = 1'-0"



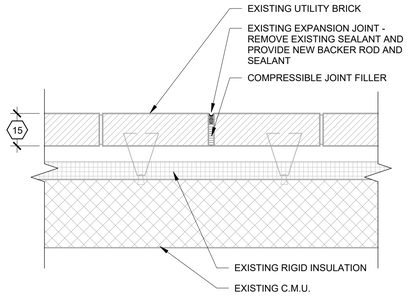
7 A7.1-2 **WDW HEAD BRICK LINTEL DETAIL**
SCALE: 1 1/2" = 1'-0"



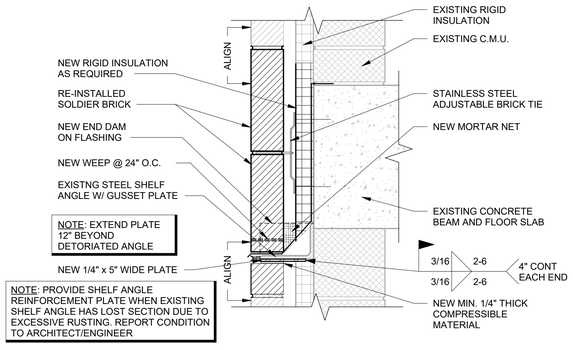
8 A7.1-2 **SHELF ANGLE DETAIL @ SOLDIER COURSE**
SCALE: 1 1/2" = 1'-0"



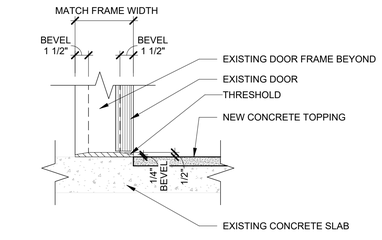
9 A7.1-2 **WDW SILL BRICK DETAIL**
SCALE: 1 1/2" = 1'-0"



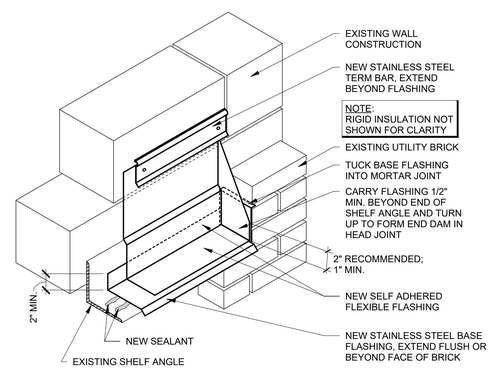
11 A7.1-2 **TYP. VERTICAL EXPANSION JOINT DETAIL**
SCALE: 1 1/2" = 1'-0"



12 A7.1-2 **SHELF ANGLE DETAIL @ REINFORCEMENT**
SCALE: 1 1/2" = 1'-0"



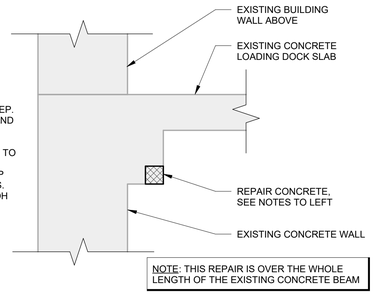
13 A7.1-2 **DOOR THRESHOLD DETAIL**
SCALE: 1 1/2" = 1'-0"



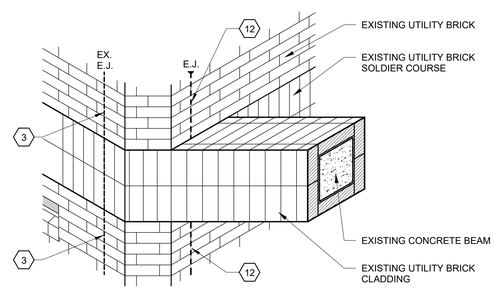
14 A7.1-2 **END DAM ISOMETRIC FLASHING DETAIL**
SCALE: 1" = 1'-0"

CONCRETE REPAIR PROCEDURES:

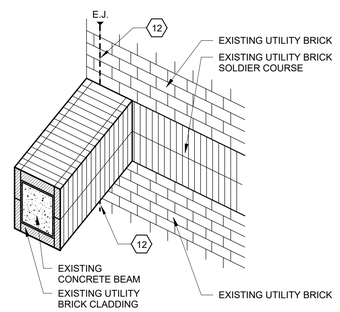
1. REMOVE ALL UNSOUND CONCRETE IN THE HATCH AREA.
2. SAWCUT PATCH EDGES TO MINIMUM 3/4" DEEP.
3. EXPOSE ANY UNCOVERED REBAR ALL AROUND TO HAVE 1" CLEAR BETWEEN REBAR AND EXISTING CONCRETE.
4. MECHANICALLY ABRADE ALL EXPOSE STEEL TO REMOVE CORROSION.
5. COAT REBAR WITH SIKA-SIKAGARD P 8100 AP PER MANUFACTURER'S RECOMMENDATIONS.
6. PATCH CONCRETE WITH SIKA-SIKAQUICK VOH IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.



16 A7.1-2 **CONCRETE BEAM REPAIR DETAIL**
SCALE: N.T.S.



18 A7.1-2 **EXTR SIDE BRICK CLAD CONC BEAM ISOMETRIC**
SCALE: N.T.S.



19 A7.1-2 **INTR SIDE BRICK CLAD CONC BEAM ISOMETRIC**
SCALE: N.T.S.

RESTORATION KEYNOTES

1. CLEAN RUST OFF ENTIRE EXISTING STEEL WINDOW FRAME AND PAINT WITH NEW HIGH PERFORMANCE PAINT, TYPICAL ALL WINDOWS.
2. REMOVE SEALANT AROUND ENTIRE PERIMETER OF EXISTING STEEL WINDOW AND FILL WITH NEW BACKER ROD AND SEALANT. REFER TO DETAIL 7/A7.1-2.
3. REMOVE ALL SEALANT AT EXISTING VERTICAL EXPANSION JOINT AND FILL WITH NEW BACKER ROD AND SEALANT. REFER TO DETAIL 11/A7.1-2.
4. CLEAN RUST OFF EXISTING STEEL DOOR AND PAINT WITH NEW HIGH PERFORMANCE PAINT.
5. REMOVE AND REPLACE PORTIONS OF CRACKED AND SPALLING BRICK WITH NEW BRICK TO MATCH EXISTING.
7. OPEN SOLDIER COURSING AND REMOVE ALL BRITTLE FLASHING AT SHELF ANGLES AND REPLACE WITH NEW CONTINUOUS FLASHING OVER THE ENTIRE SHELF ANGLE AND PROVIDE NEW WEEP SYSTEMS. REFER TO DETAIL 7/A7.1-2.
8. PROVIDE NEW END DAM FLASHING AT ALL SHELF ANGLES. REFER TO DETAIL 14/A7.1-2.
9. OPEN SOLDIER COURSING AND REMOVE ALL BRITTLE FLASHING AT SHELF ANGLES AND REPLACE WITH NEW CONTINUOUS FLASHING OVER ENTIRE SHELF ANGLE AND PROVIDE NEW WEEP SYSTEMS. REFER TO DETAIL 8/A7.1-2.
10. PROVIDE NEW HORIZONTAL EXPANSION JOINT BELOW ALL SHELF ANGLES SUPPORTING BRICK WYTHE.
11. PROVIDE NEW ISOLATION JOINT IN EXTERIOR BRICK VENEER AS INDICATED.
12. PROVIDE NEW CONTINUED EXPANSION JOINT VERTICALLY UP TO PARAPET.
13. REMOVE AND REPLACE DAMAGED/FAILING METAL COPING. RE: COPING SPLICE AND FLASHING DETAIL 2/A6.4-2.
14. REPLACE MISSING/DAMAGED COUNTERFLASHING WITH NEW COUNTERFLASHING. RE: DETAIL 1/A6.4-2.
15. SAWCUT FULL DEPTH AND REMOVE ALL DEBRIS.
16. REPAIR CONCRETE PER DETAIL 16/A7.1-2.
17. REPAIR CONCRETE COLUMN, RE: DETAIL 16/A7.1.2 FOR CONCRETE REPAIR PROCEDURES.

NO.	REVISION	DATE
	ISSUED FOR BIDS	4-06-26

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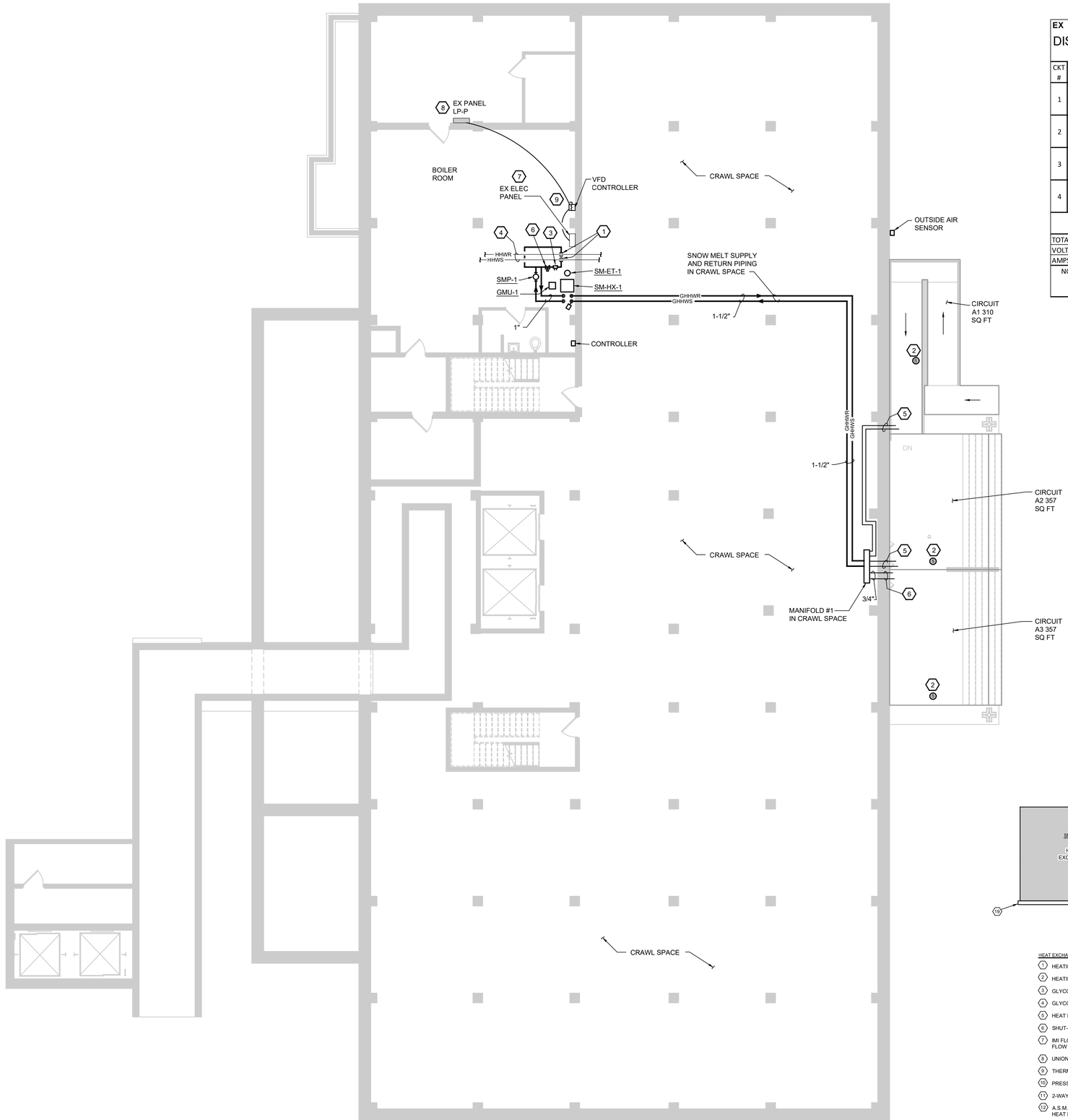
PROJECT TITLE
MASONRY REPAIRS TO:
GENESEE COUNTY JAIL
1002 S. SAGINAW STREET
FLINT, MI 48502

SHEET TITLE
JAIL EXTERIOR DETAILS

PROJECT NUMBER 2024083.1
PROJECT DATE APRIL 06, 2026
CHECKED BY K.C.L.
SHEET NUMBER A7.1-2

R.G.S. 4/6/2026 9:08:04 PM C:\Users\jjohnston\Documents\CENTRAL-2024083-2-GC-JoshMR_V25_jjohnston.rvt



BASEMENT FLOOR PLAN -
1/8"=1'-0"

EX
DIST. PANEL

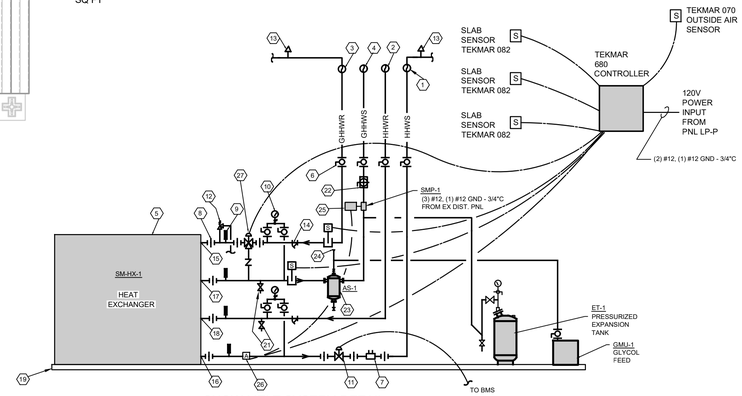
MAIN: SIZE & TYPE: 225 A		PANEL LOCATION: BOILER RM.
BUS RATING: 225 A		FEEDER SIZE:
VOLTAGE: 120 / 208 V 3 PH 3 W		FED FROM:
MOUNTING: SURFACE		MIN RMS AMPS:

CKT #	CIRCUIT DESCRIPTION	AMPS / POLES	LOAD (KVA) A	B	C
1	SNOW MELT PUMP	30A/3P 4 AF	0.300		
				0.300	
					0.300
2	COND. PUMP #1	30A/3P	0.500		
				0.500	
					0.500
3	SPARE	60A/3P			
4	COND. PUMP #2	60A/3P	0.500		
				0.500	
					0.500

LOAD SUMMARY	KVA CONNECTED A	B	C
TOTAL KVA	1.300	1.300	1.300
VOLTS / PHASE	120	120	120
AMPS / PHASE	10.833	10.833	10.833

KVA SUMMARY		
TOTAL		
3.900	kVA	
208	VOLTS	
10.8	AMPS	

NOTES:



SNOW MELT SYSTEM DETAIL
NO SCALE

HEAT EXCHANGER KEYED NOTES

1. HEATING HOT WATER SUPPLY PIPING
2. HEATING HOT WATER RETURN PIPING
3. GLYCOL HEATING HOT WATER RETURN PIPING
4. GLYCOL HEATING HOT WATER SUPPLY PIPING
5. HEAT EXCHANGER
6. SHUT-OFF VALVE, (TYP)
7. IMI FLOW DESIGN AUTOMATIC FLOW LIMITING VALVE.
8. UNION, (TYP)
9. THERMOMETER ANGLE TYPE READABLE FROM FLOOR
10. PRESSURE GAUGE WITH BALL VALVE (TYP)
11. 2-WAY 2-POSITION CONTROL VALVE
12. A.S.M.E. RELIEF VALVE W/DRAIN INSTALLED AS REQUIRED PER HEAT EXCHANGER MANUFACTURER.
13. MANUAL AIR VENT AT HIGH POINT IN SYSTEM
14. STRAINER W/BALL VALVE, HOSE CONNECTION AND CAP. STRAINER SHALL HAVE a 20-24 MESH PERFORATION LINING SIZE OR AS REQUIRED PER HEAT EXCHANGER MANUFACTURER. (TYP)
15. GLYCOL HEATING HOT WATER RETURN PIPING CONNECTION TO TOP LEFT OF HEAT EXCHANGER
16. HEATING HOT WATER PIPING OUTLET TO BOILER PLANT TO CONNECT TO TOP RIGHT OF HEAT EXCHANGER CONNECTION.
17. GLYCOL HEATING HOT WATER SUPPLY PIPING CONNECTION TO BOTTOM LEFT OF HEAT EXCHANGER
18. HEATING HOT WATER PIPING INLET FROM BOILER PLANT TO CONNECT TO BOTTOM RIGHT OF HEAT EXCHANGER.
19. 4" CONCRETE PAD. FIELD VERIFY SIZE.
20. SENSOR WELL WITH TEMPERATURE CONTROL SENSOR (TYP)
21. HEAT EXCHANGER DRAIN WITH SHUT-OFF VALVE. INSTALL AT LOW POINT.
22. VENTURI STYLE MANUAL BALANCE VALVE.
23. AIR SEPARATOR
24. AIR VENT
25. INLINE CIRCULATION PUMP
26. FREEZE PROTECTION AQUASTAT SET AT 34°F.
27. 3-WAY MIXING VALVE

KEYED NOTES

1. CONNECT NEW 1" HHWS & 1" HHWR PIPING TO EXISTING 1" HHWS & 1" HHWR PIPING AT EXISTING SHUT-OFF VALVES.
2. NEW SNOW MELT SLAB SENSOR INSTALLED AND WIRED FOR MANUFACTURERS REQUIREMENTS.
3. NEW FLOW CONTROL VALVE.
4. EXISTING HEATING SUPPLY AND RETURN PIPING.
5. NEW SNOW MELT PIPING ROUTED THRU CRAWL SPACE WALL.
6. NEW 2-WAY CONTROL VALVE.
7. UTILIZE EXISTING SPARE 30 AMP SQUARE D QMB SWITCH TO FEED NEW PUMP.
8. UTILIZE EXISTING SPARE 20A 1 POLE CIRCUIT BREAKER TO FEED NEW SNOW MELT CONTROLLER.
9. PROVIDE 1PH, 120V POWER CONNECTION FROM PANEL LP-P AND 3PH, 208V POWER CONNECTION FROM DIST. PANEL TO VFD CONTROLLER. FIELD COORDINATE POWER REQUIREMENTS WITH MANUFACTURER INSTRUCTIONS.

NO.	REVISION	DATE
	ISSUED FOR BIDS	4-06-26

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714 EAST MIDLAND STREET • BAY CITY, MICHIGAN 48706
(989) 894-4300 • WWW.MACMILLANASSOCIATES.COM • SINCE 1963

PROJECT TITLE
MASONRY REPAIRS TO:
GENESEE COUNTY COURTHOUSE & JAIL
900 & 1002 S. SAGINAW STREET
FLINT, MICHIGAN 48502

SHEET TITLE
COURTHOUSE BASEMENT
BASEMENT FLOOR PLAN
SNOW MELT SYSTEM

PROJECT NUMBER 2024083.1
PROJECT DATE APRIL 06, 2026
CHECKED BY RAM
SHEET NUMBER ME1.1

F:\15-WTA\2024-155\ GENESEE COUNTY COURTHOUSE AND JAIL EXTERIOR RESTORATION\2024-155\8-M\ME1.1 - MECHANICAL BASEMENT PLAN
2/3/2021 11:22 AM NOAH ADAMCIK (NADAMCIK@MACMILLANASSOCIATES.COM)

MECHANICAL SPECIFICATIONS

CODES, PERMITS & INSPECTIONS
CONTRACTOR SHALL SECURE PERMITS, INSPECTIONS AND TESTS, PAY ALL FEES, DEPOSITS, AND COSTS FOR ALL MECHANICAL UTILITIES AND SERVICES INVOLVED AND PRESENT THE OWNER A CERTIFICATE OF INSPECTION AND APPROVAL FROM THE DEPARTMENT HAVING JURISDICTION OVER HIS WORK. SHOULD ANY CHANGE IN THE DRAWINGS AND SPECIFICATIONS BE REQUIRED TO COMPLY WITH ALL APPLICABLE CODES, RULES, REGULATIONS, ETC., CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE SUBMITTING BID. AFTER ENTERING INTO CONTRACT, ALL WORK NECESSARY TO MEET THE REQUIREMENTS SHALL BE COMPLETED WITHOUT ADDITION TO THE CONTRACT AMOUNT. WHERE WORK INDICATED IS MORE THAN REQUIRED BY CODES, ETC., SUCH WORK SHALL BE AS INDICATED.

JOB OBSERVATION
NOTWITHSTANDING ANY REFERENCE TO ANY CODE, RULE OR REGULATION, ENGINEER SHALL HAVE NO RESPONSIBILITY FOR SAFETY ON THE JOB SITE, SHALL HAVE NO RIGHT TO CHANGE OR STOP THE WORK, SHALL NOT CONTROL THE MEANS OF THE WORK, AND SHALL NOT HAVE ANY DUTY TO PROVIDE SUPERVISION OF MEANS, METHODS, PROCESSES OR PROCEDURES OF CONSTRUCTION.

FIRST-CLASS WORKABLE SYSTEMS
FIRST CLASS WORKABLE SYSTEMS SHALL BE PROVIDED BY THE CONTRACTOR. IF, IN THE OPINION OF THE CONTRACTOR, CHANGES IN THE DRAWINGS OR SPECIFICATIONS ARE REQUIRED TO PRODUCE FIRST-CLASS WORKABLE SYSTEMS, CONTRACTOR SHALL REQUEST AN INTERPRETATION FROM THE ENGINEER BEFORE PROCEEDING WITH THE WORK. IF THE CONTRACTOR FAILS TO MAKE SUCH A REQUEST, NO EXCUSE WILL THEREAFTER BE ENTERTAINED FOR FAILURE TO PROVIDE FIRST-CLASS WORKABLE SYSTEMS.

DRAWINGS
DRAWINGS ARE INTENDED TO SHOW THE GENERAL ARRANGEMENT, DESIGN, AND EXTENT OF THE WORK AND ARE DIAGRAMMATIC. THEY ARE NOT INTENDED TO BE SCALED FOR ROUGH-IN MEASUREMENTS NOR TO SERVE AS SHOP DRAWINGS. THE ENGINEERS AND OWNER RESERVE THE RIGHT TO MAKE MINOR CHANGES IN THE LOCATION OF EQUIPMENT, DUCTWORK, PIPING, ETC. AT THE TIME OF ROUGH-IN WITHOUT ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, LOCATIONS, ETC. FOR ACCURACY AND POSSIBILITY OF INTERFERENCES DUE TO FIELD CONDITIONS AND ACTUAL BUILDING STRUCTURE. FAILURE TO CHECK WILL BE NO REASON FOR ADDITIONAL COMPENSATION.

SHOP DRAWINGS
SUBMIT ELECTRONIC SET OF COMPLETE SHOP DRAWINGS FOR ALL MECHANICAL EQUIPMENT AND MATERIALS TO THE ENGINEER FOR REVIEW BEFORE FABRICATION OF WORK OR ORDERING OF EQUIPMENT. DRAWINGS MUST BE REVIEWED BY THE ENGINEER BEFORE ORDERING EQUIPMENT. ALL SHOP DRAWINGS REJECTED SHALL BE CORRECTED AND RESUBMITTED TO THE ENGINEER BEFORE ORDERING.

STANDARDS OF INDUSTRY
STANDARDS OF INDUSTRY SHALL BE FOLLOWED WHEN APPLICABLE.

GUARANTEE
CONTRACTOR SHALL GUARANTEE EQUIPMENT, MATERIALS AND WORKMANSHIP IN HIS CONTRACT AND SHALL MAKE GOOD AT HIS OWN EXPENSE ANY DEFECTS WHICH MAY DEVELOP WITHIN ONE YEAR AFTER START-UP OF EACH PIECE OF EQUIPMENT, OCCUPANCY BY OWNER, OR FINAL ACCEPTANCE OF THE JOB, WHICHEVER OCCURS FIRST.

CONTRACTORS RECORD/AS-BUILT DRAWINGS
CONTRACTOR SHALL MAINTAIN AND KEEP AN UP-TO-DATE SET OF "RECORD" DRAWINGS REFLECTING "AS-BUILT" CONDITIONS OF THEIR WORK. CONTRACTOR SHALL INDICATE EXACT DIMENSIONS AND ELEVATIONS FOR ALL UNDERGROUND WORK. UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL DELIVER TO THE ENGINEER THE "RECORD" DRAWINGS.

LOCAL CONDITIONS
BEFORE SUBMITTING BIDS AND/OR PROCEEDING WITH THE PROJECT, THE CONTRACTOR SHALL EXAMINE ALL DRAWINGS, SPECIFICATIONS AND ADDENDA ISSUED FOR THE PROJECT AND SHALL EXAMINE THE PROJECT SITE. THE CONTRACTOR SHALL THOROUGHLY INVESTIGATE THE PROJECT SITE AND BECOME FULLY INFORMED AS TO THE EXTENT OF HIS WORK AND COORDINATION OF THIS WORK WITH ALL OTHER TRADES AND INCLUDE ALL COST TO PERFORM AND COMPLETE WORK FOR THIS PROJECT PER DRAWINGS AND SPECIFICATION AND ALL CODES.

OPERATION AND MAINTENANCE MANUALS
CONTRACTOR SHALL FURNISH TO THE ARCHITECT/ENGINEER TWO (2) COPIES OF AN APPROVED BOUND (3-RING BINDER) BOOK WITH TABS FOR SECTIONS COVERING EACH ITEM OF EQUIPMENT. THESE NOTEBOOKS SHALL INCLUDE SHOP DRAWINGS, MAINTENANCE MANUALS, OPERATING MANUALS AND PARTS LIST AS NECESSARY TO INSTRUCT THE OWNER ON PROPER OPERATION AND USE AS WELL AS MAINTENANCE FOR EACH PIECE OF EQUIPMENT FOR THIS PROJECT. THESE BOOKS SHALL ALSO INCLUDE CONTRACTOR'S, SUBCONTRACTOR'S AND MANUFACTURER'S NAMES, TELEPHONE NUMBERS AND ADDRESSES. MANUALS SHALL ALSO INCLUDE SEQUENCE OF OPERATION, CONTROL EQUIPMENT LITERATURE, WIRING AND CONTROL DIAGRAMS, CERTIFICATES OF GUARANTEES, CERTIFICATES OF INSPECTION, MECHANICAL SYSTEM TEST AND BALANCING REPORTS. THE CONTRACTOR SHALL ACCUMULATE AND SUMMARIZE THE CONTROL AND MAINTENANCE SEQUENCE IN TYPEWRITTEN SHEET TO BE INCLUDED IN THE REPORT. THESE MANUALS SHOULD BE HARD BOUND IN BEST QUALITY BINDERS AND TURNED OVER TO THE ARCHITECT/ENGINEER FOR APPROVAL AT COMPLETION OF PROJECT.

START-UP SERVICE
CONTRACTOR SHALL ARRANGE WITH EQUIPMENT MANUFACTURERS FOR PROVIDING COMPLETE START-UP SERVICE FOR ALL EQUIPMENT ON THIS PROJECT. ALL START-UP SERVICES SHALL BE PERFORMED IN THE PRESENCE OF THE OWNER AND/OR ENGINEER. A WRITTEN REPORT SHALL BE SUBMITTED TO THE ENGINEER STATING DATE OF START-UP, MANUFACTURER APPROVAL OF SYSTEM OPERATION AND INSTALLATION.

CUTTING AND PATCHING
CUTTING AND PATCHING SHALL BE BY TRADES REGULARLY ENGAGED IN THIS TYPE OF WORK, EXCEPT DRILLING OF HOLES SHALL BE DONE BY THE TRADES REQUIRING SAME. STRUCTURAL MEMBERS SHALL NOT BE CUT OR DRILLED.

SALVAGEABLE MATERIAL
SALVAGEABLE MATERIAL SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE STORED AT LOCATIONS AS DIRECTED BY THE OWNER, EXCEPT THE OWNER RESERVES THE RIGHT TO DESIGNATE CERTAIN ITEMS OF SALVAGEABLE MATERIAL TO BE REMOVED FROM THE PROJECT SITE.

RIGGING AND HOISTING
PERFORM ALL REQUIRED RIGGING, HOISTING, TRANSPORTATION, MOVING, ETC. OF ALL EQUIPMENT, MATERIALS, ETC. TO BE FURNISHED AND/OR INSTALLED AS SHOWN ON DRAWINGS, WHETHER FURNISHED BY THIS CONTRACTOR OR BY THE OWNER OR OTHER TRADES.

STORAGE FACILITY
FURNISH AND MAINTAIN A WEATHERPROOF STORAGE FACILITY ON THE SITE OF ADEQUATE SIZE TO STORE MISCELLANEOUS EQUIPMENT AND/OR MATERIALS TO PREVENT EXPOSURE TO THE WEATHER. LOCATION OF SHED SHALL BE DETERMINED BY THE OWNER AND ARCHITECT/ENGINEER. THE OWNER RESERVES THE RIGHT TO DENY STORAGE OF MATERIALS OR EQUIPMENT IN ANY EXISTING OR NEW BUILDINGS.

PROTECTION FROM DAMAGE
THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS, EQUIPMENT, ETC. AND ALL WORK INSTALLED BY HIMSELF AND SHALL PROTECT IT FROM DAMAGE UNTIL FINAL ACCEPTANCE OF THIS PROJECT BY THE OWNER.
FURNISH ALL COVERINGS AND PROTECTION FROM DIRT, DUST, RAIN, STORM, HEAT, TRAFFIC, WEAR, ETC. AND ALL POSSIBLE INJURY INCLUDING THAT BY OTHER WORKMEN. ANY EQUIPMENT, WORKMANSHIP, MATERIALS, ETC. DAMAGED PRIOR TO FINAL ACCEPTANCE BY THE OWNER OF THIS PROJECT SHALL BE PROPERLY REPAIRED AT NO EXPENSE TO THE OWNER.
PROTECT ALL EQUIPMENT FROM DAMAGE BY COVERING OR COATING. ANY DENTED, SCRATCHED, RUSTED OR MARRED SURFACE FINISHES WILL NOT BE ACCEPTED.
PROTECT ALL EQUIPMENT, MATERIALS, ETC. FROM FREEZING.

HEATING HOT WATER, PIPING

PIPING 3" AND SMALLER: COPPER TUBING: ASTM B88, TYPE L, HARD DRAWN, SEAMLESS.
FITTINGS: ASME B16.18 CAST BRONZE TEE TAP OR ASME B16.22 SOLDER WROUGHT COPPER.
JOINTS: 95-5 TIN - ANTIMONY OR TIN AND SILVER WITH MELTING RANGE 430 TO 535 DEGREES F.

VALVES

GATE VALVES:
UP TO AND INCLUDING 3 INCHES: BRONZE BODY, BRONZE TRIM, SCREWED BONNET, RISING STEM, HANDWHEEL, INSIDE SCREW WITH BACKSEATING STEM, SOLID WEDGE DISC, ALLOY SEAT RINGS, SOLDER OR THREADED ENDS.

GLOBE OR ANGLE VALVES:
UP TO AND INCLUDING 3 INCHES: BRONZE BODY, BRONZE TRIM, SCREWED BONNET, RISING STEM AND HANDWHEEL, INSIDE SCREW WITH BACKSEATING STEM, RENEWABLE COMPOSITION DISC AND BRONZE SEAT, SOLDER ENDS.

BALL VALVES:
UP TO AND INCLUDING 2 INCHES: BRONZE ONE-PIECE BODY, STAINLESS STEEL BALL, TEFLON SEATS AND STUFFING BOX RING, LEVER HANDLE WITH BALANCING STOPS, SOLDER OR THREADED ENDS.

UNIONS
UNIONS OR FLANGES SHALL BE USED AT EQUIPMENT CONNECTIONS. DIELECTRIC CONNECTIONS BETWEEN COPPER AND IRON OR STEEL PIPE SHALL BE MADE WITH DIELECTRIC NIPPLES SIMILAR TO VICTAULIC STYLE 47. A BRASS ADAPTER DIELECTRIC UNION IS NOT ACCEPTABLE.

PLATES AND SLEEVES
PROVIDE AND INSTALL PIPE SLEEVES FOR ALL PIPING PASSING THROUGH WALLS, FLOORS AND CEILINGS. SLEEVES THROUGH WALLS BELOW GRADE AND AT ALL FLOOR SHALL BE BLACK STEEL. SLEEVES THROUGH WALLS AND CEILINGS MAY BE 20 GAUGE GALVANIZED SHEET METAL. WHERE PIPES ARE INSULATED, SLEEVES SHALL BE LARGE ENOUGH TO PASS THE INSULATION. ALL PENETRATION VOIDS SHALL BE SEALED SMOKE TIGHT WITH NON-COMBUSTIBLE MATERIALS SIMILAR TO 3M OR HILTI FIRESTOP SYSTEMS TO MAINTAIN THE INTEGRITY OF THE FIRE RATED STRUCTURE. IN A NON-FIRE RATED ASSEMBLY, SEAL ALL VOIDS WITH NON-HARDENING SEALANT.

HANGERS AND SADDLES
SHALL BE MODERN PIPE SUPPORTS CORP., GRINNELL/ANVIL, AUTO GRIP OR M-CO. FOR COPPER PIPE WITH STEEL HANGERS, CLEAN AND WRAP PIPE WITH TWO LAYERS OF PLASTIC INSULATING TAPE AT POINTS OF CONTACT. HANGERS FOR PIPING WITH VAPOR BARRIER SEALED INSULATION SHALL BE MULTIPURPOSE PIPE SADDLES FITTING OVER THE INSULATION. WIRE OR PERFORATED STRAP IRON WILL NOT BE PERMITTED FOR PIPE SUPPORTS. HANGERS SHALL BE CLEVIS OR SPLIT RING TYPE WITH VERTICAL ADJUSTMENT AND BEAM CLAMP SIMILAR TO GRINNELL/ANVIL FIG. 260, WITH MAXIMUM SPACING PER ASHRAE STANDARDS:

PIPE SIZE	STEEL PIPE	COPPER PIPE	PVC PIPE	ROD SIZE
1/2 TO 3/4 INCH	6 FEET	5 FEET	4 FEET	3/8"
1 INCH	7 FEET	5 FEET	4 FEET	3/8"
1 1/4 INCH	7 FEET	7 FEET	4 FEET	3/8"
1 1/2 INCH	7 FEET	7 FEET	4 FEET	1/2"
2 INCH	10 FEET	8 FEET	4 FEET	1/2"
2 1/2 INCH	11 FEET	9 FEET	4 FEET	5/8"
3 INCH	11 FEET	9 FEET	4 FEET	5/8"
3 1/2 INCH	13 FEET	11 FEET	4 FEET	5/8"
4 INCH	14 FEET	12 FEET	4 FEET	5/8"

TESTING, FLUSHING AND CLEANING OF PIPING SYSTEMS
HEATING AND AIR CONDITION PIPING: HYDROSTATICALLY TEST TO AT LEAST TWICE THE OPERATING PRESSURE BUT IN NO CASE LESS THAN 100 PSIG FOR FOUR (4) HOURS. THIS PRESSURE TO BE ON PIPING ONLY, NOT ON EQUIPMENT.

PIPE INSULATION ON INDOOR SYSTEMS
PIPE INSULATION SHALL BE AS MANUFACTURED BY ARMSTRONG, CERTAINTEED, KNAUF, MANSVILLE OR OWENS-CORNING. OWENS-CORNING NUMBERS ARE GIVEN TO ESTABLISH TYPES. ALL INSULATIONS, COVERINGS, VAPOR BARRIERS, ADHESIVES, ETC. SHALL BE CLASS A, MAXIMUM OF 25 FLAME SPREAD, 35 FUEL CONTRIBUTED AND 50 SMOKE DEVELOPED RATING. INSULATION SHALL HAVE VAPOR BARRIER AND BE UL RATED. INSULATION SHALL BE OWENS-CORNING FIBERGLAS ASJ-SSL II PIPE COVERING WITH FACTORY APPLIED DOUBLE PRESSURE SENSITIVE ADHESIVE SYSTEM TO PROVIDE POSITIVE CLOSURES AND VAPOR BARRIER INTEGRITY.

ALL LONGITUDINAL JOINTS SHALL BE SECURED WITH SELF SEALING LAPS. ALL TRANSVERSE JOINTS SHALL BE SECURED WITH SELF-SEALING BUTT STRIPS. BUTT STRIPS SHALL BE MINIMUM 3" WIDE. APPLY INSULATION TO PIPE WITH ALL JOINTS BUTTED TIGHTLY TOGETHER. FITTINGS, INCLUDING VALVES, FLANGES, UNIONS, ETC. SHALL BE INSULATED WITH THE SAME THICKNESS AS THE REQUIRED PIPE INSULATION AND COVERED WITH ZESTON OR SPEEDLINE PVC FITTING COVER.

INSULATION THICKNESS SHALL BE AS FOLLOWS:

PIPING SYSTEM	PIPE SIZE	INSULATION THICKNESS	INSULATION CONDUCTIVITY BTU IN H-FT2-F
HEATING HOT WATER AND AIR SEPARATOR TANK (200F AND BELOW)	UP THRU 1¼" 1½" AND LARGER	1½" 2"	0.29

CLEAN ALL SURFACES BEFORE APPLYING COVERING. INSULATION SHALL BE CONTINUOUS THROUGH WALLS, FLOORS, CEILINGS, ETC. TERMINATE AND SEAL INSULATION AT BOTH ENDS OF UNINSULATED UNIONS AND FLANGES BY A NEAT 45 DEGREE BEVEL. INSTALL ALL INSULATION IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

ASBESTOS INSULATION
ALL EXISTING ASBESTOS INSULATION ON EXISTING PIPING, EQUIPMENT, ETC. WHERE TIE-INS ARE REQUIRED, SHALL BE REMOVED BY THE OWNER.

PIPE IDENTIFICATION
ALL PIPING SHALL BE IDENTIFIED PER ANSI/OSHA OR OWNER'S STANDARDS WITH COLOR PIPE BANDS, IDENTIFICATION LABELS AND FLOW ARROWS. PIPES SHALL BE BANDED AND LABELED ON 10'-0" CENTERS ON CONTINUOUS LINES, AT EQUIPMENT CONNECTIONS, AT BOTH SIDES OF A WALL THROUGH WHICH PIPE PASSES AT EVERY BRANCH CONNECTION, ON PIPING WITHIN SIGHT OF AN ACCESS DOOR OR PANEL. SHOW SLOPE DIRECTIONAL ARROWS AT EACH IDENTIFICATION POINT. LABELS, FLOW ARROWS AND STENCIL AND PAINT SHALL BE 1" HIGH ON PIPING UP TO 2 1/2" AND SHALL BE 2" HIGH ON PIPE SIZES OF 3" AND LARGER. BANDS SHALL BE 1 1/2" WIDE. LABELS SHALL BE AS MANUFACTURED BY SETON OR W.H. BRADY COMPANY OR EQUAL. VERIFY TYPE, SIZE AND COLORS OF PIPE IDENTIFICATION WITH OWNER.

GENERAL PIPING NOTES
INSTALL MANUAL AIR VENTS AT ALL HIGH POINTS OR POINTS THAT CAN TRAP AIR ON HEATING HOT WATER PIPING. WHERE DISSIMILAR MATERIAL PIPING ARE JOINED, DIELECTRIC NIPPLES SHALL BE UTILIZED AND SHALL BE NON-CONDUCTING FOR CONNECTION OF DISSIMILAR MATERIALS. DIELETRIC NIPPLES SHALL BE SIMILAR TO VICTAULIC STYLE 47. A BRASS ADAPTOR DIELECTRIC UNION IS NOT ACCEPTABLE.

TESTING, ADJUSTING AND BALANCING

TESTING, ADJUSTING AND BALANCING SHALL BE PERFORMED BY AN INDEPENDENT CERTIFIED AGENCY IN ACCORDANCE WITH AABC, ADC, ASHRAE III, NEBB AND SMACNA STANDARDS. FURNISH 5 SETS OF REPORTS OF AIR AND WATER SYSTEMS BALANCE REPORTS TO THE ENGINEER INDICATING DESIGN AND ACTUAL QUANTITIES, NAMEPLATE DATA, ETC.

ACCEPTABLE TEST AND BALANCE CONTRACTORS:
1. HITECH TEST AND BALANCE (FREELAND, MI)
2. ABSOLUTE BALANCE COMPANY (SOUTH LYON, MI)
3. ENVIRO-AIRE/TOTAL BALANCE COMPANY (ST. CLAIR SHORES, MI)
4. ENER-TECH TESTING (HOLLY, MI)
5. INTERNATIONAL TEST AND BALANCE (SOUTHFIELD, MI)

WATER SYSTEMS VERIFY THAT SYSTEMS ARE COMPLETE AND OPERABLE BEFORE COMMENCING WORK. VERIFY SYSTEMS ARE STARTED AT A SAFE AND NORMAL OPERATION, TEMPERATURE CONTROL SYSTEMS ARE INSTALLED COMPLETE AND OPERABLE. PROPER THERMAL OVERLOAD PROTECTION IS IN PLACE FOR ELECTRICAL EQUIPMENT, HYDRONIC SYSTEMS ARE FLUSHED, FILLED AND VENTED, PUMPS ARE ROTATING CORRECTLY, PROPER STRAINER BASKETS ARE CLEAN AND IN PLACE, SERVICE AND BALANCE VALVES ARE OPEN, ETC. ADJUST WATER SYSTEMS TO PROVIDE REQUIRED OR DESIGN QUANTITY AND TO PROVIDE SPECIFIED OR SCHEDULES PRESSURE DROPS AND FLOWS THROUGH EQUIPMENT, COILS, ETC. ADJUST FLOWS BY MEANS OF BALANCING COCKS, VALVES AND FITTINGS.

GLYCOL SOLUTION
CONTRACTOR SHALL FILL THE SNOWMELT GLYCOL PIPING SYSTEM AND THE GLYCOL FEED TANK WITH A MIXTURE OF PROPYLENE GLYCOL AND WATER. MIXTURE SHALL BE 40% PROPYLENE GLYCOL FOR SNOW MELT SYSTEM. GLYCOL SHALL BE DOWFROST AS MANUFACTURED BY THE DOW CHEMICAL CO. OR EQUAL, WITH ANNUAL TESTING SERVICE OFFERED BY THE MANUFACTURER. SYSTEM AND FEED TANK SHALL BE FULL AT COMPLETION OF PROJECT. A PRESSURE RELIEF VALVE SHALL BE FURNISHED WITH THE FEED UNIT AND INSTALLED BY THE CONTRACTOR. RELIEF VALVE DISCHARGE SHALL BE PIPED INTO THE TOP OF THE GLYCOL FEED TANK.

IF GLYCOL/ WATER MIXTURE IS REQUIRED, CLEAN AND FLUSH GLYCOL SYSTEM BEFORE ADDING GLYCOL SOLUTION. FEED GLYCOL SOLUTION TO SYSTEM THROUGH MAKE-UP LINE WITH PRESSURE REGULATOR, VENTING SYSTEM HIGH POINTS. PERFORM TESTS DETERMINING STRENGTH OF GLYCOL AND WATER SOLUTION AND SUBMIT WRITTEN TEST RESULTS.

SNOWMELT SYSTEM EQUIPMENT SCHEDULE

TAG: SM-HX-1
1 B&G MODEL - BP400 - 20 PLATE HEAT EXCHANGER - CONSISTING OF A BRAZED PACK UNIT WITH PLATES. THERMAL PLATES ARE SA240 S31603 X 0.0157IN. TK. THIS UNIT HAS THE FOLLOWING CONNECTIONS: PORT-1: 3/4" NPT MALE THREAD, PORT-2: 3/4" NPT MALE THREAD, PORT-3: 3/4" NPT MALE THREAD, PORT-4: 3/4" NPT MALE THREAD, WORKING PRESSURE: 435 $PSIG$ MOUNTING OPTIONS: ASME CODE: NO, PART NUMBER: 5-686-02-020-00. WATER SIDE-16.11 GPM, 180 F. EWT, 160 LWT. 40% PROPYLENE GLYCOL SIDE- 13.66 GPM, 97 F. EWT, 122 F. LWT. TOTAL HEAT EXCHANGED 157,298.98 BTUH.

TAG: SMP-1
1 B&G IN-LINE PUMP SERIES MODEL E-90, 1 AAB, BF, 0.5 HP, 1800 RPM, 56J FRAME WITH 4.75" IMPELLER, E.P.R. SIC-SIC SEAL, U.S. MOTORS, TEFC, STANDARD EFFICIENT, 208/460/3/60 MOTOR, 14 GPM, 21 FT HEAD.
1 BOBCO DIFFERENTIAL PRESSURE GAUGE KIT W/ 30PSI MILJOCO GAUGE
1 DANFOSS .50 HP FC102 VARIABLE SPEED DRIVE WITH THREE-CONTACTOR BYPASS AND FUSED DISCONNECT - 208/3 VOLTAGE - NEMA 1 - 1.1 MAX AMP OUTPUT
1 CHECK TEST AND START-UP FOR THE ABOVE DANFOSS EQUIPMENT.

TAG: SM-AS-1
1 B&G EASB-1-1/4JR BRASS AIR SEPARATOR 1-1/4IN NPT

TAG: SM-ET-1
1 B&G D15 SERIES D ASME DIAPHRAGM TANK (8 GAL)
1 GRISWOLD VALVES TANK DRAIN VALVE - ISOLATOR B WITH DRAIN VALVE - 3/4IN FNPT X 3/4IN MNPT
1 B&G #87 AUTOMATIC AIR VENT

TAG: GMU-1
1 WESSELS MODEL G-6 GLYMATIC 6-GAL GLYCOL/WATER MAKE-UP PACKAGE

SNOWMELT TUBING, MANIFOLDS, & FITTINGS

TAG: TUBING
5 MR. PEX 3/4IN DIAMETER PEX-A TUBING WITH OXYGEN BARRIER - 300FT ROLL

TAG: MANIFOLDS & FITTINGS
1 MR. PEX 304SS 1-1/2IN SUPPLY AND RETURN MANIFOLD SET FOR 5/8IN AND 3/4IN PEX-5 LOOP
1 MR. PEX PRESSURE TEST KIT
1 MR. PEX PEX FITTING ASSEMBLY FOR EK - 3/4 PEX TO EK 25 - BAG OF 10

TAG: ACCESSORIES
1 MR. PEX PLASTIC CONDUIT BEND SUPPORT - 5/8 - 3/4 TUBING - BAG OF 10
5 MR. PEX FOAM INSULATION TACKER STAPLES FOR 3/8IN - 5/8IN PEX & PEX-AL-PEX (BOX OF 300)
1 MR. PEX TACKER TOOL FOR INSTALLING TACKER STAPLES INTO FOAMBOARD INSULATION

SNOWMELT CONTROLS

TAG: SNOWMELT CONTROLS
1 TEKMAR MODEL 680 SNOWMELT CONTROL - BAS, BOILER & MIXING - INCLUDES ONE 070 OUTDOOR AIR SENSOR AND THREE 082 UNIVERSAL SENSORS
1 TEKMAR MODEL 090 SNOW/ICE SENSOR - 65FT WIRE
1 TEKMAR MODEL 091 SNOW/ICE SENSOR SOCKET

NO.	REVISION	DATE
	ISSUED FOR BIDS	4-06-26

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PROJECT TITLE
MASONRY REPAIRS TO:
GENESEE COUNTY COURTHOUSE & JAIL
900 & 1002 S. SAGINAW STREET
FLINT, MICHIGAN 48502

SHEET TITLE
COURTHOUSE BASEMENT SNOW MELT SYSTEM SCHED'S & SPECIFICATION

PROJECT NUMBER 2024083.1
PROJECT DATE APRIL 06, 2026
CHECKED BY RAM
SHEET NUMBER ME1.2

F:\1-S-WTA\2024-1\59 GENESEE COUNTY COURTHOUSE AND JAIL EXTERIOR RESTORATION\2024-150\M-ME1.2 - MECHANICAL SPEC
NOAH ADAMCIK (NADAMCIK@MACMILLANASSOCIATES.COM)
2/3/2021 11:22 AM

MASTER ELECTRICAL DRAWINGS SPECIFICATIONS

BASIC ELECTRICAL REQUIREMENTS

A. FURNISH ALL EQUIPMENT, MATERIALS, ARTICLES, ITEMS, OPERATIONS OR METHODS LISTED, MENTIONED OR SCHEDULED ON DRAWINGS, THESE SPECIFICATIONS, MANUFACTURER'S INSTALLATION INSTRUCTIONS AND INCLUDE ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY FOR COMPLETE INSTALLATION AND OPERATION.

B. LAYOUT OF THE WORK
EXAMINE THE SITE AND ALL THE DRAWINGS BEFORE PROCEEDING WITH THE LAYOUT AND INSTALLATION OF THIS WORK. CONFER AND COOPERATE WITH THE OTHER TRADES ON THE JOB SO ALL PARTS WILL BE INSTALLED IN PROPER RELATIONSHIP. PRECISE LOCATIONS OF PARTS TO COORDINATE WITH OTHER WORK IS THE RESPONSIBILITY OF THE CONTRACTOR.

C. INTERFERENCES
THE CONTRACTOR SHALL CONFER WITH OTHER TRADES REGARDING LOCATION OF EQUIPMENT, FIXTURES, CONDUIT, SWITCHES, OUTLETS, ETC., IN ORDER THAT THERE MAY BE NO INTERFERENCE IN THE INSTALLATION OF THE WORK OF ANY TRADES OR DELAY IN THE PROGRESS OF ANY WORK.

D. MATERIALS AND WORKMANSHIP
ALL MATERIALS AND EQUIPMENT FURNISHED FOR INSTALLATION ON THIS PROJECT SHALL BE NEW AND IN STRICT ACCORDANCE WITH THIS SPECIFICATION. ALL PACKAGED MATERIALS SHALL BE DELIVERED IN THE ORIGINAL CONTAINERS WHICH SHOW THE MANUFACTURER'S NAME AND THE IDENTIFYING DESIGNATIONS AS TO SIZE, QUALITY, ETC. MATERIALS DELIVERED TO THE JOB IN UNMARKED OR MUTILATED PACKAGES WILL BE ORDERED TO BE REMOVED FROM THE SITE AT ONCE. MATERIALS OR EQUIPMENT JUDGED AS "DAMAGED" BY THE ARCHITECT OR ENGINEER SHALL BE REMOVED FROM THE JOB. ALL ELECTRICAL EQUIPMENT SHALL BEAR THE UNDERWRITER'S LABEL.

E. GUARANTEES
ALL EQUIPMENT AND WORK PERFORMED SHALL BE GUARANTEED FOR ONE YEAR FROM TIME OF SUBSTANTIAL COMPLETION OF PROJECT, UNLESS DIRECTED OTHERWISE IN DIVISION 1.

F. SUBMITTALS
SUBMIT ELECTRONIC FILES.

PROPOSED PRODUCTS LIST: INCLUDE PRODUCTS SPECIFIED IN THE FOLLOWING SECTIONS

G. REGULATORY REQUIREMENTS
CONFORM TO APPLICABLE BUILDING CODE.

CONFORM TO REQUIREMENTS OF NFPA 70, 2023 NATIONAL ELECTRIC CODE, 2021 MICHIGAN BUILDING CODE, 2023 STATE OF MICHIGAN ELECTRICAL CODE, 2009 ANSI 117.1, 2021 MICHIGAN ENERGY CODE, AND LOCAL CODES.

EQUIPMENT: U.L. TESTED AND APPROVED FOR ITS PURPOSE.

THE ELECTRICAL CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND INSPECTION FEES. COPIES OF THE CERTIFICATE OF INSPECTION ARE TO BE PROVIDED TO THE OWNER AFTER FINAL INSPECTION AND APPROVAL FROM AUTHORITIES HAVING JURISDICTION.

H. PROJECT/SITE CONDITIONS
ALL BIDDERS SHALL PERSONALLY INSPECT THE SITE AND ACQUAINT THEMSELVES WITH ALL EXISTING CONDITIONS INVOLVED IN EXECUTION OF THIS CONTRACT, AND MAKE ALL NECESSARY MEASUREMENTS. NO "EXTRA" WILL BE CONSIDERED FOR ADDITIONAL WORK REQUIRED BECAUSE OF BIDDER'S FAILURE TO DO SO.

I. TEMPORARY SERVICES
THE CONTRACTOR SHALL PROVIDE AND MAINTAIN WIRING FOR ALL INTERIOR CONSTRUCTION LIGHTING AND POWER TO MEET OSHA STANDARDS. CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL REQUIRED LAMPS AND GUARDS. CONTRACTOR'S POWER TOOLS, CORDS, ETC. SHALL BE IN STRICT ACCORDANCE WITH NATIONAL ELECTRICAL CODE 2023, ARTICLE 590.

J. OPERATION AND MAINTENANCE MANUALS
TWO (2) BOUND SETS OF OPERATING AND MAINTENANCE MANUALS ARE TO BE SUBMITTED TO THE ARCHITECT/ENGINEER FOR APPROVAL. MANUALS ARE TO INCLUDE ELECTRICAL DISTRIBUTION PARTS LISTS AND ALL OTHER PARTS LISTS AND MAINTENANCE PROCEDURES AS WELL AS OPERATING INSTRUCTIONS ON ALL EQUIPMENT SUPPLIED.

CONDUIT

A. METAL CONDUIT.

B. LIQUIDTIGHT FLEXIBLE RIGID STEEL CONDUIT.

C. ELECTRICAL METALLIC TUBING.

D. NONMETAL CONDUIT. SCH 40 OR HDPE.

E. 3/4" MINIMUM SIZE.

F. UNDERGROUND INSTALLATIONS:
1. USE SCHEDULE 40 PVC NON-METALLIC CONDUIT OR SEAMLESS HDPE DIRECT BURIAL CONDUIT.

G. EXTERIOR LOCATIONS: USE GALVANIZED RIGID STEEL CONDUIT FOR ALL OUTSIDE INSTALLATION. USE APPLICABLE FITTINGS.

H. DRY INTERIOR LOCATIONS:
1. USE EMT TYPE CONDUIT, SET SCREW COUPLINGS AND CONNECTORS.
2. USE RIGID STEEL FOR DRY INTERIOR WITH APPLICABLE FITTINGS AS NOTED OR SHOWN ON THE DRAWINGS.

I. ONE 1" MINIMUM SIZE FOR DATA.

INSTALLATION

A. INSTALL NONMETALLIC CONDUIT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

B. ARRANGE SUPPORTS TO PREVENT MISALIGNMENT DURING WIRING INSTALLATION.

C. SUPPORT CONDUIT USING COATED STEEL OR MALLEABLE IRON STRAPS, LAY-IN ADJUSTABLE HANGERS, CLEVIS HANGERS, AND SPLIT HANGERS.

D. GROUP RELATED CONDUITS; SUPPORT USING CONDUIT RACK. CONSTRUCT RACK USING STEEL CHANNEL; PROVIDE SPACE ON EACH FOR 25 PERCENT ADDITIONAL CONDUITS.

E. FASTEN CONDUIT SUPPORTS TO BUILDING STRUCTURE AND SURFACES.

F. DO NOT SUPPORT CONDUIT WITH WIRE OR PERFORATED PIPE STRAPS. REMOVE WIRE USED FOR TEMPORARY SUPPORTS.

G. DO NOT ATTACH CONDUIT TO CEILING SUPPORT WIRES.

H. ARRANGE CONDUIT TO MAINTAIN HEADROOM AND PRESENT NEAT APPEARANCE.

I. ROUTE CONDUIT PARALLEL AND PERPENDICULAR TO WALLS OR BUILDING CENTERLINES.

J. ROUTE CONDUIT INSTALLED ABOVE ACCESSIBLE CEILINGS PARALLEL AND PERPENDICULAR TO WALLS.

K. MAINTAIN ADEQUATE CLEARANCE BETWEEN CONDUIT AND PIPING.

INTERFACE WITH OTHER PRODUCTS

A. USE FIRESTOP CAULK WHERE CONDUIT PASSES THROUGH FIRE RATED FLOORS AND WALLS. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS.

BUILDING WIRE AND CABLE

A. BUILDING WIRE AND CABLE.

B. METAL CLAD CABLE (MC).

C. DESCRIPTION: SINGLE CONDUCTOR INSULATED WIRE.

D. CONDUCTOR: COPPER.

E. INSULATION VOLTAGE RATING: 600 VOLTS.

F. INSULATION: TYPE THHN/THWN 75ºC.

INSTALLATION

A. USE CONDUCTOR SIZE NOT SMALLER THAN 12 AWG FOR POWER AND LIGHTING CIRCUITS.

B. USE 10 AWG CONDUCTORS FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS LONGER THAN 100 FEET.

C. NEATLY TRAIN AND LACE WIRING INSIDE BOXES, EQUIPMENT, AND PANELBOARDS.

D. ALL POWER WIRING SHALL BE INSTALLED IN CONDUIT.

FIELD QUALITY CONTROL

A. VERIFY CONTINUITY OF EACH BRANCH CIRCUIT CONDUCTOR.

BOXES

A. BRANCH DEVICE BOXES. SHEET METAL BOXES: AS THE GENERAL PROJECT REQUIREMENT FOR BRANCH POWER AND LOW VOLTAGE SYSTEMS. USE 4" SQUARE STEEL BOX, WITH SINGLE GANG DEVICE. NON-METALLIC BOX IS NOT ACCEPTABLE IN FIRE RATED WALLS AND OR GENERAL PROJECT INSTALLATION.

B. PULL AND JUNCTION BOXES. NEMA 1 ENCLOSURE FOR INTERIOR LOCATIONS. NEMA 3R FOR EXTERIOR LOCATIONS.

INSTALLATION

A. DO NOT FASTEN BOXES TO CEILING SUPPORT WIRES.

B. SUPPORT BOXES INDEPENDENTLY OF CONDUIT.

EQUIPMENT WIRING SYSTEMS

A. MECHANICAL EQUIPMENT

INSTALLATION

A. ELECTRICAL TRADES SHALL PROVIDE POWER TO THE EQUIPMENT AS NOTED, SHOWN OR SCHEDULED ON THE DRAWINGS.

SUPPORTING DEVICES

A. CONDUIT AND EQUIPMENT SUPPORTS.

B. ANCHORS AND FASTENERS.

PRODUCT REQUIREMENTS

A. MATERIALS AND FINISHES: PROVIDE ADEQUATE CORROSION RESISTANCE.

B. PROVIDE MATERIALS, SIZES, AND TYPES OF ANCHORS, FASTENERS AND SUPPORTS TO CARRY THE LOADS OF EQUIPMENT AND CONDUIT. CONSIDER WEIGHT OF WIRE IN CONDUIT WHEN SELECTING PRODUCTS.

C. ANCHORS AND FASTENERS:
1. CONCRETE STRUCTURAL ELEMENTS: USE EXPANSION ANCHORS.
2. STEEL STRUCTURAL ELEMENTS: USE BEAM CLAMPS.
3. CONCRETE SURFACES: USE SELF-DRILLING ANCHORS AND EXPANSION ANCHORS.
4. HOLLOW MASONRY, PLASTER, AND GYPSUM BOARD PARTITIONS: USE TOGGLE BOLTS AND HOLLOW WALL FASTENERS.
5. SOLID MASONRY WALLS: USE EXPANSION ANCHORS.
6. SHEET METAL: USE SHEET METAL SCREWS.
7. WOOD ELEMENTS: USE WOOD SCREWS.

INSTALLATION

A. INSTALL PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

ELECTRICAL IDENTIFICATION

A. NAMEPLATES AND LABELS.

B. WIRE AND CABLE MARKERS.

C. PANELBOARD DIRECTORY.

NAMEPLATES AND LABELS

A. NAMEPLATES: ENGRAVED THREE-LAYER LAMINATED PLASTIC, BLACK LETTERS ON WHITE BACKGROUND, 1/4" LETTER HEIGHT, 1 1/2" MINIMUM TAG WIDTH AND 4 1/2" MAXIMUM TAG LENGTH.

B. LOCATIONS:
1. PANELBOARDS
2. DISCONNECT SWITCHES
3. VFDS
4. MOTOR STARTERS

WIRE MARKERS

A. MANUFACTURERS:
1. BRADY OR EQUAL.

B. DESCRIPTION: TAPE OR TUBING TYPE WIRE MARKERS.

C. LOCATIONS: EACH CONDUCTOR AT PANELBOARD.

PANELBOARD DIRECTORY

A. USE FACTORY SUPPLIED DIRECTORY CARDS. PROVIDE TYPEWRITTEN CIRCUIT LOADS PER CODE REQUIREMENTS. HAND WRITTEN DIRECTORY IS NOT ACCEPTABLE.

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	ISSUED FOR BIDS	4-06-26

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PROJECT TITLE
MASONRY REPAIRS TO:
GENESEE COUNTY COURTHOUSE & JAIL
900 & 1002 S. SAGINAW STREET
FLINT, MICHIGAN 48502

SHEET TITLE
COURTHOUSE BASEMENT SNOW MELT SYSTEM ELEC SPECIFICATION

PROJECT NUMBER
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PROJECT DATE
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CHECKED BY
RAM

SHEET NUMBER
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2/3/2021 11:22 AM NOAH ADAMCIK (NADAMCIK@MACMILLANASSOCIATES.COM) \\ARBC19\DRAWINGS15.WTA\2024-150\ GENESEE COUNTY COURTHOUSE AND JAIL EXTERIOR RESTORATION\2024-150\ME1.3 - ELECTRICAL SPEC

April 6, 2026

WTA ARCHITECTS

MASONRY REPAIRS:
GENESEE COUNTY COURTHOUSE & JAIL

FLINT, MICHIGAN

ARCHITECT'S PROJECT NO. 2024083.1

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DIVISION 34 – TRANSPORTATION

NOT APPLICABLE

END OF SECTION 000110

DOCUMENT 000115 - LIST OF DRAWING SHEETS

1.1 DRAWING INDEX:

TS TITLE SHEET

ARCHITECTURAL

A1.0-1 COURTHOUSE ARCHITECTURAL SITE PLAN
A1.0-2 JAIL ARCHITECTURAL SITE PLAN, ENLARGED PARTIAL PLAN & DETAILS

A2.0-1 COURTHOUSE BASEMENT FLOOR PLAN
A2.1-1 COURTHOUSE FIRST FLOOR PLAN & ENLARGED PLANS
A2.1-2 JAIL LEVEL 1 FLOOR PLAN
A2.2-1 COURTHOUSE SECOND FLOOR PLAN
A2.2-2 JAIL LEVEL 2 FLOOR PLAN
A2.3-1 COURTHOUSE THIRD FLOOR PLAN
A2.3-2 JAIL LEVEL 3 FLOOR PLAN
A2.4-1 COURTHOUSE FOURTH FLOOR PLAN
A2.4-2 JAIL LEVEL 4 FLOOR PLAN
A2.5-1 COURTHOUSE FIFTH FLOOR PLAN
A2.5-2 JAIL LEVEL 5 FLOOR PLAN

A4.1-1 ENLARGED STAIR & RAMP PLAN & SECTIONS

A5.1-1 COURTHOUSE EXTERIOR ELEVATIONS
A5.1-2 JAIL EXTERIOR ELEVATIONS
A5.2-1 COURTHOUSE EXTERIOR ELEVATIONS
A5.2-2 JAIL EXTERIOR ELEVATIONS
A5.5-1 COURTHOUSE PHOTO DETAILS
A5.5-2 JAIL PHOTO DETAILS
A5.6-1 COURTHOUSE PHOTO DETAILS
A5.6-2 JAIL PHOTO DETAILS
A5.7-1 COURTHOUSE PHOTO DETAILS
A5.7-2 JAIL PHOTO DETAILS
A5.8-1 COURTHOUSE PHOTO DETAILS

A6.0-1 COURTHOUSE ROOF PLAN
A6.0-2 JAIL ROOF PLAN
A6.4-1 COURTHOUSE ROOF DETAILS
A6.4-2 JAIL ROOF DETAILS

A7.1-2 COURTHOUSE EXTERIOR DETAILS
A7.1-2 JAIL EXTERIOR DETAILS

MECHANICAL / ELECTRICAL

ME1.1	COURTHOUSE BASEMENT FLOOR PLAN SNOWMELT SYSTEM
ME1.2	COURTHOUSE BASEMENT SNOW MELT SYSTEM SCHED'S & SPECIFICATIONS
ME1.3	COURTHOUSE BASEMENT SNOW MELT SYSTEM ELEC SPECIFICATIONS

END OF DOCUMENT 000115

SECTION 005000 - AVAILABILITY OF ELECTRONIC FILES

PART 1 - GENERAL

1.1 POLICY

A. As a service to bidders, contractors, subcontractors, vendors, material suppliers and others needing electronic copies of drawing files, the Architect will provide electronic files via file transfer through the Project Website in accordance with the following policy.
   1. In accepting and utilizing any drawings or data generated and furnished by WTA Architects, the Receiver agrees that all such electronic files are instruments of service of WTA Architects and its consultants, who shall be deemed the author, and shall retain all common law, statutory law and other rights, without limitation, including copyrights.
   2. The Receiver agrees not to reuse these electronic files, in whole or in part, for any purpose other than for the Project. The Receiver agrees not to transfer these electronic files to others without the prior written consent of WTA Architects or its consultants. The Receiver further agrees that WTA Architects and its consultants shall have no responsibility or liability to Receiver or others for any changes made it shall be the Receiver's responsibility to be aware of changes made by WTA Architects, its consultants or the Owner.
   3. It is further understood and agreed that the undersigned Receiver will hold WTA Architects and its consultants harmless, indemnify and defend WTA Architects and its consultants from all claims, liabilities, losses, etc., including attorney's fees arising out of the use or misuse of the transferred items.
   4. It is understood and agreed that the items transmitted are prepared from electronic files current at the time of preparation. All files are AutoCAD 2019. The Receiver will specify on request form if an older version is required.
   5. This information does not waive the need to verify and review current field conditions and the status of Addenda and/or Bulletin documentation.
   6. As a record of information to be transmitted, WTA Architects will prepare a duplicate back-up for its files, which may be electronic or hard-copy.
   7. Compensation for providing this material will be as follows:
      a. Base Fee of $250 for 1 to 3 drawings.
      b. Base Fee of $500 for 4 to 10 drawings.
      c. For each additional drawing after 10 the fee is $40.00 per drawing (i.e. 11 drawings = $540)
   8. Payment must be provided along with a signed copy of the Release Letter before files will be released.

1.2 REQUEST PROCEDURE

B. To receive files the attached Release Letter must be completed in full and submitted to the Project Manager at WTA Architects.
   1. A signed copy of the Release Letter must be submitted; faxed or emailed copies will be accepted. However, files will not be exchanged until payment has been received.
   2. Upon remittance of the signed Release Letter and Fee, allow five working days for processing.

PROJECT NO. 2024083.1

Date: _____

Firm Requesting Files:

Name: _____
Company: _____
Address: _____
City, State, Zip: _____

Phone: _____

Re: Letter of Authorization for Electronic File Transfers

Project Name: _____

WTA Project No.: _____

Dear Sir:

Per your request, WTA Architects will transmit the requested electronic files via file transfer through the project website upon receipt of this letter with conditions of agreement as stated.

1. In accepting and utilizing any drawings or data generated and furnished by WTA Architects, the Receiver agrees that all such electronic files are instruments of service of WTA Architects and its consultants, who shall be deemed the author, and shall retain all common law, statutory law and other rights, without limitation, including copyrights.
2. The Receiver agrees not to reuse these electronic files, in whole or in part, for any purpose other than for the Project. The Receiver agrees not to transfer these electronic files to others without the prior written consent of WTA Architects or its consultants. The Receiver further agrees that WTA Architects and its consultants shall have no responsibility or liability to the Receiver or others for any changes made it shall be the Contractors responsibility to be aware of changes made by WTA Architects, its consultants or the Owner.
3. It is further understood and agreed that the undersigned will hold WTA Architects and its consultants harmless, indemnify and defend WTA Architects and its consultants from all claims, liabilities, losses, etc., including attorney's fees arising out of the use or misuse of the transferred items.
4. It is understood and agreed that the items transmitted are prepared from electronic files current at the time of preparation. **All files are AutoCAD 2019**, unless requested otherwise.
5. This information does not waive the need to verify and review current field conditions and the status of Addenda and/or Bulletin documentation.
6. As a record of information to be transmitted, we will prepare a duplicate back-up for our files, which may be electronic or hard-copy.
7. Compensation for providing this material will be as follows: Base Fee of $250 for 1 to 3 drawings and a Base Fee of $500 for 4 to 10 drawings; for each additional drawing after 10 the fee is $40.00 per drawing (i.e. 11 drawings = $540). Payment must be provided along with a signed copy of this form before files will be released. Please remit to WTA Architects and allow five working days for processing.

Fee: $_____ Drawings: _____

Signed: _____ Printed Name/Title: _____

To be Completed by WTA Architects, Inc.

Released (Signed By): _____ WTA Architects, Inc.

Printed Name/Title: _____ Date: _____

END OF SECTION 005000

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Access to site.
4. Coordination with occupants.
5. Work restrictions.
6. Specification and drawing conventions.

B. Related Requirements:

1. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.2 PROJECT INFORMATION

A. Project Identification: Genesee County Courthouse & Jail Masonry Repairs

1. Project Location: 900 & 1002 S. Saginaw Street, Flint, Michigan 48502

B. Owner: Genesee County Board of Commissioners

1. Owner's Representative: Derrick Jones, Purchasing Department

C. Architect: WTA Architects; 100 S. Jefferson Ave.; Saginaw, Michigan 48607; ph. 989-752-8107

1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and consists of the following:

1. Project includes exterior masonry and flashing repairs associated with current leaks and failed sealants and joints within the courthouse and jail buildings. Snow melt system for the original courthouse entrance stair, landing and ramp. Patch, repair and paint interior ceiling and walls as indicated on the drawings.

B. Type of Contract.

1. Project will be constructed under a single prime contract.

1.4 ACCESS TO SITE

A. General: Contractor shall have use of Project site for construction operations and as indicated on Drawings by the scope of construction work and as indicated by requirements of this Section.

B. Use of Site: Limit use of Project site to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.

1. Limits: Confine construction operations to areas being worked in per schedule.
2. Driveways, Walkways and Entrances: Keep driveways, loading areas, and entrances serving premises clear and available to Owner, Owner's employees, Patrons and emergency vehicles at all times. Do not use these areas for parking or storage of materials.

a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

C. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.

1.5 WORK RESTRICTIONS

A. Work Restrictions, General: Comply with restrictions on construction operations.

1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.

B. On-Site Work Hours: Work in the existing building may be performed during normal business working hours of 7am – 4pm, unless otherwise indicated.

1. Notify the Owner not less than two days prior in advance of any work that is to be performed outside of the hours indicated.
2. Obtain Owner's written permission before proceeding.

C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:

1. Notify Owner not less than two days in advance of proposed utility interruptions.
2. Obtain Owner's written permission before proceeding with utility interruptions.

D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.

1. Notify Owner not less than two days in advance of proposed disruptive operations.
2. Obtain Owner's written permission before proceeding with disruptive operations.

E. Controlled Substances: Use of tobacco products and other controlled substances within the existing building and on Project site is not permitted.

1.6 SPECIFICATION AND DRAWING CONVENTIONS

A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.

B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.

C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:

1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SECTION 012100 - ALLOWANCES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements governing allowances.

B. Types of allowances include the following:
   1. Unit-cost allowances.

C. Related Requirements:

   1. Section 012200 "Unit Prices" for procedures for using unit prices, including adjustment of quantity allowances when applicable.

1.2 SELECTION AND PURCHASE

A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection, or purchase and delivery, of each product or system described by an allowance must be completed by the Owner to avoid delaying the Work.

B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.

C. Purchase products and systems selected by Architect from the designated supplier.

1.3 ACTION SUBMITTALS

A. Submit proposals for purchase of products or systems included in allowances in the form specified for Change Orders.

1.4 INFORMATIONAL SUBMITTALS

A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.

B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.

C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.5 UNIT-COST ALLOWANCES

A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include taxes, freight, and delivery to Project site.

B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner or selected by Architect under allowance shall be included as part of the Contract Sum and not part of the allowance.

1.6 ADJUSTMENT OF ALLOWANCES

A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.

1. Include installation costs in purchase amount only where indicated as part of the allowance.
2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other markups.
3. Submit substantiation of a change in scope of Work, if any, claimed in Change Orders related to unit-cost allowances.
4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.

B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.

1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of Work has changed from what could have been foreseen from information in the Contract Documents.
2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

A. Allowance No. 1: Base Bid Allowance: Include the removal and repointing of 2,000 lineal feet of damaged stone mortar joints.

1. This allowance includes material cost, receiving, handling, and installation, and Contractor overhead and profit.

B. Allowance No. 2: Base Bid Allowance: Include 100 square feet of cementitious compound for concrete crack and spalling repairs.

1. This allowance includes material cost, receiving, handling, and installation, and Contractor overhead and profit.

C. Allowance No. 3: Base Bid Allowance: Include 200 lineal feet of new sealant joints, replacing existing deteriorated and cracked joints.

1. This allowance includes material cost, receiving, handling, and installation, and Contractor overhead and profit.

END OF SECTION 012100

SECTION 012200 - UNIT PRICES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for unit prices.

B. Related Requirements:

1. Section 012100 "Allowances" for procedures for using unit prices to adjust quantity allowances.

1.2 DEFINITIONS

A. Unit price is an amount incorporated into the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.3 PROCEDURES

A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.

B. Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.

C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.

D. List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT COST - COURTHOUSE

A. Unit Cost No. 1: Removal and repointing of mortar joints.

1. Description: Remove existing deteriorated or cracked mortar joints to depth of 1" minimum and repoint/install new mortar joint.
2. Unit of Measurement: Lineal foot.

B. Unit Cost No. 2: Repair of concrete cracks and spalling.

1. Description: Repair existing cracked or spalling concrete with cementitious compound.
2. Unit of Measurement: Square foot.

C. Unit Cost No. 3: Remove and install new sealant joints.

1. Description: Remove existing deteriorated or damaged sealant joints to a depth of 1" min. and install new backer rod and sealant.
2. Unit of Measurement: Lineal foot.

3.2 SCHEDULE OF UNIT COST - JAIL

A. Unit Cost No. 1: Removal and repointing of mortar joints.

1. Description: Remove existing deteriorated or cracked mortar joints to depth of 1" minimum and repoint/install new mortar joint.
2. Unit of Measurement: Lineal foot.

B. Unit Cost No. 2: Repair of concrete cracks and spalling.

1. Description: Repair existing cracked or spalling concrete with cementitious compound.
2. Unit of Measurement: Square foot.

C. Unit Cost No. 3: Remove and install new sealant joints.

1. Description: Remove existing deteriorated or damaged sealant joints to a depth of 1" min. and install new backer rod and sealant.
2. Unit of Measurement: Lineal foot.

END OF SECTION 012200

SECTION 012300 - 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 bidders 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.

D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES - COURTHOUSE

A. Alternate No. 1 (Deduct): Interior: Patch, repair and paint existing gypsum ceiling and wall as indicated in drawings.

B. Alternate No. 2:
   1. Base Bid – Limestone panels and snow melt system at original courthouse east entrance stair and ramp.
   2. Alternate – Granite base panels in lieu of limestone panels at original courthouse east entrance stair and ramp.

3.2 SCHEDULE OF ALTERNATES – JAIL

A. Alternate No. 1 (Deduct): Steel window / door frame, scrap away loose material and paint to match existing. Include a high performance paint allowance of $5,000.00.

B. Alternate No. 2:
   1. Base Bid – Replace metal parapet coping at areas of damaged / failing.
   2. Alternate – Replace metal parapet coping on entire building.

END OF SECTION 012300

SECTION 012500 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for substitutions.
B. Related Requirements:
   1. Section 016000 "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. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
   2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

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 form acceptable to Architect.
   2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
      a. Statement indicating why specified product or fabrication or installation method cannot be provided, if applicable.
      b. Coordination of 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 substitutions 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. List of similar installations for completed projects, with project names and addresses as well as names and addresses of architects and owners.
      h. Material test reports from a qualified testing agency, indicating and interpreting test results for compliance with requirements indicated.
      i. Detailed comparison of Contractor's construction schedule using proposed substitutions with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be

provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.

j. Cost information, including a proposal of change, if any, in the Contract Sum.

k. 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.

l. 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 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.

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.

1.5 PROCEDURES

A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

1.6 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. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:

a. Requested substitution is consistent with the Contract Documents and will produce indicated results.

b. Substitution request is fully documented and properly submitted.

c. Requested substitution will not adversely affect Contractor's construction schedule.

d. Requested substitution has received necessary approvals of authorities having jurisdiction.

e. Requested substitution is compatible with other portions of the Work.

f. Requested substitution has been coordinated with other portions of the Work.

g. Requested substitution provides specified warranty.

h. 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: Not allowed.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012500

SECTION 01 2500.01 - WTA SUBSTITUTION REQUEST FORM

SUBSTITUTION REQUEST NUMBER:_____DATE SUBMITTED: _____
WTA PROJECT NUMBER_____PROJECT NAME: _____

SPECIFIED ITEM

SPECIFICATION TITLE:_____
SPECIFICATION SECTION_____SPECIFICATION ARTICLE/PARAGRAPH: _____
SPECIFIED PRODUCT / DESCRIPTION: _____
SPECIFIED MANUFACTURER: _____
SPECIFIED PRODUCT / MODEL: _____
REASON SPECIFIED ITEM CANNOT BE PROVIDED: _____
_____
_____

PROPOSED SUBSTITUTION

DESCRIPTION OF PROPOSED SUBSTITUTION: _____
_____

PROPOSED MANUFACTURER: _____
ADDRESS:_____
WEBSITE: _____
PRODUCT / MODEL: _____
YEARS PRODUCT/MODEL HAS BEEN MANUFACTURED: _____
DIFFERENCES BETWEEN PROPOSED SUBSTITUTION AND SPECIFIED ITEM: _____
_____
_____
_____
_____

WILL PROPOSED SUBSTITUTION AFFECT OTHER PARTS OF WORK? ☐ NO ☐ YES
IF YES, EXPLAIN HOW: _____
_____
_____
_____

HOW WILL SUBSTITUTION BENEFIT THE OWNER: ☐ COST SAVINGS ☐ TIME SAVINGS ☐ OTHER

PROVIDE SPECIFIC DETAILS: _____

_____

_____

_____

THE FOLLOWING INFORMATION IS REQUIRED; CHECK TO INDICATE INFORMATION IS ATTACHED. (REQUEST WILL BE REJECTED WITHOUT REQUIRED DATA)

32.01

A. ☐ List of references where proposed product has been installed; include address, owner, architect, and date installed.
B. ☐ Product data sheets.
C. ☐ Applicable certificates and test reports.
D. ☐ Comparative Data: Provide point-by-point, side-by-side comparison of specified product and proposed substitution addressing essential attributes specified.

INDICATE WHICH OF THE FOLLOWING VOLUNTARY INFORMATION IS ATTACHED, IF ANY:

☐ DRAWINGS.
☐ SAMPLES.
☐ OTHER ITEMS: _____

SIGNATURE

THE UNDERSIGNED CERTIFIES:

1. The proposed substitution meets or exceeds the quality level of the specified product, equipment, assembly, or system.
2. To provide the same warranty for the substitution as for the specified product.
3. Agrees to provide same or equivalent maintenance service and source of replacement parts, as applicable.
4. Agrees to coordinate installation and make changes to other work that may be required for the work to be complete, with no additional cost to Owner.
5. The proposed substitution will have no adverse effects on other work. The proposed substitution will not affect project schedule.
6. Waives claims for additional costs or time extension that may subsequently become apparent.

CONTRACTOR / COMPANY: _____
SIGNED BY:_____ PRINTED NAME: _____
TITLE: _____
ADDRESS:_____
EMAIL: _____ PHONE:_____

ARCHITECT'S RESPONSE

A. During bidding, Architect will approve substitution requests by issuing an Addendum. Substitutions not approved by addendum are rejected.
B. During construction, Architect will notify Contractor in writing (see below) of decision to accept or reject request, and incorporate the substitution into the project by Change Order, Construction Change Directive, Architectural Supplementary Instructions, or similar instruments as provided for in the Conditions of the Contract.

☐ SUBSTITUTION APPROVED - PROVIDE SUBMITTALS PER SECTION 01 3300 AND RESPECTIVE SECTION FOR WHICH SUBSTITUTION WAS MADE.
☐ SUBSTITUTION REJECTED - PROVIDE SPECIFIED MATERIALS.

SIGNED BY:_____ PRINTED NAME:_____
ARCHITECT'S COMMENTS: _____
_____
_____

END OF SECTION – 012500.01

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Submittal schedule requirements.
   2. Administrative and procedural requirements for submittals.

1.2 DEFINITIONS

A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
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. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

1.3 SUBMITTAL SCHEDULE

A. Submittal Schedule: Submit, as an action submittal, a list 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 FORMATS

A. Submittal Information: Include information requested in form fields in Newforma Project Center’s Submittal page.
B. Options: Identify options requiring selection by Architect.
C. Deviations and Additional Information: On each submittal, clearly indicate deviations from requirements in the Contract Documents, including minor variations and limitations; include relevant additional information and revisions, other than those requested by Architect on previous submittals. Indicate by highlighting on each submittal or noting on attached separate sheet.
D. Electronic Submittals: Prepare submittals as PDF package, incorporating complete information into each PDF file. Name PDF file with submittal number.

1.5 SUBMITTAL PROCEDURES

A. Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
   1. Web-Based Project Management Software: Prepare submittals in PDF form, and upload to web-based Project management software website. Enter required data in web-based software site to fully identify submittal.
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. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.

C. Processing Time: Allow time for submittal review, including time for resubmittals, 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 resubmittals.
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. Resubmittal Review: Allow 15 days for review of each resubmittal.

D. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.

E. 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.

F. 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.

1.6 SUBMITTAL REQUIREMENTS

A. 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 unsuitable 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. Testing by recognized testing agency.
   f. Application of testing agency labels and seals.
   g. Notation of coordination requirements.
   h. Availability and delivery time information.
4. For equipment, include the following in addition to the above, as applicable:
   a. Wiring diagrams that show factory-installed wiring.
   b. Printed performance curves.
   c. Operational range diagrams.
   d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.

B. 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. Schedules.
   c. Compliance with specified standards.
   d. Notation of coordination requirements.
   e. Notation of dimensions established by field measurement.
   f. Relationship and attachment to adjoining construction clearly indicated.

g. Seal and signature of professional engineer if specified.

C. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other materials.
   1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
   2. Identification: Permanently attach label on unexposed side of Samples that includes the following:
      a. Project name and submittal number.
      b. Generic description of Sample.
      c. Product name and name of manufacturer.
      d. Sample source.
      e. Number and title of applicable Specification Section.
      f. Specification paragraph number and generic name of each item.
   3. 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.
   4. 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 one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
   5. 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 two Sample sets; remainder will be returned. Mark up and retain one returned Sample set as a project record Sample.
         1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
         2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.

D. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:

E. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.

F. Design Data: Prepare and submit written and graphic information indicating compliance with indicated performance and design criteria in individual Specification Sections. Include

list of assumptions and summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Number each page of submittal.

G. Certificates:
   1. Certificates and Certifications Submittals: Submit 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. Provide a notarized signature where indicated.
   2. 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.
   3. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
   4. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
   5. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
   6. 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. Test and Research Reports:
   1. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for substrate preparation and primers required.
   2. 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.
   3. 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.
   4. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
   5. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
   6. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
      a. Name of evaluation organization.
      b. Date of evaluation.
      c. Time period when report is in effect.
      d. Product and manufacturers' names.
      e. Description of product.
      f. Test procedures and results.
      g. Limitations of use.

1.7 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 insufficient 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 digitally signed PDF file and 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.

1.8 CONTRACTOR'S REVIEW

A. Action Submittals 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. Contractor's Approval: Indicate Contractor's approval for each submittal with a uniform approval stamp. Include 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.
   1. Architect will not review submittals received from Contractor that do not have Contractor's review and approval.

1.9 ARCHITECT'S REVIEW

A. Action Submittals: Architect will review each submittal, indicate corrections or revisions required, and return it.
   1. PDF Submittals: Architect will indicate, via markup on each submittal, the appropriate action.
   2. Submittals by Web-Based Project Management Software: Architect will indicate, on Project management software website, the appropriate action.
B. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.
D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
E. Architect will return without review submittals received from sources other than Contractor.
F. Submittals not required by the Contract Documents will be returned by Architect without action.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

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 inspection 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 quality-control procedures that facilitate compliance with the Contract Document requirements.
   2. Requirements for Contractor to provide quality-assurance and quality-control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.

1.2 DEFINITIONS

A. Experienced: When used with an entity or individual, "experienced" unless otherwise further described means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.
B. Field Quality-Control Tests and Inspections: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
C. 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, assembly, and similar operations.
   1. Use of trade-specific terminology in referring to a Work result does not require that certain construction activities specified apply exclusively to specific trade(s).
D. Mockups: Full-size physical assemblies that are constructed on-site either as freestanding temporary built elements or as part of permanent construction. Mockups are constructed to verify selections made under Sample submittals; to demonstrate aesthetic effects and 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.
   1. Laboratory Mockups: Full-size physical assemblies constructed and tested at testing facility to verify performance characteristics.
   2. Integrated Exterior Mockups: Mockups of the exterior envelope constructed on-site as as indicated in-place portions of permanent construction, consisting of multiple products, assemblies, and subassemblies, with cutaways enabling inspection of concealed portions of the Work.
      a. Include each system, assembly, component, and part of the exterior wall and roof to be constructed for the Project. Colors of components shall be those selected by the Architect for use in the Project.
   3. Room Mockups: Mockups of typical interior spaces complete with wall, floor, and ceiling finishes; doors; windows; millwork; casework; specialties; furnishings and equipment; and lighting.
   4. Product Mockups: Mockups that may include multiple products, materials, or systems specified in a single Section.

5. In-Place Mockups: Mockups constructed on-site in their actual final location as part of permanent construction.

E. 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. Unless otherwise indicated, copies of reports of tests or inspections performed for other than the Project do not meet this definition.

F. Product Tests: Tests and inspections that are performed by a nationally recognized testing laboratory (NRTL) according to 29 CFR 1910.7, by a testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program (NVLAP), or by a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.

G. Source Quality-Control Tests and Inspections: Tests and inspections that are performed at the source; for example, plant, mill, factory, or shop.

H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall have the same meaning as testing agency.

I. 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.

J. 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. Contractor's quality-control services do not include contract administration activities performed by Architect.

1.3 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 Statement: Submit a statement, 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, indicating that the products and systems are in compliance with performance and design criteria indicated. Include list of codes, loads, and other factors used in performing these services.

1.4 CONFLICTING REQUIREMENTS

A. Conflicting Standards and Other Requirements: If compliance with two or more standards or requirements is specified and the standards or requirements establish different or conflicting requirements for minimum quantities or quality levels, inform the Architect regarding the conflict and obtain clarification prior to proceeding with the Work. Refer conflicting requirements that are different, but apparently equal, to Architect for clarification 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.

1.5 ACTION SUBMITTALS

A. Mockup Shop Drawings: For integrated exterior mockups.
   1. Include plans, sections, elevations, and details, indicating materials and size of mockup construction.
   2. Indicate manufacturer and model number of individual components.
   3. Provide axonometric drawings for conditions difficult to illustrate in two dimensions.

1.6 INFORMATIONAL SUBMITTALS

A. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility submitted to authorities having jurisdiction before starting work on the following systems:
   1. Seismic-force-resisting system, designated seismic system, or component listed in the Statement of Special Inspections.
   2. Main wind-force-resisting system or a wind-resisting component listed in the Statement of Special Inspections.
B. 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.
C. Permits, Licenses, and Certificates: For Owner's record, 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.

1.7 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, telephone number, and email address 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 inspection.
   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 reinspecting.
B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:
   1. Statement on condition of substrates and their acceptability for installation of product.
   2. Statement that products at Project site comply with requirements.
   3. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.

4. Results of operational and other tests and a statement of whether observed performance complies with requirements.
5. Other required items indicated in individual Specification Sections.

C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:
1. Statement that equipment complies with requirements.
2. Results of operational and other tests and a statement of whether observed performance complies with requirements.
3. Other required items indicated in individual Specification Sections.

1.8 QUALITY ASSURANCE

A. 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. As applicable, procure products from manufacturers able to meet qualification requirements, warranty requirements, and technical or factory-authorized service representative requirements.
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, applying, 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 and Inspecting Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspection indicated, as documented according to ASTM E329; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.
H. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
I. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
1. Contractor responsibilities include the following:
a. Provide test specimens representative of proposed products and construction.

b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
c. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
d. When testing is complete, remove test specimens and test assemblies, and mockups; do not reuse products on Project.

2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

J. 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 of size indicated.
2. Build mockups in location indicated or, if not indicated, as directed by Architect.
3. Notify Architect seven days in advance of dates and times when mockups will be constructed.
4. Employ supervisory personnel who will oversee mockup construction. Employ workers that will be employed to perform same tasks during the construction at Project.
5. Demonstrate the proposed range of aesthetic effects and workmanship.
6. Obtain Architect's approval of mockups before starting corresponding work, fabrication, or construction.
a. Allow seven days for initial review and each re-review of each mockup.
7. Promptly correct unsatisfactory conditions noted by Architect's preliminary review, to the satisfaction of the Architect, before completion of final mockup.
8. Approval of mockups by the Architect does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
9. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
10. Demolish and remove mockups when directed unless otherwise indicated.

K. Integrated Exterior Mockups: Construct integrated exterior mockup according to approved Shop Drawings. Coordinate installation of exterior envelope materials and products for which mockups are required in individual Specification Sections, along with supporting materials. Comply with requirements in "Mockups" Paragraph.
1. Coordinate construction of the mockup to allow observation of air barrier installation, flashings, air barrier integration with fenestration systems, and other portions of the building air/moisture barrier and drainage assemblies, prior to installation of veneer, cladding elements, and other components that will obscure the work.

1.9 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 inspection they are engaged to perform.
2. Costs for retesting and reinspecting construction that replaces or is necessitated by Work that failed to comply with the Contract Documents will be charged to Contractor.

B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities, whether specified or not, to verify and document that the Work complies with requirements.
   1. Engage a qualified testing agency to perform quality-control services.
      a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
   2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspection 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 inspection 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/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, 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 locations 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 duties of Contractor.

E. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 013300 "Submittal Procedures."

F. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.

G. Contractor's Associated Requirements and Services: Cooperate with agencies and representatives 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 inspection. Assist agency in obtaining samples.
   4. Facilities for storage and field curing of test samples.
   5. Preliminary design mix proposed for use for material mixes that require control by testing agency.

6. Security and protection for samples and for testing and inspection equipment at Project site.

H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspection.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.

1.10 SPECIAL TESTS AND INSPECTIONS

A. Special Tests and Inspections: Owner will engage a qualified testing agency to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, and as follows:
1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
2. Notifying Architect and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect with copy to Contractor and to authorities having jurisdiction.
4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
6. Retesting and reinspecting corrected Work.

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.

B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's and authorities' having jurisdiction reference during normal working hours.
1. Submit log at Project closeout as part of Project Record Documents.

3.2 REPAIR AND PROTECTION

A. General: On completion of testing, inspection, 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 Section 017300 "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 014200 - REFERENCES

PART 1 - GENERAL

1.1 DEFINITIONS

A. General: Basic Contract definitions are included in the Conditions of the Contract.
B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."
D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
G. "Install": Unload, temporarily store, unpack, assemble, erect, place, anchor, apply, work to dimension, finish, cure, protect, clean, and similar operations at Project site.
H. "Provide": Furnish and install, complete and ready for the intended use.
I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.2 INDUSTRY STANDARDS

A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.
    1. For standards referenced by applicable building codes, comply with dates of standards as listed in building codes.
C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
    1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

1.3 ABBREVIATIONS AND ACRONYMS

A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Gale's "Encyclopedia of Associations: National Organizations of the U.S." or in Columbia Books' "National Trade & Professional Associations of the United States."
B. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the

following list. The information in this list is subject to change and is believed to be accurate as of the date of the Contract Documents.

1. AABC - Associated Air Balance Council; www.aabc.com.
2. AAMA - American Architectural Manufacturers Association; www.aamanet.org.
3. AAPFCO - Association of American Plant Food Control Officials; www.aapfco.org.
4. AASHTO - American Association of State Highway and Transportation Officials; www.transportation.org.
5. AATCC - American Association of Textile Chemists and Colorists; www.aatcc.org.
6. ABMA - American Bearing Manufacturers Association; www.americanbearings.org.
7. ABMA - American Boiler Manufacturers Association; www.abma.com.
8. ACI - American Concrete Institute; (Formerly: ACI International); www.concrete.org.
9. ACPA - American Concrete Pipe Association; www.concrete-pipe.org.
10. AEIC - Association of Edison Illuminating Companies, Inc. (The); www.aeic.org.
11. AF&PA - American Forest & Paper Association; www.afandpa.org.
12. AGA - American Gas Association; www.aga.org.
13. AHAM - Association of Home Appliance Manufacturers; www.aham.org.
14. AHRI - Air-Conditioning, Heating, and Refrigeration Institute (The); www.ahrinet.org.
15. AI - Asphalt Institute; www.asphaltinstitute.org.
16. AIA - American Institute of Architects (The); www.aia.org.
17. AISC - American Institute of Steel Construction; www.aisc.org.
18. AISI - American Iron and Steel Institute; www.steel.org.
19. AITC - American Institute of Timber Construction; www.aitc-glulam.org.
20. AMCA - Air Movement and Control Association International, Inc.; www.amca.org.
21. ANSI - American National Standards Institute; www.ansi.org.
22. AOSA - Association of Official Seed Analysts, Inc.; www.aosaseed.com.
23. APA - APA - The Engineered Wood Association; www.apawood.org.
24. APA - Architectural Precast Association; www.archprecast.org.
25. API - American Petroleum Institute; www.api.org.
26. ARI - Air-Conditioning & Refrigeration Institute; (See AHRI).
27. ARI - American Refrigeration Institute; (See AHRI).
28. ARMA - Asphalt Roofing Manufacturers Association; www.asphaltroofing.org.
29. ASCE - American Society of Civil Engineers; www.asce.org.
30. ASCE/SEI - American Society of Civil Engineers/Structural Engineering Institute; (See ASCE).
31. ASHRAE - American Society of Heating, Refrigerating and Air-Conditioning Engineers; www.ashrae.org.
32. ASME - ASME International; (American Society of Mechanical Engineers); www.asme.org.
33. ASSE - American Society of Sanitary Engineering; www.asse-plumbing.org.
34. ASSP - American Society of Safety Professionals (The); www.assp.org.
35. ASTM - ASTM International; www.astm.org.
36. ATIS - Alliance for Telecommunications Industry Solutions; www.atis.org.
37. AVIXA - Audiovisual and Integrated Experience Association; (Formerly: Infocomm International); www.soundandcommunications.com.
38. AWEA - American Wind Energy Association; www.awea.org.
39. AWI - Architectural Woodwork Institute; www.awinet.org.
40. AWMAC - Architectural Woodwork Manufacturers Association of Canada; www.awmac.com.
41. AWPA - American Wood Protection Association; www.awpa.com.
42. AWS - American Welding Society; www.aws.org.
43. AWWA - American Water Works Association; www.awwa.org.
44. BHMA - Builders Hardware Manufacturers Association; www.buildershardware.com.

45. BIA - Brick Industry Association (The); www.gobrick.com.
46. BICSI - BICSI, Inc.; www.bicsi.org.
47. BIFMA - BIFMA International; (Business and Institutional Furniture Manufacturer's Association); www.bifma.org.
48. BISSC - Baking Industry Sanitation Standards Committee; www.bissc.org.
49. BWF - Badminton World Federation; (Formerly: International Badminton Federation); www.bissc.org.
50. CDA - Copper Development Association; www.copper.org.
51. CE - Conformite Europeenne; http://ec.europa.eu/growth/single-market/ce-marking/.
52. CEA - Canadian Electricity Association; www.electricity.ca.
53. CFFA - Chemical Fabrics and Film Association, Inc.; www.chemicalfabricsandfilm.com.
54. CFSEI - Cold-Formed Steel Engineers Institute; www.cfsei.org.
55. CGA - Compressed Gas Association; www.cganet.com.
56. CIMA - Cellulose Insulation Manufacturers Association; www.cellulose.org.
57. CISCA - Ceilings & Interior Systems Construction Association; www.cisca.org.
58. CISPI - Cast Iron Soil Pipe Institute; www.cispi.org.
59. CLFMI - Chain Link Fence Manufacturers Institute; www.chainlinkinfo.org.
60. CPA - Composite Panel Association; www.compositepanel.org.
61. CRI - Carpet and Rug Institute (The); www.carpet-rug.org.
62. CRRC - Cool Roof Rating Council; www.coolroofs.org.
63. CRSI - Concrete Reinforcing Steel Institute; www.crsi.org.
64. CSA - CSA Group; www.csa-group.org.
65. CSI - Construction Specifications Institute (The); www.csiresources.org.
66. CSSB - Cedar Shake & Shingle Bureau; www.cedarbureau.org.
67. CTA - Consumer Technology Association; www.cta.tech.
68. CTI - Cooling Technology Institute; (Formerly: Cooling Tower Institute); www.coolingtechnology.org.
69. CWC - Composite Wood Council; (See CPA).
70. DASMA - Door and Access Systems Manufacturers Association; www.dasma.com.
71. DHA - Decorative Hardwoods Association; (Formerly: Hardwood Plywood & Veneer Association); www.decorativehardwoods.org.
72. DHI - Door and Hardware Institute; www.dhi.org.
73. ECA - Electronic Components Association; (See ECIA).
74. ECAMA - Electronic Components Assemblies & Materials Association; (See ECIA).
75. ECIA - Electronic Components Industry Association; www.eciaonline.org.
76. EIA - Electronic Industries Alliance; (See TIA).
77. EIMA - EIFS Industry Members Association; www.eima.com.
78. EJMA - Expansion Joint Manufacturers Association, Inc.; www.ejma.org.
79. EOS/ESD Association; (Electrostatic Discharge Association); www.esda.org.
80. ESTA - Entertainment Services and Technology Association; (See PLASA).
81. ETL - Intertek (See Intertek); www.intertek.com.
82. EVO - Efficiency Valuation Organization; www.evo-world.org.
83. FCI - Fluid Controls Institute; www.fluidcontrolsinstitute.org.
84. FIBA - Federation Internationale de Basketball; (The International Basketball Federation); www.fiba.com.
85. FIVB - Federation Internationale de Volleyball; (The International Volleyball Federation); www.fivb.org.
86. FM Approvals - FM Approvals LLC; www.fmglobal.com.
87. FM Global - FM Global; (Formerly: FMG - FM Global); www.fmglobal.com.
88. FRSA - Florida Roofing, Sheet Metal Contractors Association, Inc.; www.floridaroof.com.
89. FSA - Fluid Sealing Association; www.fluidsealing.com.

90. FSC - Forest Stewardship Council U.S.; www.fscus.org.
91. GA - Gypsum Association; www.gypsum.org.
92. GANA - Glass Association of North America; (See NGA).
93. GS - Green Seal; www.greenseal.org.
94. HI - Hydraulic Institute; www.pumps.org.
95. HI/GAMA - Hydronics Institute/Gas Appliance Manufacturers Association; (See AHRI).
96. HMMA - Hollow Metal Manufacturers Association; (See NAAMM).
97. HPVA - Hardwood Plywood & Veneer Association; (See DHA).
98. HPW - H. P. White Laboratory, Inc.; www.hpwhite.com.
99. IAPSC - International Association of Professional Security Consultants; www.iapsc.org.
100. IAS - International Accreditation Service; www.iasonline.org.
101. ICBO - International Conference of Building Officials; (See ICC).
102. ICC - International Code Council; www.iccsafe.org.
103. ICEA - Insulated Cable Engineers Association, Inc.; www.icea.net.
104. ICPA - International Cast Polymer Alliance; www.icpa-hq.org.
105. ICRI - International Concrete Repair Institute, Inc.; www.icri.org.
106. IEC - International Electrotechnical Commission; www.iec.ch.
107. IEEE - Institute of Electrical and Electronics Engineers, Inc. (The); www.ieee.org.
108. IES - Illuminating Engineering Society; (Formerly: Illuminating Engineering Society of North America); www.ies.org.
109. IESNA - Illuminating Engineering Society of North America; (See IES).
110. IEST - Institute of Environmental Sciences and Technology; www.iest.org.
111. IGMA - Insulating Glass Manufacturers Alliance; www.igmaonline.org.
112. IGSHPA - International Ground Source Heat Pump Association; www.igshpa.org.
113. II - Infocomm International; (See AVIXA).
114. ILI - Indiana Limestone Institute of America, Inc.; www.iliai.com.
115. Intertek - Intertek Group; (Formerly: ETL SEMCO; Intertek Testing Service NA); www.intertek.com.
116. ISA - International Society of Automation (The); (Formerly: Instrumentation, Systems, and Automation Society); www.isa.org.
117. ISAS - Instrumentation, Systems, and Automation Society (The); (See ISA).
118. ISFA - International Surface Fabricators Association; (Formerly: International Solid Surface Fabricators Association); www.isfanow.org.
119. ISO - International Organization for Standardization; www.iso.org.
120. ISSFA - International Solid Surface Fabricators Association; (See ISFA).
121. ITU - International Telecommunication Union; www.itu.int/home.
122. KCMA - Kitchen Cabinet Manufacturers Association; www.kcma.org.
123. LMA - Laminating Materials Association; (See CPA).
124. LPI - Lightning Protection Institute; www.lightning.org.
125. MBMA - Metal Building Manufacturers Association; www.mbma.com.
126. MCA - Metal Construction Association; www.metalconstruction.org.
127. MFMA - Maple Flooring Manufacturers Association, Inc.; www.maplefloor.org.
128. MFMA - Metal Framing Manufacturers Association, Inc.; www.metalframingmfg.org.
129. MHIA - Material Handling Industry of America; www.mhia.org.
130. MIA - Marble Institute of America; (See NSI).
131. MMPA - Moulding & Millwork Producers Association; www.wmmpa.com.
132. MPI - Master Painters Institute; www.paintinfo.com.
133. MSS - Manufacturers Standardization Society of The Valve and Fittings Industry Inc.; www.mss-hq.org.
134. NAAMM - National Association of Architectural Metal Manufacturers; www.naamm.org.
135. NACE - NACE International; (National Association of Corrosion Engineers International); www.nace.org.

136. NADCA - National Air Duct Cleaners Association; www.nadca.com.
137. NAIMA - North American Insulation Manufacturers Association; www.naima.org.
138. NALP - National Association of Landscape Professionals; www.landscapeprofessionals.org.
139. NBGQA - National Building Granite Quarries Association, Inc.; www.nbgqa.com.
140. NBI - New Buildings Institute; www.newbuildings.org.
141. NCAA - National Collegiate Athletic Association (The); www.ncaa.org.
142. NCMA - National Concrete Masonry Association; www.ncma.org.
143. NEBB - National Environmental Balancing Bureau; www.nebb.org.
144. NECA - National Electrical Contractors Association; www.necanet.org.
145. NeLMA - Northeastern Lumber Manufacturers Association; www.nelma.org.
146. NEMA - National Electrical Manufacturers Association; www.nema.org.
147. NETA - InterNational Electrical Testing Association; www.netaworld.org.
148. NFHS - National Federation of State High School Associations; www.nfhs.org.
149. NFPA - National Fire Protection Association; www.nfpa.org.
150. NFPA - NFPA International; (See NFPA).
151. NFRC - National Fenestration Rating Council; www.nfrc.org.
152. NGA - National Glass Association (The); (Formerly: Glass Association of North America); www.glass.org.
153. NHLA - National Hardwood Lumber Association; www.nhla.com.
154. NLGA - National Lumber Grades Authority; www.nlga.org.
155. NOFMA - National Oak Flooring Manufacturers Association; (See NWFA).
156. NOMMA - National Ornamental & Miscellaneous Metals Association; www.nomma.org.
157. NRCA - National Roofing Contractors Association; www.nrca.net.
158. NRMCA - National Ready Mixed Concrete Association; www.nrmca.org.
159. NSF - NSF International; www.nsf.org.
160. NSI - National Stone Institute; (Formerly: Marble Institute of America); www.naturalstoneinstitute.org.
161. NSPE - National Society of Professional Engineers; www.nspe.org.
162. NSSGA - National Stone, Sand & Gravel Association; www.nssga.org.
163. NTMA - National Terrazzo & Mosaic Association, Inc. (The); www.ntma.com.
164. NWFA - National Wood Flooring Association; www.nwfa.org.
165. PCI - Precast/Prestressed Concrete Institute; www.pci.org.
166. PDI - Plumbing & Drainage Institute; www.pdionline.org.
167. PLASA - PLASA; (Formerly: ESTA - Entertainment Services and Technology Association); www.plasa.org.
168. RCSC - Research Council on Structural Connections; www.boltcouncil.org.
169. RFCI - Resilient Floor Covering Institute; www.rfci.com.
170. RIS - Redwood Inspection Service; www.redwoodinspection.com.
171. SAE - SAE International; www.sae.org.
172. SCTE - Society of Cable Telecommunications Engineers; www.scte.org.
173. SDI - Steel Deck Institute; www.sdi.org.
174. SDI - Steel Door Institute; www.steeldoor.org.
175. SEFA - Scientific Equipment and Furniture Association (The); www.sefalabs.com.
176. SEI/ASCE - Structural Engineering Institute/American Society of Civil Engineers; (See ASCE).
177. SIA - Security Industry Association; www.siaonline.org.
178. SJI - Steel Joist Institute; www.steeljoist.org.
179. SMA - Screen Manufacturers Association; www.smainfo.org.
180. SMACNA - Sheet Metal and Air Conditioning Contractors' National Association; www.smacna.org.
181. SMPTE - Society of Motion Picture and Television Engineers; www.smpte.org.

182. SPFA - Spray Polyurethane Foam Alliance; www.sprayfoam.org.
183. SPIB - Southern Pine Inspection Bureau; www.spib.org.
184. SPRI - Single Ply Roofing Industry; www.spri.org.
185. SRCC - Solar Rating & Certification Corporation; www.solar-rating.org.
186. SSINA - Specialty Steel Industry of North America; www.ssina.com.
187. SSPC - SSPC: The Society for Protective Coatings; www.sspc.org.
188. STI - Steel Tank Institute; www.steeltank.com.
189. SWI - Steel Window Institute; www.steelwindows.com.
190. SWPA - Submersible Wastewater Pump Association; www.swpa.org.
191. TCA - Tilt-Up Concrete Association; www.tilt-up.org.
192. TCNA - Tile Council of North America, Inc.; www.tileusa.com.
193. TEMA - Tubular Exchanger Manufacturers Association, Inc.; www.tema.org.
194. TIA - Telecommunications Industry Association (The); (Formerly: TIA/EIA - Telecommunications Industry Association/Electronic Industries Alliance); www.tiaonline.org.
195. TIA/EIA - Telecommunications Industry Association/Electronic Industries Alliance; (See TIA).
196. TMS - The Masonry Society; www.masonrysociety.org.
197. TPI - Truss Plate Institute; www.tpinst.org.
198. TPI - Turfgrass Producers International; www.turfgrasssod.org.
199. TRI - Tile Roofing Institute; www.tileroofing.org.
200. UL - Underwriters Laboratories Inc.; www.ul.com.
201. UNI - Uni-Bell PVC Pipe Association; www.uni-bell.org.
202. USAV - USA Volleyball; www.usavolleyball.org.
203. USGBC - U.S. Green Building Council; www.usgbc.org.
204. USITT - United States Institute for Theatre Technology, Inc.; www.usitt.org.
205. WA - Wallcoverings Association; www.wallcoverings.org.
206. WASTEC - Waste Equipment Technology Association; www.wastec.org.
207. WCLIB - West Coast Lumber Inspection Bureau; www.wclib.org.
208. WCMA - Window Covering Manufacturers Association; www.wcmanet.org.
209. WDMA - Window & Door Manufacturers Association; www.wdma.com.
210. WI - Woodwork Institute; www.wicnet.org.
211. WSRCA - Western States Roofing Contractors Association; www.wsrca.com.
212. WWPA - Western Wood Products Association; www.wwpa.org.

C. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. This information is believed to be accurate as of the date of the Contract Documents.
   1. DIN - Deutsches Institut fur Normung e.V.; www.din.de.
   2. IAPMO - International Association of Plumbing and Mechanical Officials; www.iapmo.org.
   3. ICC - International Code Council; www.iccsafe.org.
   4. ICC-ES - ICC Evaluation Service, LLC; www.icc-es.org.

D. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Information is subject to change and is up to date as of the date of the Contract Documents.
   1. COE - Army Corps of Engineers; www.usace.army.mil.
   2. CPSC - Consumer Product Safety Commission; www.cpsc.gov.
   3. DOC - Department of Commerce; National Institute of Standards and Technology; www.nist.gov.
   4. DOD - Department of Defense; www.quicksearch.dla.mil.
   5. DOE - Department of Energy; www.energy.gov.

6. EPA - Environmental Protection Agency; www.epa.gov.
7. FAA - Federal Aviation Administration; www.faa.gov.
8. FG - Federal Government Publications; www.gpo.gov/fdsys.
9. GSA - General Services Administration; www.gsa.gov.
10. HUD - Department of Housing and Urban Development; www.hud.gov.
11. LBL - Lawrence Berkeley National Laboratory; Environmental Energy Technologies Division; www.eetd.lbl.gov.
12. OSHA - Occupational Safety & Health Administration; www.osha.gov.
13. SD - Department of State; www.state.gov.
14. TRB - Transportation Research Board; National Cooperative Highway Research Program; The National Academies; www.trb.org.
15. USDA - Department of Agriculture; Agriculture Research Service; U.S. Salinity Laboratory; www.ars.usda.gov.
16. USDA - Department of Agriculture; Rural Utilities Service; www.usda.gov.
17. USDOJ - Department of Justice; Office of Justice Programs; National Institute of Justice; www.ojp.usdoj.gov.
18. USP - U.S. Pharmacopeial Convention; www.usp.org.
19. USPS - United States Postal Service; www.usps.com.

E. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. This information is subject to change and is believed to be accurate as of the date of the Contract Documents.
1. CFR - Code of Federal Regulations; Available from Government Printing Office; www.govinfo.gov.
2. DOD - Department of Defense; Military Specifications and Standards; Available from DLA Document Services; www.quicksearch.dla.mil.
3. DSCC - Defense Supply Center Columbus; (See FS).
4. FED-STD - Federal Standard; (See FS).
5. FS - Federal Specification; Available from DLA Document Services; www.quicksearch.dla.mil.
    a. Available from Defense Standardization Program; www.dsp.dla.mil.
    b. Available from General Services Administration; www.gsa.gov.
    c. Available from National Institute of Building Sciences/Whole Building Design Guide; www.wbdg.org.
6. MILSPEC - Military Specification and Standards; (See DOD).
7. USAB - United States Access Board; www.access-board.gov.
8. USATBCB - U.S. Architectural & Transportation Barriers Compliance Board; (See USAB).

F. State Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. This information is subject to change and is believed to be accurate as of the date of the Contract Documents.
1. CBHF; State of California; Department of Consumer Affairs; Bureau of Electronic and Appliance Repair, Home Furnishings and Thermal Insulation; www.bearhfti.ca.gov.
2. CCR; California Code of Regulations; Office of Administrative Law; California Title 24 Energy Code; www.calregs.com.
3. CDHS; California Department of Health Services; (See CDPH).
4. CDPH; California Department of Public Health; Indoor Air Quality Program; www.cal-iaq.org.
5. CPUC; California Public Utilities Commission; www.cpuc.ca.gov.
6. SCAQMD; South Coast Air Quality Management District; www.aqmd.gov.

7. TFS; Texas A&M Forest Service; Sustainable Forestry and Economic Development; www.txforestservice.tamu.edu.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 014200

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
B. Related Requirements:
   1. Section 011000 "Summary" for work restrictions and limitations on utility interruptions.

1.2 USE CHARGES

A. Installation, removal, and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities engaged in the Project to use temporary services and facilities without cost, including, but not limited to, Architect, testing agencies, and authorities having jurisdiction.
B. Water and Sewer Service from Existing System: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
C. Electric Power Service from Existing System: Electric power from Owner's existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

1.3 INFORMATIONAL SUBMITTALS

A. Site Utilization Plan: Show temporary facilities, temporary utility lines and connections, staging areas, construction site entrances, vehicle circulation, and parking areas for construction personnel.
B. Project Identification and Temporary Signs: Show fabrication and installation details, including plans, elevations, details, layouts, typestyles, graphic elements, and message content.
C. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.
D. Moisture- and Mold-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage and mold. Describe delivery, handling, storage, installation, and protection provisions for materials subject to water absorption or water damage.
   1. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and requirements for replacing water-damaged Work.
   2. Indicate sequencing of work that requires water, such as sprayed fire-resistive materials, plastering, and terrazzo grinding, and describe plans for dealing with water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.
   3. Indicate methods to be used to avoid trapping water in finished work.

1.4 QUALITY ASSURANCE

A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.

B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
C. Accessible Temporary Egress: Comply with applicable provisions in the United States Access Board's ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1.

1.5 PROJECT CONDITIONS

A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 TEMPORARY FACILITIES

A. Field Offices: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.
B. Common-Use Field Office: Of sufficient size to accommodate needs of Owner, Architect, and construction personnel office activities and to accommodate Project meetings specified in other Division 01 Sections. Keep office clean and orderly. Furnish and equip offices as follows:
   1. Furniture required for Project-site documents including file cabinets, plan tables, plan racks, and bookcases.
   2. Conference room of sufficient size to accommodate meetings of 10 individuals. Provide electrical power service and 120-V ac duplex receptacles, with no fewer than one receptacle on each wall. Furnish room with conference table, chairs, and 4-foot-(1.2-m-) square tack and marker boards.
   3. Drinking water and private toilet.
   4. Heating and cooling equipment necessary to maintain a uniform indoor temperature of 68 to 72 deg F (20 to 22 deg C).
   5. Lighting fixtures capable of maintaining average illumination of 20 fc (215 lx) at desk height.

2.2 EQUIPMENT

A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
B. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
   1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
   2. Heating, Cooling, and Dehumidifying Units: Listed and labeled for type of fuel being consumed, by a qualified testing agency acceptable to authorities having jurisdiction, and marked for intended location and application.
   3. Permanent HVAC System: If Owner authorizes use of permanent HVAC system for temporary use during construction, provide filter with MERV of 8 at each return-air grille in system and remove at end of construction and clean HVAC system as required in Section 017700 "Closeout Procedures."
C. Air-Filtration Units: Primary and secondary HEPA-filter-equipped portable units with four-stage filtration. Provide single switch for emergency shutoff. Configure to run continuously.

PART 3 - EXECUTION

3.1 TEMPORARY FACILITIES, GENERAL

A. Conservation: Coordinate construction and use of temporary facilities with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.
   1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

3.2 INSTALLATION, GENERAL

A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.
C. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.

3.3 TEMPORARY UTILITY INSTALLATION

A. General: Install temporary service or connect to existing service.
   1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
B. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully.
   1. Connect temporary sewers to municipal system as directed by authorities having jurisdiction.
C. Water Service: Install water service and distribution piping in sizes and pressures adequate for construction.
D. Sanitary Facilities: Provide temporary toilets, wash facilities, safety shower and eyewash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
E. Temporary Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.
   1. Provide temporary dehumidification systems when required to reduce ambient and substrate moisture levels to level required to allow installation or application of finishes and their proper curing or drying.
F. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.
   1. Install electric power service underground unless otherwise indicated.
G. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
   1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.

H. Telephone Service: Provide temporary telephone service in common-use facilities for use by all construction personnel. Install WiFi cell phone access equipment.
I. Electronic Communication Service: Provide secure WiFi wireless connection to internet with provisions for access by Architect and Owner.
J. Project Computer: Provide a desktop computer in the primary field office adequate for use by Architect and Owner to access Project electronic documents and maintain electronic communications. Equip computer with not less than the following:
   1. Processor: Intel Core i5 or i7.
   2. Memory: 16 gigabyte.
   3. Disk Storage: 1 -terrabyte hard-disk drive and combination DVD-RW/CD-RW drive.
   4. Display: 24-inch (610-mm) LCD monitor with 256-Mb dedicated video RAM.
   5. Full-size keyboard and mouse.
   6. Network Connectivity: 10/100BaseT Ethernet.
   7. Operating System: Microsoft Windows 10 Professional.
   8. Productivity Software:
      a. Microsoft Office Professional, 2013 or higher, including Word, Excel, and Outlook.
      b. Adobe Reader DC.
      c. WinZip 10.0 or higher.
   9. Printer: "All-in-one" unit equipped with printer server, combining color printing, photocopying, scanning, and faxing, or separate units for each of these three functions.
   10. Internet Service: Broadband modem, router, and ISP, equipped with hardware firewall, providing minimum 10.0 -Mbps upload and 15 -Mbps download speeds at each computer.
   11. Internet Security: Integrated software, providing software firewall, virus, spyware, phishing, and spam protection in a combined application.
   12. Backup: External hard drive, minimum 2 terrabytes, with automated backup software providing daily backups.

3.4 SUPPORT FACILITIES INSTALLATION

A. Comply with the following:
   1. Provide construction for temporary field offices, shops, and sheds located within construction area or within 30 feet (9 m) of building lines that is noncombustible according to ASTM E136. Comply with NFPA 241.
   2. Utilize designated area within existing building for temporary field offices.
   3. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.
B. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate for construction operations. Locate temporary roads and paved areas within construction limits indicated on Drawings.
   1. Provide dust-control treatment that is nonpolluting and nontracking. Reapply treatment as required to minimize dust.
C. Traffic Controls: Comply with requirements of authorities having jurisdiction.
   1. Protect existing site improvements to remain including curbs, pavement, and utilities.
   2. Maintain access for fire-fighting equipment and access to fire hydrants.
D. Parking: Use designated areas of Owner's existing parking areas for construction personnel.
E. Storage and Staging: Use designated areas of Project site for storage and staging needs.
F. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.

1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties or endanger permanent Work or temporary facilities.
2. Remove snow and ice as required to minimize accumulations.

G. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.
1. Identification Signs: Provide Project identification signs as indicated on Drawings.
2. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.
a. Provide temporary, directional signs for construction personnel and visitors.
3. Maintain and touch up signs so they are legible at all times.

H. Waste Disposal Facilities: Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."

I. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with progress cleaning requirements in Section 017300 "Execution."

J. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.
1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

3.5 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
1. Where access to adjacent properties is required in order to affect protection of existing facilities, obtain written permission from adjacent property owner to access property for that purpose.

B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

C. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings.
1. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross tree- or plant-protection zones.
2. Inspect, repair, and maintain erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
3. Clean, repair, and restore adjoining properties and roads affected by erosion and sedimentation from Project site during the course of Project.
4. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

D. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.

E. Tree and Plant Protection: Comply with requirements specified in Section 015639 "Temporary Tree and Plant Protection."

F. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.

G. Pest Control: Engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals so Project will be free of pests and their residues at

Substantial Completion. Perform control operations lawfully, using materials approved by authorities having jurisdiction.

H. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people from easily entering site except by entrance gates.
   1. Extent of Fence: As indicated on Drawings.

I. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each workday.

J. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

K. Temporary Egress: Provide temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction. Provide signage directing occupants to temporary egress.

L. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
   1. Where heating or cooling is needed and permanent enclosure is incomplete, insulate temporary enclosures.

M. Temporary Partitions: Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by Owner from fumes and noise.
   1. Construct dustproof partitions with gypsum wallboard with joints taped on occupied side, and fire-retardant-treated plywood on construction operations side.
   2. Where fire-resistance-rated temporary partitions are indicated or are required by authorities having jurisdiction, construct partitions according to the rated assemblies.
   3. Provide walk-off mats at each entrance through temporary partition.

N. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire-prevention program.
   1. Prohibit smoking in construction areas. Comply with additional limits on smoking specified in other Sections.
   2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
   3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
   4. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

3.6 MOISTURE AND MOLD CONTROL

A. Moisture and Mold Protection: Protect stored materials and installed Work in accordance with Moisture and Mold Protection Plan.

B. Exposed Construction Period: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:
   1. Protect porous materials from water damage.
   2. Protect stored and installed material from flowing or standing water.
   3. Keep porous and organic materials from coming into prolonged contact with concrete.

4. Remove standing water from decks.
5. Keep deck openings covered or dammed.

C. Partially Enclosed Construction Period: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:
1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
2. Keep interior spaces reasonably clean and protected from water damage.
3. Periodically collect and remove waste containing cellulose or other organic matter.
4. Discard or replace water-damaged material.
5. Do not install material that is wet.
6. Discard and replace stored or installed material that begins to grow mold.
7. Perform work in a sequence that allows wet materials adequate time to dry before enclosing the material in gypsum board or other interior finishes.

D. Controlled Construction Period: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:
1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
2. Use temporary or permanent HVAC system to control humidity within ranges specified for installed and stored materials.
3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.

3.7 OPERATION, TERMINATION, AND REMOVAL

A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.

B. Maintenance: Maintain facilities in good operating condition until removal.
1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.

C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.

D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
2. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 017700 "Closeout Procedures."

END OF SECTION 015000

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. Section 012500 "Substitution Procedures" for requests for substitutions.

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. Salvaged items or items reused from other projects are not considered new products. Items that are manufactured or fabricated to include recycled content materials are considered new products, unless indicated otherwise.
   3. Comparable Product: Product by named manufacturer that is demonstrated and approved through the comparable product submittal process described in Part 2 "Comparable Products" Article, 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 single manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation. Published attributes and characteristics of basis-of-design product establish salient characteristics of products.
   1. Evaluation of Comparable Products: In addition to the basis-of-design product description, product attributes and characteristics may be listed to establish the significant qualities related to type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other special features and requirements for purposes of evaluating comparable products of additional manufacturers named in the specification.
C. Subject to Compliance with Requirements: Where the phrase "Subject to compliance with requirements" introduces a product selection procedure in an individual Specification Section, provide products qualified under the specified product procedure. In the event that a named product or product by a named manufacturer does not meet the other requirements of the specifications, select another named product or product from another named manufacturer that does meet the requirements of the specifications; submit a comparable product request or substitution request, if applicable.
D. Comparable Product Request Submittal: An action submittal requesting consideration of a comparable product, including the following information:
   1. Identification of basis-of-design product or fabrication or installation method to be replaced, including Specification Section number and title and Drawing numbers and titles.

2. Data indicating compliance with the requirements specified in Part 2 "Comparable Products" Article.

E. Basis-of-Design Product Specification Submittal: An action submittal complying with requirements in Section 013300 "Submittal Procedures."

F. Substitution: Refer to Section 012500 "Substitution Procedures" for definition and limitations on substitutions.

1.3 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.

1.4 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.

1.5 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 standard warranty form furnished by individual manufacturer for a particular product and issued in the name of the Owner or endorsed by manufacturer to Owner.
   2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner and issued in the name of the Owner or endorsed by manufacturer to 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 in the Project Manual, prepare a written document, using indicated form properly executed.
   3. See other Sections for specific content requirements and particular requirements for submitting special warranties.

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 meeting 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. Sole 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. Sole product may be indicated by the phrase "Subject to compliance with requirements, provide the following."
2. Sole Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
   a. Sole manufacturer/source may be indicated by the phrase "Subject to compliance with requirements, provide products by the following."
3. Limited List of Products: 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 not be considered.
   a. Limited list of products may be indicated by the phrase "Subject to compliance with requirements, provide one of the following."
4. Non-Limited List of Products: 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.
   a. Non-limited list of products is indicated by the phrase "Subject to compliance with requirements, available products that may be incorporated in the Work include, but are not limited to, the following."
   b. Provision of an unnamed product is not considered a substitution, if the product complies with requirements.
5. Limited List of Manufacturers: 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 not be considered.
   a. Limited list of manufacturers is indicated by the phrase "Subject to compliance with requirements, provide products by one of the following."
6. Non-Limited List of Manufacturers: 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.
   a. Non-limited list of manufacturers is indicated by the phrase "Subject to compliance with requirements, available manufacturers whose products may be incorporated in the Work include, but are not limited to, the following."
   b. Provision of products of an unnamed manufacturer is not considered a substitution, if the product complies with requirements.
7. 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 may additionally 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.

a. For approval of products by unnamed manufacturers, comply with requirements in Section 012500 "Substitution Procedures" for substitutions for convenience.

C. Visual Matching Specification: Where Specifications require the phrase "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 Section 012500 "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 a 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 of Comparable Products: 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 the following requirements:

1. Evidence that proposed product does not require revisions to the Contract Documents, is consistent with the Contract Documents, will produce the indicated results, and is compatible with other portions of the Work.
2. Detailed comparison of significant qualities of proposed product with those of the named basis-of-design product. Significant product qualities include attributes, such as type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other specific features and requirements.
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.

B. Architect's Action on Comparable Products Submittal: If necessary, Architect will request additional information or documentation for evaluation, as specified in Section 013300 "Submittal Procedures."

1. Form of Approval of Submittal: As specified in Section 013300 "Submittal Procedures."
2. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.

C. Submittal Requirements, Two-Step Process: Approval by the Architect of Contractor's request for use of comparable product is not intended to satisfy other submittal requirements. Comply with specified submittal requirements.

D. Submittal Requirements, Single-Step Process: When acceptable to Architect, incorporate specified submittal requirements of individual Specification Section in combined submittal for comparable products. Approval by the Architect of Contractor's request for use of comparable product and of individual submittal requirements will also satisfy other submittal requirements.

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. Coordination of Owner's portion of the Work.
   6. Coordination of Owner-installed products.
   7. Progress cleaning.
   8. Starting and adjusting.
   9. Protection of installed construction.

B. Related Requirements:
   1. Section 011000 "Summary" for coordination of Owner-furnished products, and limits on use of Project site.
   2. Section 017700 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, replacing defective work, and final cleaning.
   3. Section 024119 "Selective Demolition" for demolition and removal of selected portions of the building.

1.2 DEFINITIONS

A. Cutting: Removal of in-place construction necessary to permit installation or performance of subsequent work.

B. Patching: Fitting and repair work required to restore construction to original conditions after installation of subsequent work.

1.3 INFORMATIONAL SUBMITTALS

A. Certified Surveys: Submit two copies signed by professional engineer.

B. Certificates: Submit certificate signed by professional engineer, certifying that location and elevation of improvements comply with requirements.

1.4 CLOSEOUT SUBMITTALS

A. Final Property Survey: Submit 10 copies showing the Work performed and record survey data.

1.5 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, or when encountering the need for cutting and patching of elements whose structural function is not known, notify Architect of locations and details of cutting and await directions from Architect before proceeding. Shore, brace, and support structural elements 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. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
3. 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 results in increased maintenance or decreased operational life or safety.
4. 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.

C. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of specified products and equipment.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Comply with requirements specified in other Sections.
   1. For projects requiring compliance with sustainable design and construction practices and procedures, use products for patching that comply with sustainable design requirements.

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. Use materials that are not considered hazardous.

C. 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 EXAMINATION

A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, 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, gas service piping, 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. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
1. Description of the Work, including Specification Section number and paragraph, and Drawing sheet number and detail, where applicable.
2. List of detrimental conditions, including substrates.
3. List of unacceptable installation tolerances.
4. Recommended corrections.

D. 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, submit a request for information to Architect in accordance with requirements in Section 013100 "Project Management and Coordination."

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 and existing conditions. If discrepancies are discovered, notify Architect promptly.

B. Engage a professional engineer experienced in laying out the Work, using the following 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. Identification: Owner will identify existing benchmarks, control points, and property corners.

B. 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.
1. Do not change or relocate existing benchmarks or control points without prior written approval of Architect. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Architect before proceeding.
2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.

C. 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.
2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

D. 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 sitework.

3.5 INSTALLATION

A. 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.

4. Maintain minimum headroom clearance of 96 inches (2440 mm) in occupied spaces and 90 inches (2300 mm) in unoccupied spaces, unless otherwise indicated on Drawings.

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 satisfactory results as judged by Architect. 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 of type expected for Project.

E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on-site and placement in permanent locations.

F. Tools and Equipment: Select tools or equipment that minimize production of excessive noise levels.

G. Templates: Obtain and distribute to the parties involved templates for Work specified to be factory prepared and field installed. Check Shop Drawings of other portions of the Work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

H. 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 with manufacturer.
   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.

I. Joints: Make joints of uniform width. Where joint locations in exposed Work are not indicated, arrange joints for the best visual effect, as judged by Architect. Fit exposed connections together to form hairline joints.

J. Repair or remove and replace damaged, defective, or nonconforming Work.
   1. Comply with Section 017700 "Closeout Procedures" for repairing or removing and replacing defective Work.

3.6 CUTTING AND PATCHING

A. 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: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching in accordance with requirements in Section 011000 "Summary."

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. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
   2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
   3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
   4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.
   5. 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.
   6. 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, as judged by Architect. Provide materials and comply with installation requirements specified in other Sections, where applicable.
   1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
   2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
      a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
      b. Restore damaged pipe covering to its original condition.
   3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
      a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch, corner to corner of wall and edge to edge of ceiling. Provide additional coats until patch blends with adjacent surfaces.
   4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
   5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight 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 COORDINATION OF OWNER'S PORTION OF THE WORK

A. Site Access: Provide access to Project site for Owner's construction personnel.
   1. Provide temporary facilities required for Owner-furnished, Contractor-installed products.
   2. Refer to Section 011000 "Summary" for other requirements for Owner-furnished, Contractor-installed products

3.8 PROGRESS CLEANING

A. 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. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F (27 deg C).
   3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
      a. Use containers intended for holding waste materials of type to be stored.
   4. Coordinate progress cleaning for joint-use areas where Contractor and other contractors are working concurrently.
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: 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. Comply with waste disposal requirements in Section 017419 "Construction Waste Management and Disposal."
H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
I. 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.
J. Limiting Exposures: Supervise construction operations to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.9 STARTING AND ADJUSTING

A. Coordinate startup and adjusting of equipment and operating components with requirements in Section 019113 "General Commissioning Requirements."
B. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
C. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
D. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
E. Manufacturer's Field Service: Comply with qualification requirements in Section 014000 "Quality Requirements."

3.10 PROTECTION AND REPAIR OF INSTALLED CONSTRUCTION

A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
B. Repair Work previously completed and subsequently damaged during construction period. Repair to like-new condition.
C. Protection of Existing Items: Provide protection and ensure that existing items to remain undisturbed by construction are maintained in condition that existed at commencement of the Work.
D. Comply with manufacturer's written instructions for temperature and relative humidity.

END OF SECTION 017300

SECTION 017310 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes procedural requirements for cutting and patching.
B. Related Sections include the following:
   1. Division 7 Section "Through-Penetration Firestop Systems" for patching fire-rated construction.
   2. Divisions 2 through 33 Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.
      a. Requirements in this Section apply to mechanical and electrical installations. Refer to Divisions 21, 22, 23, 26, 27 and 28 Sections for other requirements and limitations applicable to cutting and patching mechanical and electrical installations.

1.3 DEFINITIONS

A. Cutting: Removal of existing construction necessary to permit installation or performance of other Work.
B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

1.4 QUALITY ASSURANCE

A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
B. Operational Elements: Do not cut and patch the following operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
   1. Primary operational systems and equipment.
   2. Fire-protection systems.
   3. Electrical wiring systems.
C. Miscellaneous Elements: Do not cut and patch the following elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.
   1. Piping, ductwork, vessels, and equipment.
   2. Noise- and vibration-control elements and systems.
D. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Architect's opinion, reduce the building and site's aesthetic qualities. Remove and replace
construction that has been cut and patched in a visually unsatisfactory manner.
   1. If possible, retain original Installer or fabricator to cut and patch exposed Work listed below. If it is impossible to engage original Installer or fabricator, engage another recognized, experienced, and specialized firm.
      a. Roofing.

E. Cutting and Patching Conference: Before proceeding, meet at Project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

1.5 WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Comply with requirements specified in other Sections of these Specifications.
B. Existing Materials: Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
   1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of existing materials.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
   1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
   2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Temporary Support: Provide temporary support of Work to be cut.
B. Protection: Protect existing 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.
C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
D. Existing Services: Where existing services are required to be removed, relocated, or abandoned, bypass such services before cutting to minimize interruption of services to occupied areas.

3.3 PERFORMANCE

A. 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 existing 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. Cutting: Cut existing 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. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
2. Existing Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
4. Excavating and Backfilling: Comply with requirements in applicable Division 2 Sections where required by cutting and patching operations.
5. 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.
6. Proceed with patching after construction operations requiring cutting are complete.

C. 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 possible. Provide materials and comply with installation requirements specified in other Sections of these Specifications.

1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
    a. Where patching occurs in a painted surface, apply primer and intermediate paint coats over the patch and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
4. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.

END OF SECTION 017310

SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for the following:
   1. Salvaging nonhazardous demolition waste.
   2. Disposing of nonhazardous demolition and construction waste.
B. Related Requirements:
   1. Section 042000 "Unit Masonry" for disposal requirements for masonry waste.

1.2 DEFINITIONS

A. Construction Waste: Building, structure, and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
B. Demolition Waste: Building, structure, and site improvement materials resulting from demolition operations.
C. Disposal: Removal of demolition or construction waste and subsequent salvage, sale, recycling, or deposit in landfill, incinerator acceptable to authorities having jurisdiction, or designated spoil areas on Owner's property.
D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

PART 2 - PRODUCTS

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

A. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
   1. Comply with Section 015000 "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.

3.2 SALVAGING DEMOLITION WASTE

A. Comply with requirements in Section 024119 "Selective Demolition" for salvaging demolition waste.
B. Salvaged Items for Reuse in the Work:
   1. Clean salvaged items.
   2. Pack or crate items after cleaning. Identify contents of containers with label indicating elements, date of removal, quantity, and location where removed.
   3. Store items in a secure area until installation.
   4. Protect items from damage during transport and storage.

5. Install salvaged items to comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make items functional for use indicated.

C. Salvaged Items for Sale and Donation: Not permitted on Project site.

D. Salvaged Items for Owner's Use:
1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers with label indicating elements, date of removal, quantity, and location where removed.
3. Store items in a secure area until delivery to Owner.
4. Transport items to Owner's storage area on-site.
5. Protect items from damage during transport and storage.

3.3 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged or recycled, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. General: Except for items or materials to be salvaged or recycled, remove waste materials and legally dispose of at designated spoil areas on Owner’s property.

C. Burning: Do not burn waste materials.

END OF SECTION 017419

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.
B. Related Requirements:
   1. Section 017823 "Operation and Maintenance Data" for additional operation and maintenance manual requirements.
   2. Section 017839 "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of cleaning agent.
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 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, damage or settlement surveys, property surveys, and similar final record information.
   3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
   4. Submit maintenance material submittals specified in individual 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.
   5. Submit testing, adjusting, and balancing 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 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 video recordings specified in Section 017900 "Demonstration and Training."
   6. Advise Owner of changeover in utility services.
   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.
   10. Touch up paint 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 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.

1.5 FINAL COMPLETION PROCEDURES

A. Submittals Prior to Final Completion: Before requesting final inspection for determining Final Completion, complete the following:
   1. Submit a final Application for Payment in accordance with Section 012900 "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.

B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 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 a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1.6 LIST OF INCOMPLETE ITEMS

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.
   1. Organize list of spaces in sequential order, starting with exterior areas first, listed by room or space number.
   2. Organize items applying to each space by major element, including categories for ceilings, individual walls, floors, equipment, and building systems.
   3. Include the following information at the top of each page:
      a. Project name.
      b. Date.
      c. Name of Architect.
      d. Name of Contractor.
      e. Page number.
   4. Submit list of incomplete items in the following format:
      a. PDF Electronic File: Architect will return annotated file.

1.7 SUBMITTAL OF PROJECT WARRANTIES

A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where warranties are indicated to commence on dates other than date of Substantial Completion, 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 Project Manual.
C. Warranties in Paper Form:
   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 (215-by-280-mm) paper.
D. 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. 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 workers or professional 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 of rubbish, waste material, litter, and other foreign substances.
      b. 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.
      c. Remove debris and surface dust from limited-access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
      d. Clean flooring, removing debris, dirt, and staining; clean according to manufacturer's recommendations.
      e. Vacuum and mop concrete.
      f. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
      g. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
      h. Remove labels that are not permanent.
      i. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
      j. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
      k. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
      l. Clean ducts, blowers, and coils if units were operated without filters during construction or that display contamination with particulate matter on inspection.
         1) Clean HVAC system in compliance with NADCA ACR.
      m. Clean luminaires, lamps, globes, and reflectors to function with full efficiency.
      n. Clean strainers.
      o. Leave Project clean and ready for occupancy.

C. Pest Control: Comply with pest control requirements in Section 015000 "Temporary Facilities and Controls." Prepare written report.

D. Construction Waste Disposal: Comply with waste-disposal requirements in Section 017419 "Construction Waste Management and Disposal."

3.2 REPAIR OF THE WORK

A. Complete repair and restoration operations required by Section 017300 "Execution" before requesting inspection for determination of Substantial Completion.

END OF SECTION 017700

SECTION 017823 - OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
   1. Operation and maintenance documentation directory manuals.
   2. Emergency manuals.
   3. Systems and equipment operation manuals.
   4. Systems and equipment maintenance manuals.
   5. Product maintenance manuals.

1.2 CLOSEOUT SUBMITTALS

A. Submit operation and maintenance manuals indicated. Provide content for each manual as specified in individual Specification Sections, and as reviewed and approved at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.
   1. Architect will comment on whether content of operation and maintenance submittals is acceptable.
   2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.

B. Format: Submit operation and maintenance manuals in the following format:
   1. Submit three paper copies. Architect will return two copies.

C. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 15 days before commencing demonstration and training. Architect will return copy with comments.
   1. Correct or revise each manual to comply with Architect's comments. Submit copies of each corrected manual within 15 days of receipt of Architect's comments and prior to commencing demonstration and training.

D. Comply with Section 017700 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

1.3 FORMAT OF OPERATION AND MAINTENANCE MANUALS

A. Manuals, Paper Copy: Submit manuals in the form of hard-copy, bound and labeled volumes.
   1. Binders: Heavy-duty, three-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch (215-by-280-mm) paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
   2. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
      a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
      b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

1.4 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

A. Organization of Manuals: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
   1. Title page.
   2. Table of contents.
   3. Manual contents.

B. Title Page: Include the following information:
   1. Subject matter included in manual.
   2. Name and address of Project.
   3. Name and address of Owner.
   4. Date of submittal.
   5. Name and contact information for Contractor.
   6. Name and contact information for Construction Manager.
   7. Name and contact information for Architect.
   8. Name and contact information for Commissioning Authority.
   9. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
   10. Cross-reference to related systems in other operation and maintenance manuals.

C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.

D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.

E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

1.5 EMERGENCY MANUALS

A. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.

B. Content: Organize manual into a separate section for each of the following:
   1. Type of emergency.
   2. Emergency instructions.
   3. Emergency procedures.

C. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:
   1. Fire.
   2. Flood.
   3. Gas leak.
   4. Water leak.
   5. Power failure.
   6. Water outage.
   7. System, subsystem, or equipment failure.
   8. Chemical release or spill.

D. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.
E. Emergency Procedures: Include the following, as applicable:
   1. Instructions on stopping.
   2. Shutdown instructions for each type of emergency.
   3. Operating instructions for conditions outside normal operating limits.
   4. Required sequences for electric or electronic systems.
   5. Special operating instructions and procedures.

1.6 SYSTEMS AND EQUIPMENT OPERATION MANUALS

A. Systems and Equipment Operation Manual: Assemble a complete set of data indicating operation of each system, subsystem, and piece of equipment not part of a system. Include information required for daily operation and management, operating standards, and routine and special operating procedures.
B. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:
   1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
   2. Performance and design criteria if Contractor has delegated design responsibility.
   3. Operating standards.
   4. Operating procedures.
   5. Operating logs.
   6. Wiring diagrams.
   7. Control diagrams.
   8. Piped system diagrams.
   9. Precautions against improper use.
   10. License requirements including inspection and renewal dates.
C. Descriptions: Include the following:
   1. Product name and model number. Use designations for products indicated on Contract Documents.
   2. Manufacturer's name.
   3. Equipment identification with serial number of each component.
   4. Equipment function.
   5. Operating characteristics.
   6. Limiting conditions.
   7. Performance curves.
   8. Engineering data and tests.
   9. Complete nomenclature and number of replacement parts.
D. Operating Procedures: Include the following, as applicable:
   1. Startup procedures.
   2. Equipment or system break-in procedures.
   3. Routine and normal operating instructions.
   4. Regulation and control procedures.
   5. Instructions on stopping.
   6. Normal shutdown instructions.
   7. Seasonal and weekend operating instructions.
   8. Required sequences for electric or electronic systems.
   9. Special operating instructions and procedures.
E. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.

F. Piped Systems: Diagram piping as installed, and identify color coding where required for identification.

1.7 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

A. Systems and Equipment Maintenance Manuals: Assemble a complete set of data indicating maintenance of each system, subsystem, and piece of equipment not part of a system. Include manufacturers' maintenance documentation, preventive maintenance procedures and frequency, repair procedures, wiring and systems diagrams, lists of spare parts, and warranty information.
B. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranties and bonds, as described below.
C. Manufacturers' Maintenance Documentation: Include the following information for each component part or piece of equipment:
    1. Standard maintenance instructions and bulletins; include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
        a. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.
    2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
    3. Identification and nomenclature of parts and components.
    4. List of items recommended to be stocked as spare parts.
D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:
    1. Test and inspection instructions.
    2. Troubleshooting guide.
    3. Precautions against improper maintenance.
    4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
    5. Aligning, adjusting, and checking instructions.
    6. Demonstration and training video recording, if available.
E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
G. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
    1. Include procedures to follow and required notifications for warranty claims.
H. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.

1.8 PRODUCT MAINTENANCE MANUALS

A. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
B. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
C. Product Information: Include the following, as applicable:
    1. Product name and model number.
    2. Manufacturer's name.
    3. Color, pattern, and texture.
    4. Material and chemical composition.
    5. Reordering information for specially manufactured products.
D. Maintenance Procedures: Include manufacturer's written recommendations and the following:
    1. Inspection procedures.
    2. Types of cleaning agents to be used and methods of cleaning.
    3. List of cleaning agents and methods of cleaning detrimental to product.
    4. Schedule for routine cleaning and maintenance.
    5. Repair instructions.
E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
    1. Include procedures to follow and required notifications for warranty claims.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 017823

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. Section 017823 "Operation and Maintenance Data" for operation and maintenance manual requirements.

1.2 CLOSEOUT SUBMITTALS

A. Record Drawings: Comply with the following:
   1. Number of Copies: Submit one set(s) of marked-up record prints.

B. Record Specifications: Submit annotated PDF electronic files of Project's Specifications, including addenda and Contract modifications.

1.3 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, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.
      a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
      b. Accurately record information in an acceptable drawing technique.
      c. Record data as soon as possible after obtaining it.
      d. Record and check the markup before enclosing concealed installations.
      e. Cross-reference record prints to corresponding photographic documentation.
   2. Content: Types of items requiring marking include, but are not limited to, the following:
      a. Dimensional changes to Drawings.
      b. Revisions to details shown on Drawings.
      c. Depths of foundations.
      d. Locations and depths of underground utilities.
      e. Revisions to routing of piping and conduits.
      f. Revisions to electrical circuitry.
      g. Actual equipment locations.
      h. Duct size and routing.
      i. Locations of concealed internal utilities.
      j. Changes made by Change Order or Construction Change Directive.
      k. Changes made following Architect's written orders.
      l. Details not on the original Contract Drawings.
      m. Field records for variable and concealed conditions.
      n. Record information on the Work that is shown only schematically.

3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
4. Mark record prints with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
5. Mark important additional information that was either shown schematically or omitted from original Drawings.
6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

B. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
1. Record Prints: Organize record prints into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
2. Identification: As follows:
a. Project name.
b. Date.
c. Designation "PROJECT RECORD DRAWINGS."
d. Name of Architect.
e. Name of Contractor.

1.4 RECORD SPECIFICATIONS

A. Preparation: Mark Specifications to indicate the actual product installation, where installation varies from that indicated in Specifications, addenda, and Contract modifications.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
4. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.
5. Note related Change Orders and Record Drawings where applicable.

B. Format: Submit record specifications as annotated PDF electronic file.

1.5 MAINTENANCE OF RECORD DOCUMENTS

A. Maintenance of Record Documents: Store Record Documents 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.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 017839

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Demolition and removal of selected portions of building or structure.

1.2 MATERIALS OWNERSHIP

A. Unless otherwise indicated, demolition waste becomes property of Contractor.
B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
   1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.3 PREINSTALLATION MEETINGS

A. Predemolition Conference: Conduct conference at Project site.

1.4 INFORMATIONAL SUBMITTALS

A. Proposed Protection Measures: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property, for dust control and for noise control. Indicate proposed locations and construction of barriers.
B. Schedule of selective demolition activities with starting and ending dates for each activity.
C. Predemolition photographs or video.

1.5 CLOSEOUT SUBMITTALS

A. Inventory of items that have been removed and salvaged.

1.6 FIELD CONDITIONS

A. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
B. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
C. Hazardous Materials: Hazardous materials have been identified on site. Refer to section 028200 “Asbestos Remediation” for additional information.
   1. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner.
D. Storage or sale of removed items or materials on-site is not permitted.
E. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
F. Arrange selective demolition schedule so as not to interfere with Owner's operations.

1.7 WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials and using approved contractors so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
B. Standards: Comply with ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped before starting demolition.
B. Perform an engineering survey of condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective building demolition operations.
C. Inventory and record the condition of items to be removed and salvaged.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.
    1. Owner will arrange to shut off indicated services/systems when requested by Contractor.
    2. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
    3. Disconnect, demolish, and remove plumbing and HVAC systems, equipment, and components indicated on Drawings to be removed.
        a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
        b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material and leave in place.
        c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
        d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
        e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
        f. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.
        g. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material and leave in place.

3.3 PROTECTION

A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
B. Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of

construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

C. Remove temporary barricades and protections where hazards no longer exist.

3.4 SELECTIVE DEMOLITION

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
   1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
   2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
   3. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
   4. Maintain fire watch during and for at least a half hour after flame-cutting operations.
   5. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
   6. Dispose of demolished items and materials promptly.

B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

C. Removed and Salvaged Items:
   1. Clean salvaged items.
   2. Pack or crate items after cleaning. Identify contents of containers.
   3. Store items in a secure area until delivery to Owner.
   4. Transport items to Owner's storage area designated by Owner.
   5. Protect items from damage during transport and storage.

D. Removed and Reinstalled Items:
   1. Clean and repair items to functional condition adequate for intended reuse.
   2. Pack or crate items after cleaning and repairing. Identify contents of containers.
   3. Protect items from damage during transport and storage.
   4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.5 CLEANING

A. Remove demolition waste materials from Project site and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction.
   1. Do not allow demolished materials to accumulate on-site.
   2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn demolished materials.

C. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119

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.
B. Related Requirements:
   1. Section 312000 "Earth Moving" for drainage fill under slabs-on-grade.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.
B. Design Mixtures: For each concrete mixture.
C. Steel Reinforcement Shop Drawings: Placing Drawings that detail fabrication, bending, and placement.
D. Joint Layout Shop Drawings: Indicate proposed construction and contraction joint layout required to construct the structure.

1.3 INFORMATIONAL SUBMITTALS

A. Material certificates.
B. Material test reports.
C. Floor surface flatness and levelness measurements indicating compliance with specified tolerances.

1.4 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 qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.

1.5 PREINSTALLATION MEETING

A. Preinstallation Conference: Before submitting design mixtures, review concrete design mixture and examine procedures for ensuring quality of concrete materials. Require representatives of each entity directly concerned with concrete materials, installation, and finishes, including polishing, to be present, including:
   1. Contractor’s Superintendent
   2. Independent testing agency responsible for concrete design mixtures.
   3. Ready-mix concrete manufacturer.

4. Cast-in-Place concrete subcontractor.
5. Finish flooring subcontractor.

B. Review mix design, cold-weather concreting procedures, curing procedures, construction joints, concrete repair procedures, concrete finishing, and protection of polished concrete.

1.6 PRECONSTRUCTION TESTING

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

1.7 FIELD CONDITIONS

A. Cold-Weather Placement: Comply with ACI 306.1.
   1. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in mixture designs.
B. Hot-Weather Placement: Comply with ACI 301 (ACI 301M) and ACI 305.1).

PART 2 - PRODUCTS

2.1 CONCRETE, GENERAL

A. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:
   1. ACI 301 (ACI 301M).
   2. ACI 117 (ACI 117M).

2.2 FORM-FACING MATERIALS

A. Smooth-Formed Finished Concrete: Form-facing panels that 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.

2.3 STEEL REINFORCEMENT

A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), deformed.
B. Low-Alloy-Steel Reinforcing Bars: ASTM A 706/A 706M, deformed.
C. Plain-Steel Welded-Wire Reinforcement: ASTM A 1064/A 1064M, plain, fabricated from as-drawn steel wire into flat sheets.
D. Deformed-Steel Welded-Wire Reinforcement: ASTM A 1064/A 1064M, flat sheet.
E. 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."

2.4 CONCRETE MATERIALS

A. Cementitious Materials:
   1. Portland Cement: ASTM C 150/C 150M, Type I
   2. Fly Ash: ASTM C 618, Class F or C.
   3. Slag Cement: ASTM C 989/C 989M, Grade 100 or 120.
B. Normal-Weight Aggregates: ASTM C 33/C 33M, graded.
   1. Maximum Coarse-Aggregate Size: 1-1/2 inches (38 mm) foundations; 3/4 inch (19 mm) nominal.
   2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.
C. Air-Entraining Admixture: ASTM C 260/C 260M.
D. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures and that do 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.
E. Water: ASTM C 94/C 94M.

2.5 VAPOR RETARDERS

A. Sheet Vapor Retarder: Polyethylene sheet, ASTM D 4397, not less than 10 mils (0.25 mm) thick.

2.6 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 Butyl Strip Waterstops: Manufactured rectangular or trapezoidal strip, butyl rubber with sodium bentonite or other hydrophilic polymers, for adhesive bonding to concrete, 3/4 by 1 inch (19 by 25 mm).

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 9 oz./sq. yd. (305 g/sq. m) when dry.
C. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

D. Water: Potable.
E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.
F. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, nondissipating, certified by curing compound manufacturer to not interfere with bonding of floor covering.
G. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, 18 to 25 percent solids, nondissipating, certified by curing compound manufacturer to not interfere with bonding of floor covering.
H. Clear, Waterborne, Membrane-Forming Curing and Sealing Compound: ASTM C 1315, Type 1, Class A.

2.8 RELATED MATERIALS

A. Expansion- and Isolation-Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber.

2.9 CONCRETE MIXTURES, GENERAL

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 (ACI 301M).
B. Cementitious Materials: Use fly ash, pozzolan, slag cement, and silica fume as needed to reduce the total amount of portland cement, which would otherwise be used, by not less than 40 percent.
C. Admixtures: Use admixtures according to manufacturer's written instructions.
   1. Use water-reducing, high-range water-reducing or plasticizing admixture in concrete, as required, for placement and workability.

2.10 CONCRETE MIXTURES FOR BUILDING ELEMENTS

A. Normal-Weight Concrete:
   1. Minimum Compressive Strength: As indicated on the drawings at 28 days.
   2. Maximum W/C Ratio: As indicated on the drawings.
   3. Slump Limit: As indicated on the drawings. before adding high-range water-reducing admixture or plasticizing admixture.
   4. Air Content: 6 percent, plus or minus 1.5 percent at point of delivery for 1-inch nominal maximum aggregate size.

2.11 FABRICATING REINFORCEMENT

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

2.12 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M, and furnish batch ticket information.

1. When air temperature is between 85 and 90 deg F (30 and 32 deg C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes.

2.13 CONCRETE FINISHING

A. Product: Subject to compliance with requirements provide water-based sealer from Curecrete Distribution, Inc.
   1. Contact: 1203 W. Spring Creek Place, Springville, UT 84663-0551; Telephone: (800) 998-5664, (801) 489-5663; Fax: (801) 489-3307; Email: info@ashfordformula.com; Website: www.ashfordformula.com.

B. Cure-Seal-Hardener: Ashford Formula, a water-based, chemically reactive penetrating sealer and hardener that densifies concrete to seal against water molecules, but allows air and water vapor to pass, so that concrete can achieve full compressive strength for minimized surface crazing and elimination of dusting.
   1. Abrasion Resistance to Revolving Disks: At least a 32.5% improvement over untreated samples when tested in accordance with ASTM C779.
   2. Surface Adhesion: At least a 22% increase in adhesion for epoxy when tested in accordance with ASTM D3359.
   3. Hardening: As follows when tested in accordance with ASTM C39.
      a. After 7 Days: An increase of at least 40% over untreated samples.
      b. After 28 Days: An increase of at least 38% over untreated samples.
   4. Coefficient of Friction: 0.86 dry, 0.69 wet when tested in accordance with ASTM C1028.
   5. Rebound Number: An increase of at least 13.3% over untreated samples when tested in accordance with ASTM C805.
   6. Light Exposure Degradation: No evidence of adverse effects on treated samples when tested in accordance with ASTM G23.

PART 3 - EXECUTION

3.1 FORMWORK INSTALLATION

A. Design, erect, shore, brace, and maintain formwork, according to ACI 301 (ACI 301M), 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 (ACI 117M).

C. Chamfer exterior corners and edges of permanently exposed concrete.

3.2 EMBEDDED ITEM INSTALLATION

A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

3.3 VAPOR-RETARDER INSTALLATION

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 (150 mm) and seal with manufacturer's recommended tape.

3.4 STEEL REINFORCEMENT INSTALLATION

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

3.5 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.
   1. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- (3.2-mm-) wide joints into concrete when cutting action does 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.

3.6 WATERSTOP INSTALLATION

A. Waterstops: Install in construction joints and at other locations indicated, according to manufacturer's written instructions.

3.7 CONCRETE PLACEMENT

A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections are completed.
B. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete is 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 (ACI 301M).

3.8 FINISHING FORMED SURFACES

A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.
   1. Apply to concrete surfaces not exposed to public view.
B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defects. Remove fins and other projections that exceed specified limits on formed-surface irregularities.
   1. Apply to concrete surfaces exposed to public view, to receive a rubbed finish, or to be covered with a coating or covering material applied directly to concrete.
C. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.

3.9 FINISHING FLOORS AND SLABS

A. General: Comply with ACI 302.1R recommendations for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.
B. Float Finish: Consolidate surface with power-driven floats or by hand floating if area is small or inaccessible to power-driven floats. Restraighten, cut down high spots, and fill low spots. Repeat float passes and restraightening until surface is left with a uniform, smooth, granular texture.
   1. Apply float finish to surfaces to receive trowel finish.
C. Trowel Finish: After applying float finish, apply first troweling and consolidate concrete by hand or power-driven trowel. Continue troweling passes and restraighten until surface is free of trowel marks and uniform in texture and appearance. Grind smooth any surface defects that would telegraph through applied coatings or floor coverings.
   1. Apply a trowel finish to surfaces exposed to view or to be covered with resilient flooring, carpet, ceramic or quarry tile set over a cleavage membrane, paint, or another thin-film-finish coating system.
D. Trowel and Fine-Broom Finish: Apply a first trowel finish to surfaces where ceramic or quarry tile is to be installed by either thickset or thinset method. While concrete is still plastic, slightly scarify surface with a fine broom.
   1. Comply with flatness and levelness tolerances for trowel-finished floor surfaces.
E. Broom Finish: Apply a broom finish to exterior concrete platforms, steps, ramps, and elsewhere as indicated.
   1. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route. Coordinate required final finish with Architect before application.

3.10 CONCRETE FINISHING APPLICATION

A. New Concrete (Sealed): In areas indicated for exposed sealed concrete floor, finish as follows:

1. Apply cure-seal hardener to new concrete as soon as the concrete is firm enough to work on after troweling; with colored concrete, wait a minimum of 30 days before application.
   a. Spray on at rate of 200 ft^2/gal (5 m^2/L).
   b. Keep surface wet with cure-seal-hardener for a minimum soak-in period of 30 minutes without allowing it to dry or become slippery. If slipperiness occurs before the 30 minute time period has elapsed, apply additional cure-seal-hardener, as needed, to keep the entire surface in a non-slippery state for the first 15 minutes; for the remaining 15 minutes, mist the surface as needed with water to keep the material in a non-slippery state. In hot weather conditions, follow manufacturer's special application procedures.
   c. When the treated surface becomes slippery after this period, lightly mist with water until slipperiness disappears.
   d. Wait for surface to become slippery again, and then flush entire surface with water to remove all cure-seal-hardener residue.
   e. Squeegee surface completely dry, flushing any remaining slippery areas until no residue remains.
   f. Wet vacuum or scrubbing machines can be used in accordance with manufacturer's instructions to remove residue.

B. Protect installed floors for at least 3 months until chemical reaction process is complete.
   1. Do not allow traffic on floors for 3 hours after application.
   2. Do not allow parking of vehicles on concrete slab.
   3. If vehicles must be temporarily parked on slab, place drop cloths under vehicles during entire time parked.
   4. Do not allow pipe cutting using pipe cutting machinery on concrete slab.
   5. Do not allow temporary placement and storage of steel members on concrete slabs.
   6. Clean up spills immediately and spot-treat stains with degreaser or oil emulsifier.
   7. Clean floor regularly in accordance with manufacturer's recommendations.

3.11 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 305.1 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 (1 kg/sq. m 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.

3.12 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.

3.13 FIELD QUALITY CONTROL

A. Special Inspections: Owner will engage a special inspector and qualified testing and inspecting agency to perform field tests and inspections and prepare test reports.
B. Measure floor and slab flatness and levelness according to ASTM E 1155 (ASTM E 1155M) within 48 hours of finishing.

END OF SECTION 033000

SECTION 04 0110 - MASONRY CLEANING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes cleaning the following:
   1. Brick masonry and limestone surfaces.

1.2 DEFINITIONS

A. Low-Pressure Spray: 100 to 400 psi (690 to 2750 kPa); 4 to 6 gpm (0.25 to 0.4 L/s)
B. Medium-Pressure Spray: 400 to 800 psi (2750 to 5510 kPa); 4 to 6 gpm (0.25 to 0.4 L/s)
C. High-Pressure Spray: 800 to 1200 psi (5510 to 8250 kPa); 4 to 6 gpm (0.25 to 0.4 L/s)

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at project site.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.5 QUALITY ASSURANCE

A. Mockups: Prepare mockups of cleaning on existing surfaces to demonstrate aesthetic effects and to set quality standards for materials and execution.
   1. Cleaning: Clean an entire area of one sill limestone piece.
      a. Test cleaners and methods on samples of adjacent materials for possible adverse reactions. Do not test cleaners and methods known to have deleterious effect.
      b. Allow a waiting period of not less than seven days after completion of sample cleaning to permit a study of sample panels for negative reactions.
   2. Along with cleaning all areas of the new masonry installations and where specific staining is noted to be cleaned, contractor shall clean all areas of existing masonry below and adjacent to the work area that may be affected by run-off or overspray at no additional cost to Owner.

PART 2 - PRODUCTS

2.1 CLEANING MATERIALS

A. Water: Potable.

B. Hot Water: Water heated to a temperature of 140 to 160 deg F (60 to 71 deg C).

C. Detergent Solution, Job Mixed: Solution prepared by mixing 2 cups (0.5 L) of tetrasodium pyrophosphate (TSPP), 1/2 cup (125 mL) of laundry detergent, and 20 quarts (20 L) of hot water for every 5 gal. (20 L) of solution required.

D. Mold, Mildew, and Algae Remover, Job Mixed: Solution prepared by mixing 2 cups (0.5 L) of tetrasodium pyrophosphate (TSPP), 5 quarts (5 L) of 5 percent sodium hypochlorite (bleach), and 15 quarts (15 L) of hot water for every 5 gal. (20 L) of solution required.

E. Nonacidic Gel Cleaner: Manufacturer's standard gel formulation, eith pH between 6 and 9, that contains detergents and chelating agents and is specifically formulated for cleaning masonry surfaces.

1. Products:
   a. Price Research, Ltd.: Price Marble Cleaner-Gel
   b. PROSOCO, Inc.: Sure-Klean 942 Masonry Cleaner
   c. Approved Equal

F. Nonacidic Liquid Cleaner: Manufacturer's standard mildly alkaline liquid cleaner formulated for removing mold, mildew, and other organic soiling from ordinary building materials, including polished stone, brick, aluminum, plastics, and wood.

1. Products:

   a. Dominion Restoration, Inc.: Bio-Cleanse
   b. Dumond Chemicals, Inc.: Safe 'n Easy Architectural Cleaner/Restorer
   c. Price Research, Ltd.: Price Non-Acidic Masonry Cleaner
   d. PROSOCO, Inc.: Enviro-Klean Restoration Cleaner
   e. Approved Equal.

2.2 CHEMICAL CLEANING SOLUTIONS

A. Dilute chemical cleaners with water to produce solutions not exceeding concentration recommended in writing by chemical-cleaner manufacturer.

PART 3 - EXECUTION

3.1 PROTECTION

A. Comply with each manufacturer's written instructions for protecting building and other surfaces against damage from exposure to its products. Prevent paint removers and chemical cleaning solutions from coming into contact with people, motor vehicles, landscaping, buildings, and other surfaces that could be harmed by such contact.
   1. Cover adjacent surfaces with materials that are proven to resist paint removers and chemical cleaners used unless products being used will not damage adjacent surfaces. Use protective materials that are waterproof and UV resistant. Apply masking agents according to manufacturer's written instructions. Do not apply liquid strippable masking agent to painted or porous surfaces. When no longer needed, promptly remove masking to prevent adhesive staining.

3.2 CLEANING MASONRY, GENERAL

A. Cleaning Appearance Standard: Cleaned surfaces are to have a uniform appearance as viewed from 20 feet (6 m) away by Architect.
B. Proceed with cleaning in an orderly manner; work from top to bottom of each scaffold width and from one end of each elevation to the other. Ensure that dirty residues and rinse water do not wash over dry, cleaned surfaces.
C. Use only those cleaning methods indicated for each masonry material and location.

1. Brushes: Do not use wire brushes or brushes that are not resistant to chemical cleaner being used.
2. Spray Equipment: Use spray equipment that provides controlled application at volume and pressure indicated, measured at nozzle. Adjust pressure and volume to ensure that cleaning methods do not damage surfaces, including joints.
    a. Equip units with pressure gages.
    b. For chemical-cleaner spray application, use low-pressure tank or chemical pump suitable for chemical cleaner indicated, equipped with nozzle having a cone-shaped spray.
    c. For water-spray application, use fan-shaped spray that disperses water at an angle of 25 to 50 degrees.
    d. For heated water-spray application, use equipment capable of maintaining temperature between 140 and 160 deg F (60 and 71 deg C) at flow rates indicated.

D. Perform each cleaning method indicated in a manner that results in uniform coverage of all surfaces, including corners, moldings, and interstices, and that produces an even effect without streaking or damaging masonry surfaces. Keep wall wet below area being cleaned to prevent streaking from runoff.

E. Perform additional general cleaning, paint and stain removal, and spot cleaning of small areas that are noticeably different when viewed according to the "Cleaning Appearance Standard" Paragraph, so that cleaned surfaces blend smoothly into surrounding areas.

F. Water-Spray Application Method: Unless otherwise indicated, hold spray nozzle at least 6 inches (150 mm) from masonry surface and apply water in horizontal back-and-forth sweeping motion, overlapping previous strokes to produce uniform coverage.

G. Chemical-Cleaner Application Methods: Apply chemical cleaners to masonry surfaces according to chemical-cleaner manufacturer's written instructions; use brush or spray application. Do not apply at pressures exceeding 50 psi (345 kPa). Do not allow chemicals to remain on surface for periods longer than those indicated or recommended in writing by manufacturer.

H. Rinse off chemical residue and soil by working upward from bottom to top of each treated area at each stage or scaffold setting. Periodically during each rinse, test pH of rinse water running off of cleaned area to determine that chemical cleaner is completely removed.
    1. Apply neutralizing agent and repeat rinse if necessary to produce tested pH of between 6.7 and 7.5.

3.3 PRELIMINARY CLEANING

A. Removing Plant Growth: Completely remove visible plant, moss, and shrub growth from masonry surfaces. Carefully remove plants, creepers, and vegetation by cutting at roots and allowing remaining growth to dry as long as possible before removal. Remove loose soil and plant debris from open joints to whatever depth they occur.

B. Preliminary Cleaning: Before beginning general cleaning, remove extraneous substances that are resistant to planned cleaning methods. Extraneous substances include paint, caulking, asphalt, and tar.
    1. Carefully remove heavy accumulations of rigid materials from masonry surface with sharp chisel. Do not scratch or chip masonry surface.

3.4 CLEANING MASONRY

A. Detergent Cleaning:
    1. Wet surface with hot water applied by low-pressure spray.

2. Scrub surface with detergent solution using medium-soft brushes until soil is thoroughly dislodged and can be removed by rinsing. Use small brushes to remove soil from mortar joints and crevices. Dip brush in solution often to ensure that adequate fresh detergent is used and that surface remains wet.
3. Rinse with hot water applied by low-pressure spray to remove detergent solution and soil.
4. Repeat cleaning procedure above where required to produce cleaning effect established by mockup.

B. Mold, Mildew, and Algae Removal:
1. Wet surface with hot water applied by low-pressure spray.
2. Apply mold, mildew, and algae remover by brush or low-pressure spray.
3. Scrub surface with medium-soft brushes until mold, mildew, and algae are thoroughly dislodged and can be removed by rinsing. Use small brushes for mortar joints and crevices. Dip brush in mold, mildew, and algae remover often to ensure that adequate fresh cleaner is used and that surface remains wet.
4. Rinse with hot water applied by low-pressure spray to remove mold, mildew, and algae remover and soil.
5. Repeat cleaning procedure above where required to produce cleaning effect established by mockup.

C. Nonacidic Chemical Cleaning:
1. Wet surface with cold water applied by low-pressure spray.
2. Apply cleaner to surface in two applications by brush or low-pressure spray.
3. Let cleaner remain on surface for period recommended in writing by chemical-cleaner manufacturer.
4. Rinse with cold water applied by medium-pressure spray to remove chemicals and soil.
5. Repeat cleaning procedure above where required to produce cleaning effect established by mockup. Do not repeat more than once. If additional cleaning is required, use steam cleaning.

END OF SECTION 040110

SECTION 04 0120- MASONRY REPAIR

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:
   1. Removing and reinstalling limestone coping
   2. Repairing brick masonry, including replacing units and partial wall reconstruction.
   3. Injected epoxy for stone cracks and anchoring of dowel pins.
   4. Removing abandoned anchors.
   5. Painting steel uncovered during the work.

1.3 DEFINITIONS

A. Low-Pressure Spray: 100 to 400 psi (690 to 2750 kPa); 4 to 6 gpm (0.25 to 0.4 L/s)
B. Medium-Pressure Spray: 400 to 800 psi (2750 to 5500 kPa); 4 to 6 gpm (0.25 to 0.4 L/s)

1.4 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site
   1. Required attendance: Architect, Owner, Contractor's Superintendent, Masonry and Roofing Contractor Foremen, Testing and Inspection Company Representative.
   2. Review scheduling, coordination, methods and procedures related to parapet repair.

1.5 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.
   1. Include recommendations for product application and use.
B. Samples, for each product indicated:
   1. Colored Mortar: Submit samples of mortar that will be left exposed.
      a. Have each sample contain a mix of colored sands and cements that produce a mortar matching existing, cleaned mortar when cured and dry.
   2. Patching Compound: Submit 3 (three) sets of patching compound samples in the form of plugs (patches in drilled holes) in sample units of masonry representative of the range of masonry colors on the building.
   3. Brick Tie and Flashing: Submit one (1) sample each of all various brick ties and flashing pieces.
   4. Samples of other exposed accessories involving color selection.

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For brick masonry repair specialist including field supervisors and workers.

1.7 QUALITY ASSURANCE

A. Restoration Specialist Qualifications: Engage an experienced masonry restoration firm to perform work of this Section. Firm shall have completed work similar in material, design, and extent to that indicated for this Project with a record of successful in-service performance. Experience in only installing masonry is insufficient experience.
   1. Field Supervision: Masonry restoration specialist firm shall maintain experienced full-time supervisors on Project site during times that masonry restoration work is in progress.
   2. Restoration Worker Qualifications: Persons who are experienced and specialize in restoration work of types indicated.

B. Architect's Project Representatives: Architect will assign Project Representatives to help carry out Architect's responsibilities at the site, including observing progress and quality of portion of the Work completed. Allow Architect's Project representatives use of lift devices and scaffolding, as needed, to observe progress and quality of portion of the Work completed.

C. Notify Architect's Project representatives in advance of times when lift devices and scaffolding will be relocated. Do not relocate lift devices and scaffolding until inspectors and Architect's Project representatives have had reasonable opportunity to make inspections and observations of work areas at lift device or scaffold location.

D. Source Limitations: Obtain each type of material for masonry restoration (cement, sand, etc.) from one source with resources to provide materials of consistent quality in appearance and physical properties.

E. Mockups: Prepare mockups of masonry parapet repair to demonstrate aesthetic effects and to set quality standards for materials and execution and for fabrication and installation.
   1. Parapet Mockup: Prepare a section of re-constructed parapet one – to - two coping sections long (approximately 4 to 6 linear feet).
      a. Include at least one through-wall flashing joint, counter-flashing joint, wall flashing vertical seam and one end dam.
      b. Leave stone coping off a portion to expose the through wall flashing joint and at least one dowel penetration for review.
      c. Mockup will be prepared and reviewed in stages with Architect and Owner's Representative present. Proposed stages may consist of:
         1) Upon Demolition of existing
         2) When new masonry is installed but before flashing
         3) Flashing and dowel pin installation
         4) Stone coping reinstalled and joints sealed.
   2. Brick Repair / Replacement Mockup: 4 (four) square feet minimum.
   3. Tuck-Pointing Mockup: 4 (four) square feet minimum.
   4. Provide 2 minimum masonry cleaning mockups to determine best cleaning agent.
   5. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Deliver masonry units to Project site strapped together in suitable packs or pallets or in heavy-duty cartons and protected against impact and chipping.

B. Store cementitious materials and lime on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.

C. Store sand where grading and other required characteristics can be maintained, and contamination avoided.
D. Handle masonry units to prevent overstressing, chipping, defacement, and other damage.

1.9 FIELD CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit brick masonry repair work to be performed according to product manufacturers' written instructions and specified requirements.
B. Temperature Limits, General: Repair masonry units only when air temperature is between 40 and 90 deg F (4 and 32 deg C) and is predicted to remain so for at least seven days after completion of the Work.
C. Cold-Weather Requirements: Comply with the following procedures for masonry repair unless otherwise indicated:
   1. When air temperature is below 40 deg F (4 deg C), heat mortar ingredients, masonry repair and pointing materials, and existing masonry walls to produce temperatures between 40 and 120 deg F (4 and 49 deg C).
   2. When mean daily air temperature is below 40 deg F (4 deg C), provide enclosure and heat to maintain temperatures above 32 deg F (0 deg C) within the enclosure for seven days after repair and pointing.
D. Hot-Weather Requirements: Protect masonry repairs and pointing when temperature and humidity conditions produce excessive evaporation of water from mortar and repair materials. Provide artificial shade and wind breaks, and use cooled materials as required to minimize evaporation. Do not apply mortar to substrates with temperatures of 90 deg F (32 deg C) and above.
E. For manufactured repair materials, perform work within the environmental limits set by each manufacturer.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. Source Limitations: Obtain each type of material for repairing brick masonry (brick, cement, sand, etc.) from single source with resources to provide materials of consistent quality in appearance and physical properties.
B. It is the intent to match existing brick color, texture, shading variations and outward appearance as closely as possible. Subject to compliance with performance requirements, contractors may propose alternative brick from their available sources. The existing brick size is standard. Contractors may at their option utilize modular brick for areas not exposed to view and for creating header courses. All exposed stretchers are to be standard size to match existing.

2.2 MORTAR MATERIALS

A. Portland Cement: ASTM C 150, Type I or Federal Specification SS-C-1292, Type I, white or gray, or both where required for color matching of mortar.
   1. Use ASTM C 91 non-staining cement for stone setting.
B. Hydrated Lime: ASTM C 207 (hydrated), Type S or ASTM C5 (quicklime).
C. Mortar Sand: ASTM C 144, unless otherwise indicated.
   1. For pointing mortar, provide sand with rounded edges.
   2. Exposed Mortar: Match size, texture, and gradation of existing mortar sand as closely as possible. Blend several sands if necessary to achieve suitable match.
D. Water: Potable.

2.3 MANUFACTURED REPAIR MATERIALS

A. Injected Epoxy: For limestone crack repair and anchorage or dowel pins.
   1. Crack and Injection Ports: 100% solids, moisture-tolerant, high modulus, high strength, structural. smooth paste epoxy, conforming to ASTM C-881.
      a. Product: Sika Corporation; Sikadur 33.
   2. Pressure Injection Epoxy: Two component, 100% solids, moisture tolerant, low-viscosity, high-strength, multi-purpose epoxy resin adhesive.
      a. Product: Sike Corporation; Sikadur 35, Hi-Mod LV.

B. Patching Compound: Factory-mixed cementitious product that is custom manufactured for patching brick masonry.
   1. Use formulation that is vapor and water permeable (equal to or more than the masonry unit), exhibits low shrinkage, has lower modulus of elasticity than masonry units being repaired, and develops high bond strength to all types of masonry.
   2. Patching of brick is only authorized for minor anchor holes in a sound brick. Intent for damaged brick is total unit replacement. Patching Compound for brick to be Jahn M-100 terra cotta and brick repair mortar.
   3. Patching Compound for limestone to be Jahn M70 stone repair mortar.

2.4 FLASHING MATERIALS

A. Through-Wall Flashing and Reglet: Fabricate to comply with the following requirements:
   1. Stainless Steel: ASTM A 240, Type 304 stainless steel in thicknesses indicated, but not less than 0.0156 inch (0.4mm) thick.
   2. Fabricate with drip ½ inch out from exterior face of the wall, having a hemmed outer edge bent down 30 degrees, and a reglet on interior face of wall or receptor for counterflashing provided by roofing installer.
   3. Punch for dowels required for coping dowel anchors. Raised dimple in the flashing shall face upward.
   4. Fabrications shall comply with SMACNA and NRCA design standards.

2.5 MORTAR MIXES

A. General: Contractor is responsible for testing existing mortar to match new mortar to the existing mortar's compressive strength and consistency. Match size, texture, and gradation of existing mortar sand as closely as possible. Blend several sands, if necessary, to achieve suitable match.

B. Mortar Mixes: Measure cementitious materials and sand in a dry condition by volume or equivalent weight. Mix materials in a clean, mechanical batch mixer.
   1. Mixing Pointing Mortar: Thoroughly mix cementitious materials and sand together before adding any water. Then mix again adding only enough water to produce a damp, unworkable mix that will retain its form when pressed into a ball. Maintain mortar in this dampened condition for 15 to 30 minutes. Add remaining water in small portions until mortar reaches desired consistency. Use mortar within one hour of final mixing; do not retemper or use partially hardened material.

C. Do not use admixtures of any kind in mortar, unless otherwise indicated.

D. Pointing Mortar for Brick (Type N): 1 part portland cement, 1 part lime, and 6 parts sand (Not less than 2-1/4 and not more than 3 times the sum of the volumes of cement and lime used.).
   1. Use only as required for tuck pointing any existing Type N or S mortar used in laying brick having absorption rates greater than 25 gm./min./ 30 sq. in.

E. Rebuilding (Setting) Mortar (Type N): 1-part portland cement, 1 part lime, and 6 parts sand Same as pointing mortar.

2.6 ACCESSORY MATERIALS

A. Lap Sealant and Silicone sealant are specified under Division 7.
B. Masking Tape: Nonstaining, nonabsorbent material; compatible with mortar, joint primers, sealants, and surfaces adjacent to joints; and that easily comes off entirely, including adhesive.
C. Antirust Coating: Fast-curing, lead- and chromate-free, self-curing, universal modified-alkyd primer according to SSPC-Paint 20 or SSPC-Paint 29 zinc-rich coating formulated for use on hand-tool cleaned previously rusted steel surfaces.
D. Other Products: Select materials and methods of use based on the following, subject to approval of a mockup:
    1. Previous effectiveness in performing the work involved.
    2. Minimal possibility of damaging exposed surfaces.
    3. Consistency of each application.
    4. Uniformity of the resulting overall appearance.
    5. Do not use products or tools that could leave residue on surfaces.

2.7 CLEANING MATERIALS

A. Refer to Specifications Section 040110 “Masonry Cleaning”.

PART 3 - EXECUTION

3.1 PROTECTION

A. Protect persons, motor vehicles, surrounding surfaces of building being restored, building site, plants, and surrounding buildings from harm resulting from masonry restoration work.
    1. Cover adjacent surfaces with materials that resist chemical cleaners used unless chemical cleaners will not damage surfaces. Use materials that contain only waterproof, UV-resistant adhesives.
B. Prevent mortar from staining face of surrounding masonry and other surfaces.
    1. Cover sills, ledges, and other projecting items to protect them from mortar droppings.
    2. Keep wall area wet below rebuilding and repair work to discourage mortar from adhering.
    3. Immediately remove mortar splatters in contact with exposed masonry and other surfaces.
C. Provide temporary cover and rain drainage if required during work to direct water off exposed wall surfaces and away from building.

3.2 MASONRY REPAIR, GENERAL

A. Appearance Standard: Repaired surfaces are to have a uniform appearance as viewed from 50 feet (15 m) away by Architect.

B. Verify testing and acceptance of steel welding repairs and pan flashings prior to covering with new masonry.

3.3 STONE COPING REMOVAL, PREPARATION AND STORAGE

A. Remove existing limestone coping, prep and save for reinstallation:

1. Carefully remove existing limestone copings from wall, avoiding damaging units or adjacent construction. Do not exceed loading capacities of existing roofing and structures.
2. Tag each piece and notate on a plan or schedule it's location for reinstallation.
3. Manually scrape or remove residual mortar, flashing, etc. using hand tools, brushes and water. Remove sealants by cutting close to stone with utility knife and cleaning with non-staining solvents.
4. Clean limestone coping using non-acidic cleaner.
5. Store limestone coping on pallets or other raised surface and protected from weather until ready for reinstallation.

3.4 ACCESSORY REMOVAL

A. Remove anchors, and other extraneous items in the area of work.
   1. Remove items carefully to avoid spalling or cracking masonry.
   2. Notify Architect before proceeding if an item cannot be removed without damaging surrounding masonry.
   3. Patch holes where extraneous items were removed and are not intended to be reinstalled, unless directed to remove and replace entire masonry unit.

3.5 BRICK REMOVAL AND REPLACEMENT

A. At locations indicated, remove bricks that are damaged, spalled, or deteriorated. Carefully remove entire units from joint to joint, without damaging surrounding masonry, in a manner that permits replacement with full-size units.
   1. When removing single bricks, remove material from center of brick and work toward outside edges.
B. Support and protect remaining masonry that surrounds removal area.
C. Maintain adjoining construction in an undamaged condition. Coordinate with new flashing, reinforcement, and lintels as required.
D. Notify Architect of unforeseen detrimental conditions including voids, cracks, bulges, and loose units in existing masonry backup, rotted wood, rusted metal, and other deteriorated items.
E. Clean masonry surrounding removal areas by removing mortar, dust, and loose particles in preparation for brick replacement.
F. Replace removed damaged brick with new brick matching existing brick.
G. Install replacement brick into bonding and coursing pattern of existing brick. If cutting is required, use a motor-driven saw designed to cut masonry with clean, sharp, unchipped edges.
   1. Maintain joint width for replacement units to match existing joints.
   2. Use setting buttons or shims to set units accurately spaced with uniform joints.
H. Lay replacement brick with rebuilding (setting) mortar and with completely filled bed, head, and collar joints. Butter ends with enough mortar to fill head joints and shove into place. Wet both replacement and surrounding bricks that have ASTM C 67 initial rates of absorption (suction) of more than 30 g/30 sq. in. per min. (30 g/194 sq. cm per min.) Use wetting methods that ensure that units are nearly saturated, but surface is dry when laid.
   1. Tool exposed mortar joints in repaired areas to match joints of surrounding existing brickwork.
   2. When mortar is hard enough to support units, remove shims and other devices interfering with pointing of joints.
I. Curing: Cure mortar by maintaining in thoroughly damp condition for at least 72 consecutive hours, including weekends and holidays.

1. Hairline cracking within the mortar or mortar separation at edge of a joint is unacceptable. Completely remove such mortar and repoint.

3.6 PAINTING STEEL UNCOVERED DURING THE WORK

A. Notify Architect if steel is exposed during masonry removal. Where Architect determines that steel is structural, or for other reasons cannot be totally removed, prepare and paint it as follows:
   1. Surface Preparation: Remove paint, rust, and other contaminants according to SSPC-SP 2, "Hand Tool Cleaning, as applicable to comply with paint manufacturer's recommended preparation.
   2. Antirust Coating: Immediately paint exposed steel with two coats of antirust coating, following coating manufacturer's written instructions and without exceeding manufacturer's recommended rate of application (dry film thickness per coat).
B. If on inspection and rust removal, the thickness of a steel member is found to be reduced from rust by more than 1/16 inch (1.6 mm), notify Architect before proceeding.

3.7 SETTING LIMESTONE COPING

A. Limestone coping will be reinstalled in mortar bed in same location as existing, over new stainless steel through – wall flashing.
   1. Anchor horizontal coping using new stainless steel dowel anchors in lieu of thin metal tab anchors originally used.
   2. On sloping pieces, stainless steel split-tailed stone anchors may be used in lieu of dowels. Anchors to be MasonPro AST-Series or approved equal.
B. Drill stone coping for new dowel anchors. Dowel holes should be over-bored 1/4”.
C. Install dowels into rebuilt masonry parapet, accurately coordinated with penetrations in through-wall flashing.
D. Install through – wall flashing with dimples formed from punching dowel penetrations facing upward, to form a water dam at the dowel. Install continuous bead of butyl sealant around the dowel penetration above and below the flashing and allow to cure. Lap through-wall flashing six-inches at joints and provide three 1/4-inch beads of butyl lap sealant continuous from edge of metal to edge of metal.
E. Set stone in a full bed of mortar with head joints filled unless otherwise indicated. Provide sealant in the dowel holes in lieu of mortar to allow for thermal movement.
F. Tool joints with a round jointer having a diameter 1/8 inch (3 mm) larger than width of joint, when mortar is thumbprint hard.
G. Rake out mortar from head joints and other sealant-pointed joints to depths required for sealant and sealant backing but not less than 1 inch. Rake joints to uniform depths with square bottoms and clean sides.
H. Provide backer rod and silicone sealant in head joints and bed joints.

3.8 INSTALLATION TOLERANCES

A. Variation from Plumb: For vertical lines and surfaces of walls, do not exceed 1/4 inch in 10 feet (6 mm in 3 m). For external corners, corners and jambs and other conspicuous lines, do not exceed 1/8 inch in 10 feet (3 mm in 3 m).
B. Variation from Level: For, parapets, horizontal bands, and other conspicuous lines, do not exceed 1/8 inch in 10 feet (3 mm in 3 m).
C. Variation in Cross-Sectional Dimensions: For thickness of walls from dimensions indicated, do not exceed plus or minus 1/4 inch (6 mm).

D. Variation in Joint Width: Do not vary from average joint width more than plus or minus 1/8 inch (3 mm) or a quarter of nominal joint width, whichever is less.
E. Variation in Plane between Adjacent Stone Units (Lipping): Do not exceed 1/16-inch (1.5-mm) difference between planes of adjacent units.

3.9 MASONRY UNIT PATCHING

A. Patch the following masonry units unless another type of repair or replacement is indicated:
   1. Units indicated to be patched.
   2. Units with holes less than 3/8 – inch diameter.
   3. Units in the area of work with holes greater than 3/8-inch diameter, chipped edges or corners or units with any areas of deep deterioration (or cracks) are to be replaced.
B. Remove and replace existing patches if found loose, cracked or deteriorated.
C. Prepare patching in accordance with patching material manufacturer's instructions.

3.10 ANCHORING STONE

A. Anchor stone to existing masonry or steel structure as shown and indicates in the drawings.

3.11 STONE AND CONRETE CRACK REPAIR

A. Prepare for repair by scraping loose material and cleaning surfaces for repair work.
B. Place Sikadur 33 neat mixed material over cracks to be pressure-injected and around each injection port. Allow sufficient time to set before pressure injection.
C. For gravity feed cracks, pour Sikadur 35 Hi-Mod LV into vee-notched crack. Continue placement until completely filled.
D. For pressure-injected cracks, use automated injection equipment or manual method appropriate injection ports based on system used. Seal ports and cracks with Sikadur 33. When epoxy adhesive seal has cured, inject Sikadur 33 Hi-Mod LV with steady pressure.
E. Clean stone surface of epoxy residue before material hardens.

3.12 ADJUSTING AND PROGRESS CLEANING

A. Adjust stone work to comply with installation tolerances and approved mockups.
B. Remove and reinstall any stone work that does not match approved mockup. Damaged stone may be repaired if Architect approves methods and results.
C. In-Progress Cleaning: Remove mortar fins and smears before tooling joints. Remove excess sealant and smears as sealant is installed.

3.13 FINAL CLEANING

A. After mortar has fully hardened, thoroughly clean exposed masonry surfaces of excess mortar and foreign matter; use wood scrapers, stiff-nylon or -fiber brushes, and clean water applied by low-pressure spray.
   1. Do not use metal scrapers or brushes.
   2. Do not use acidic or alkaline cleaners.
B. Clean adjacent surfaces. Use detergent and soft brushes or cloths.
C. Clean mortar and debris from roof; remove debris from drainage system. Rinse off roof and remove masking materials. Leave no residues that could trap dirt.

3.14 MASONRY WASTE DISPOSAL

A. Salvageable Materials: Unless otherwise indicated, excess masonry materials are Contractor's property.
B. Masonry Waste: All masonry waste is to be recycled.

END OF SECTION 040120

SECTION 04 4200 - EXTERIOR STONE CLADDING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Stone units set with individual anchors.
   2. Stone trim units, including bands, copings, sills, and jambs.
   3. Stone units with carving or inscriptions.

1.2 ACTION SUBMITTALS

A. Product Data: For each variety of stone, stone accessory, and manufactured product.
B. Shop Drawings: Show fabrication and installation details for stone cladding assembly, including dimensions and profiles of stone units.
   1. Show locations and details of joints both within stone cladding assembly and between stone cladding assembly and other construction.
   2. Show locations and details of anchors and backup structure.
   3. Show direction of veining, grain, or other directional pattern.
C. Stone Samples: Sets for each variety, color, and finish of stone required; not less than 12 inches (300 mm) square.
D. Delegated-Design Submittal: For stone cladding assembly.

1.3 INFORMATIONAL SUBMITTALS

A. Material Test Reports:
   1. Stone Test Reports: For each stone variety proposed for use on Project, by a qualified testing agency, indicating compliance with required physical properties, other than abrasion resistance, according to referenced ASTM standards. Base reports on testing done within previous five years.
B. Preconstruction test reports.
C. Source quality-control reports.

1.4 QUALITY ASSURANCE

A. Testing Agency Qualifications: Qualified according to ASTM E 329 for testing indicated.
B. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.
   1. Build mockups of typical exterior wall area not less than 72 inches (1800 mm) long by 48 inches (1200 mm) high.

1.5 FIELD CONDITIONS

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

C. Environmental Limitations for Sealants: Do not install sealants when ambient and substrate temperatures are outside limits permitted by sealant manufacturer or below 40 deg F (5 deg C) or when joint substrates are wet.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design stone cladding assembly.
B. General: Design stone anchors and anchoring systems according to ASTM C 1242.
   1. Stone anchors shall withstand not less than two times the weight of the stone cladding in both compression and tension.
C. Structural Performance: Stone cladding assembly shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:
   1. Wind Loads: As indicated.
   2. Equipment Loads: Allow for loads due to window cleaning and maintenance equipment.
D. Seismic Performance: Stone cladding assembly shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.
   1. Component Importance Factor: 1.5.
E. Safety Factors for Stone: Design stone cladding assembly to withstand loads indicated without exceeding stone's allowable working stress determined by dividing stone's average ultimate strength, as established by testing, by the following safety factors:
   1. Safety Factor for Oolitic Limestone: 8.

2.2 LIMESTONE

A. Material Standard: Comply with ASTM C 568/C 568M.
B. Description: Oolitic limestone.
C. Varieties and Sources: Subject to compliance with requirements, provide the following:
   1. Provide natural building stone of variety, color, finish, size, and shape to match existing stone.
D. Varieties and Sources: Indiana limestone quarried in Lawrence, Monroe, or Owen Counties, Indiana.
   1. Indiana Limestone Grade and Color: Select, buff, according to grade and color classification established by ILI.
E. Finish: Smooth finish.

2.3 ANCHORS AND FASTENERS

A. Fabricate anchors from stainless steel, ASTM A 240/A 240M or ASTM A 666, Type 304; temper as required to support loads imposed without exceeding allowable design stresses. Fabricate dowels and pins for anchors from stainless steel, ASTM A 276, Type 304.
B. Postinstalled Anchor Bolts for Concrete and Masonry: Chemical anchors made from stainless-steel components complying with ASTM F 593 and ASTM F 594, Alloy Group 1 or 2 (ASTM F 738M and ASTM F 836M, Alloy Group A1 or A4) for bolts and nuts; ASTM A 240/A 240M, ASTM A 276, or ASTM A 666, Type 304 or 316, for anchors, with capability to sustain, without failure, a load equal to 4 times the loads imposed, for concrete, or 6 times the load imposed, for masonry, as determined by testing per ASTM E 488/E 488M, conducted by a qualified independent testing agency.
C. Weld Plates for Installation in Concrete: Comply with Section 055000 "Metal Fabrications."

2.4 MORTAR MATERIALS

A. Portland Cement: ASTM C 150/C 150M, Type I or Type II, except Type III may be used for cold-weather construction, natural color or white as required to produce mortar color indicated.
   1. Low-Alkali Cement: Portland cement for use with limestone shall contain no more than 0.60 percent total alkali when tested according to ASTM C 114.
B. Hydrated Lime: ASTM C 207.
C. Mortar Pigments: Natural and synthetic iron oxides and chromium oxides, compounded for use in mortar mixes and complying with ASTM C 979/C 979M. Pigments shall have a record of satisfactory performance in mortar.
D. Aggregate: ASTM C 144; except for joints narrower than 1/4 inch (6 mm) and pointing mortar, 100 percent shall pass No. 16 (1.18-mm) sieve.
E. Water: Potable.

2.5 STONE ACCESSORIES

A. Setting Shims: Strips of resilient plastic or vulcanized neoprene, Type A Shore durometer hardness of 50 to 70, nonstaining to stone, of thickness needed to prevent point loading of stone on anchors and of depths to suit anchors without intruding into required depths of pointing materials.
B. Concealed Sheet Metal Flashing: Fabricated from stainless steel in thicknesses indicated, but not less than 0.0156 inch (0.4 mm) thick, and complying with Section 076200 "Sheet Metal Flashing and Trim."
C. Cementitious Dampproofing for Limestone: Cementitious formulation recommended by ILI and nonstaining to stone; compatible with joint sealants and noncorrosive to anchors and attachments.
D. Mesh Weep/Vent: Free-draining mesh; made from polyethylene strands, of length required to extend from exterior face of stone to cavity behind, in color selected from manufacturer's standard.
E. Sealants for Joints in Stone Cladding: Manufacturer's standard chemically curing, elastomeric sealants of base polymer and characteristics indicated below that comply with applicable requirements in Section 079200 "Joint Sealants" and do not stain stone.
   1. Joint-Sealant Colors: As selected by Architect from manufacturer's full range of colors.

2.6 STONE FABRICATION

A. Control depth of stone and back check to maintain minimum clearance of 1 inch (25 mm) between backs of stone units and surfaces or projections of structural members, fireproofing (if any), backup walls, and other work behind stone.
B. Dress joints (bed and vertical) straight and at right angle to face unless otherwise indicated. Shape beds to fit supports.
C. Cut and drill sinkages and holes in stone for anchors, fasteners, supports, and lifting devices as indicated or needed to set stone securely in place.
D. Finish exposed faces and edges of stone, except sawed reveals, to comply with requirements indicated for finish and to match approved samples and mockups.
E. Cut stone to produce uniform joints 3/8 inch (10 mm) 1/2 inch (13 mm) wide and in locations indicated.
F. Contiguous Work: Provide chases, reveals, reglets, openings, and similar features as required to accommodate contiguous work.
G. Fabricate molded work, including washes and drips, to produce stone shapes with a uniform profile throughout entire unit length, with precisely formed arris slightly eased to prevent snipping, and with matching profile at joints between units.

2.7 MORTAR MIXES

A. General: Comply with referenced standards and with manufacturers' written instructions. Do not use admixtures, unless otherwise indicated.
B. Portland Cement-Lime Setting Mortar: Comply with ASTM C 270, Proportion Specification, for types of mortar indicated below:
   1. Set limestone with Type N mortar.
C. Pointing Mortar: Comply with ASTM C 270, Proportion Specification, for types of mortar indicated. Provide pointing mortar mixed to match Architect's sample and complying with the following:
   1. Point limestone with Type N mortar.

PART 3 - EXECUTION

3.1 SETTING STONE CLADDING, GENERAL

A. Before setting stone, clean surfaces that are dirty or stained by removing soil, stains, and foreign materials. Clean stone by thoroughly scrubbing with fiber brushes and then drenching with clear water. Use only mild cleaning compounds that contain no caustic or harsh materials or abrasives.
B. Coat limestone with dampproofing to extent indicated below:
   1. Stone at Grade: Beds, joints, and back surfaces to at least 12 inches (300 mm) above finish-grade elevations.
   2. Stone Extending Below Grade: Beds, joints, back surfaces, and face surfaces below grade.
C. Execute stone cladding installation by skilled mechanics and employ skilled stone fitters at Project site to do necessary field cutting as stone is set. Use power saws with diamond blades to cut stone.
D. Set stone to comply with requirements indicated. Install anchors, supports, fasteners, and other attachments indicated or necessary to secure stone cladding in place. Shim and adjust anchors, supports, and accessories to set stone accurately in locations indicated, with uniform joints of widths indicated, and with edges and faces aligned according to established relationships and indicated tolerances.
E. Provide expansion, control, and pressure-relieving joints of widths and at locations indicated.
   1. Sealing expansion and other joints is specified in Section 079200 "Joint Sealants."
   2. Keep expansion joints free of mortar and other rigid materials.
F. Install concealed flashing at continuous shelf angles, lintels, ledges, and similar obstructions to downward flow of water, to divert water to building exterior. Extend flashing 6 inches (150 mm) at ends and turn up not less than 2 inches (50 mm) to form end dams.
G. Keep cavities open where unfilled space is indicated between back of stone units and backup wall; do not fill cavities with mortar or grout.
   1. Place weep holes in joints where moisture may accumulate, including at base of cavity walls and above shelf angles and flashing. Locate weep holes at intervals not exceeding 24 inches (600 mm).
   2. Place vents in cavity walls at tops of cavities, below shelf angles and flashing, and at intervals not exceeding 20 feet (6 m) vertically. Locate vents in joints at intervals not exceeding 60 inches (1500 mm) horizontally.

3.2 SETTING MECHANICALLY ANCHORED STONE CLADDING

A. Attach anchors securely to stone and to backup surfaces. Comply with recommendations in ASTM C 1242.

B. Provide compressible filler in ends of dowel holes and bottoms of kerfs to prevent end bearing of dowels and anchor tabs on stone. Fill remainder of anchor holes and kerfs with sealant indicated for filling kerfs.
C. Set stone supported on clips or continuous angles on resilient setting shims. Use material of thickness required to maintain uniform joint widths and to prevent point loading of stone on anchors. Hold shims back from face of stone a distance at least equal to width of joint.

3.3 SETTING STONE CLADDING WITH MORTAR

A. Set stone in full bed of mortar with head joints filled unless otherwise indicated.
   1. Provide compressible filler in ends of dowel holes and bottoms of kerfs to prevent end bearing of dowels and anchor tabs on stone. Fill remainder of anchor holes and kerfs with mortar.
B. Embed ends of sills in mortar; leave remainder of joint open until final pointing.
C. Rake out joints for pointing with mortar to depths of not less than 1/2 inch (12 mm). Rake joints to uniform depths with square bottoms and clean sides.
D. Point stone joints by placing pointing mortar in layers not more than 3/8 inch (10 mm). Compact each layer thoroughly and allow to become thumbprint hard before applying next layer.
E. Tool joints with a round jointer having a diameter 1/8 inch (3 mm) larger than width of joint, when pointing mortar is thumbprint hard.
F. Rake out mortar from sealant-pointed joints to depths required for sealant and sealant backing, but not less than 1 inch. Rake joints to uniform depths with square bottoms and clean sides.

3.4 JOINT-SEALANT INSTALLATION

A. Prepare joints and apply sealants of type and at locations indicated to comply with applicable requirements in Section 079200 "Joint Sealants."

3.5 INSTALLATION TOLERANCES

A. Variation from Plumb: For vertical lines and surfaces of walls, do not exceed 1/4 inch in 10 feet (6 mm in 3 m), 3/8 inch in 20 feet (10 mm in 6 m), or 1/2 inch in 40 feet (12 mm in 12 m) or more. For external corners, corners and jambs within 20 feet (6 m) of an entrance, expansion joints, and other conspicuous lines, do not exceed 1/8 inch in 10 feet (3 mm in 3 m), 1/4 inch in 20 feet (6 mm in 6 m), or 3/8 inch in 40 feet (10 mm in 12 m) or more.
B. Variation from Level: For lintels, sills, water tables, parapets, horizontal bands, horizontal grooves, and other conspicuous lines, do not exceed 1/8 inch in 10 feet (3 mm in 3 m), 1/4 inch in 20 feet (6 mm in 6 m), or 3/8 inch (10 mm) maximum.
C. Variation of Linear Building Line: For positions shown in plan and related portions of walls and partitions, do not exceed 1/4 inch in 20 feet (6 mm in 6 m) or 1/2 inch in 40 feet (12 mm in 12 m) or more.
D. Variation in Joint Width: Do not vary from average joint width more than plus or minus 1/8 inch (3 mm) or a quarter of nominal joint width, whichever is less. For joints within 60 inches (1500 mm) of each other, do not vary more than 1/8 inch (3 mm) or a quarter of nominal joint width, whichever is less from one to the other.
E. Variation in Plane between Adjacent Stone Units (Lipping): Do not exceed 1/16-inch (1.5-mm) difference between planes of adjacent units.

3.6 ADJUSTING AND CLEANING

A. In-Progress Cleaning: Clean stone cladding as work progresses. Remove mortar fins and smears before tooling joints. Remove excess sealant and smears as sealant is installed.
B. Final Cleaning: Clean stone cladding no fewer than six days after completion of pointing and sealing, using clean water and stiff-bristle fiber brushes. Do not use wire brushes, acid-type cleaning agents, cleaning agents containing caustic compounds or abrasives, or other materials or methods that could damage stone.

END OF SECTION 044200

SECTION 055213 - PIPE AND TUBE RAILINGS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Steel pipe railings.

1.2 ACTION SUBMITTALS

A. Product Data: For the following:
   1. Railing brackets.
   2. Grout, anchoring cement, and paint products.
B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.
C. Delegated-Design Submittal: For railings, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.3 INFORMATIONAL SUBMITTALS

A. Product Test Reports: For pipe and tube railings, for tests performed by a qualified testing agency, according to ASTM E 894 and ASTM E 935.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, registered in the State of Michigan, to design railings, including attachment to building construction.
B. Structural Performance: Railings, including attachment to building construction, shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:
   1. Handrails and Top Rails of Guards:
      a. Uniform load of 50 lbf/ ft. (0.73 kN/m) applied in any direction.
      b. Concentrated load of 200 lbf (0.89 kN) applied in any direction.
      c. Uniform and concentrated loads need not be assumed to act concurrently.
   2. Infill of Guards:
      a. Concentrated load of 50 lbf (0.22 kN) applied horizontally on an area of 1 sq. ft. (0.093 sq. m).
      b. Infill load and other loads need not be assumed to act concurrently.

2.2 METALS, GENERAL

A. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails unless otherwise indicated.
   1. Provide type of bracket with predrilled hole for exposed bolt anchorage and that provides 1-1/2-inch (38-mm) clearance from inside face of handrail to finished wall surface.

2.3 STEEL AND IRON

A. Pipe: ASTM A 53/A 53M, Type F or Type S, Grade A, Standard Weight (Schedule 40), unless another grade and weight are required by structural loads.
   1. Provide galvanized finish for exterior installations and where indicated.
B. Plates, Shapes, and Bars: ASTM A 36/A 36M.

2.4 FASTENERS

A. General: Provide the following:
   1. Ungalvanized-Steel Railings: Plated steel fasteners complying with ASTM B 633 or ASTM F 1941 (ASTM F 1941M), Class Fe/Zn 5 for zinc coating.
   2. Hot-Dip Galvanized Railings: Type 304 stainless-steel or hot-dip zinc-coated steel fasteners complying with ASTM A 153/A 153M or ASTM F 2329 for zinc coating.
B. Post-Installed Anchors: Torque-controlled expansion anchors or chemical anchors capable of sustaining, without failure, a load equal to 6 times the load imposed when installed in unit masonry and 4 times the load imposed when installed in concrete, as determined by testing according to ASTM E 488/E 488M, conducted by a qualified independent testing agency.
   1. Material for Interior Locations: Carbon-steel components zinc-plated to comply with ASTM B 633 or ASTM F 1941 (ASTM F 1941M), Class Fe/Zn 5, unless otherwise indicated.
   2. Material for Exterior Locations and Where Stainless Steel Is Indicated: Alloy [Group 1 (A1)] [Group 2 (A4)] stainless-steel bolts, ASTM F 593 (ASTM F 738M), and nuts, ASTM F 594 (ASTM F 836M).

2.5 MISCELLANEOUS MATERIALS

A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
B. Etching Cleaner for Galvanized Metal: Complying with MPI#25.
C. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it.
D. Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79 and compatible with topcoat.
E. Shop Primer for Galvanized Steel: Primer formulated for exterior use over zinc-coated metal and compatible with finish paint systems indicated.
F. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187/D 1187M.
G. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107/C 1107M. Provide grout specifically recommended by manufacturer for interior and exterior applications.

2.6 FABRICATION

A. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch (1 mm) unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
B. Form work true to line and level with accurate angles and surfaces.
C. Welded Connections: Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.
   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 flux immediately.
4. At exposed connections, finish exposed surfaces smooth and blended so no roughness shows after finishing and welded surface matches contours of adjoining surfaces.

D. Form changes in direction by inserting prefabricated elbow fittings.
E. Close exposed ends of railing members with prefabricated end fittings.
F. Provide wall returns at ends of wall-mounted handrails unless otherwise indicated.
G. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors to interconnect railing members to other work unless otherwise indicated.
1. At brackets and fittings fastened to plaster or gypsum board partitions, provide crush-resistant fillers or other means to transfer loads through wall finishes to structural supports and prevent bracket or fitting rotation and crushing of substrate.

2.7 STEEL AND IRON FINISHES

A. Galvanized Railings:
1. Hot-dip galvanize exterior steel railings, including hardware, after fabrication.
2. Comply with ASTM A 123/A 123M for hot-dip galvanized railings.
3. Comply with ASTM A 153/A 153M for hot-dip galvanized hardware.

B. Preparing Galvanized Railings for Shop Priming: After galvanizing, thoroughly clean railings of grease, dirt, oil, flux, and other foreign matter, and treat with etching cleaner.
C. Preparation for Shop Priming: Prepare uncoated ferrous-metal surfaces to comply with SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."
D. Primer Application: Apply shop primer to prepared surfaces of railings unless otherwise indicated. Comply with requirements in SSPC-PA 1, "Shop, Field, and Maintenance Painting of Steel," for shop painting. Primer need not be applied to surfaces to be embedded in concrete or masonry.
1. Do not apply primer to galvanized surfaces.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Set railings accurately in location, alignment, and elevation; measured from established lines and levels and free of rack.
1. Do not weld, cut, or abrade surfaces of railing components that are coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
2. Set posts plumb within a tolerance of 1/16 inch in 3 feet (2 mm in 1 m).
3. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet (6 mm in 3.5 m).

B. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.
1. Coat, with a heavy coat of bituminous paint, concealed surfaces of aluminum that are in contact with grout, concrete, masonry, wood, or dissimilar metals.

3.2 ANCHORING POSTS

A. Use metal sleeves preset and anchored into concrete for installing posts. After posts are inserted into sleeves, fill annular space between post and sleeve with nonshrink, nonmetallic grout or anchoring cement, mixed and placed to comply with anchoring material manufacturer's written instructions.
B. Anchor posts to metal surfaces with oval flanges, angle type, or floor type as required by conditions, connected to posts and to metal supporting members.

3.3 ATTACHING RAILINGS

A. Attach railings to wall with wall brackets, except where end flanges are used. Locate brackets as indicated or, if not indicated, at spacing required to support structural loads.
B. Secure wall brackets and railing end flanges to building construction as follows:
   1. For concrete and solid masonry anchorage, use drilled-in expansion shields and hanger or lag bolts.

3.4 ADJUSTING AND CLEANING

A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop painting to comply with SSPC-PA 1 requirements 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/A 780M.

END OF SECTION 055213

SECTION 064013 - EXTERIOR ARCHITECTURAL WOODWORK

1.1 SUMMARY

A. Section Includes:

1. Exterior standing and running trim.
2. Exterior frames and jambs.

1.2 QUALITY ASSURANCE

A. Manufacturer's Qualifications: AWI's Quality Certification Program licensed participant.

B. Mockups for typical exterior woodwork.

1.3 EXTERIOR STANDING AND RUNNING TRIM FOR TRANSPARENT FINISH

A. Architectural Woodwork Standards Grade: Premium.

B. Wood Species: All-heart redwood.

1.4 EXTERIOR STANDING AND RUNNING TRIM FOR OPAQUE FINISH

A. Architectural Woodwork Standards Grade: Premium.

B. Wood Species: All-heart redwood.

1.5 EXTERIOR FRAMES AND JAMBS FOR TRANSPARENT FINISH

A. Architectural Woodwork Standards Grade: Premium.

B. Wood Species: All-heart redwood.

1.6 EXTERIOR FRAMES AND JAMBS FOR OPAQUE FINISH

A. Architectural Woodwork Standards Grade: Premium.

B. Wood Species: All-heart redwood.

1.7 FINISHING

A. Transparent Finish:

1. Field primed.
2. Field finished.

B. Opaque Finish:

1. Field primed.
2. Field finished.

1.8 INSTALLATION

A. Lumber and trim for painted applications; primed, including both faces and edges.

END OF SECTION 064013

SECTION 075420 - THERMOPLASTIC MEMBRANE ROOFING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:
   1. Fully adhered thermoplastic single ply membrane roofing system.
   2. Roof Insulation.
   3. Expansion joints.

B. Related Section include the following:
   1. Division 7 Section “Roof Specialties” for metal roof edge gravel stops and counterflashing.

1.2 SUBMITTALS

A. Product Data: For each product indicated.

B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other Work.

C. Samples for Verification: Of the following products.
   1. 12 by 12 inch square of sheet roofing, of color specified, including T-shaped side and end lap seam.
   2. 12-inch length of metal termination bars.
   3. 12-inch length of battens.
   4. Fasteners of each type, length and finish.

D. Installer Certificates: Signed by the roofing system manufacturer certifying the Installer is approved, authorized or licensed by manufacturer to install specified roofing system.

E. Manufacturer Certificates: Signed by roof Manufacturer certifying that the roofing system complies with requirements specified in the “Performance Requirements” Article. Upon request, submit evidence of meeting requirements.

F. Inspection reports: Copy of roofing system manufacturer’s inspection report of completed roofing installation.

G. Maintenance data: For roofing system to include in the maintenance manuals specified in Division 1.

H. Sample Warranty

1.3 QUALITY ASSURANCE

A. Installer Qualifications: A qualified installer, approved by manufacturer to install manufacturer's products.

B. Source Limitations: Obtain components for membrane roofing system from or approved by roofing membrane manufacturer.

C. Manufacturer’s representative: Contractor to provide services of a certified technical representative of the roofing system manufacturer to inspect the roofing for conformance with manufacturer’s requirements and provide report on completed installation.

D. Fire-Test-Response Characteristics: Provide membrane roofing materials with the fire-test-response characteristics indicated as determined by testing identical products per

test method below by UL, FMG, or another testing and inspecting agency acceptable to authorities having jurisdiction.

1. Exterior Fire-Test Exposure: Class A; ASTM E 108, for application and roof slopes indicated.

E. FM Approvals' RoofNav Listing: Roof membrane, base flashings, and component materials shall comply with requirements in FM Approvals 4450 or FM Approvals 4470 as part of a roofing system, and shall be listed in FM Approvals' RoofNav for Class 1 or noncombustible construction, as applicable. Identify materials with FM Approvals Certification markings.

1. Fire/Windstorm Classification: Class 1A-60

F. Preinstallation Conference: Conduct conference at Project site.

1.4 DELIVERY, STORAGE AND HANDLING

A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, and directions for storing and mixing with other components.

B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid materials from direct sunlight.
1. Discard and legally dispose of liquid material that cannot be applied within its stored shelf life.

C. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

1.5 PROJECT CONDITIONS

A. Weather Limitations: Proceed with roofing work only when existing and forecasted weather conditions permit roofing to be installed according to manufacturers' written instructions and warranty requirements.

1.6 WARRANTY

A. Special Warranty: Manufacturer's standard form, without monetary limitation, in which manufacturer agrees to repair or replace components of membrane roofing system that fail in materials or workmanship within fifteen (15) years from date of Substantial Completion. Failure includes roof leaks.

B. Alternate Special Warranty: Manufacturer's standard form, without monetary limitation, in which manufacturer agrees to repair or replace components of membrane roofing system that fail in materials or workmanship within twenty (20) years from date of Substantial Completion. Failure includes roof leaks.

B. Special Project Warranty: Submit roofing Installer's warranty, on warranty form at end of this Section, signed by Installer, covering Work of this Section, including all components of roofing system such as roofing pavers, and walkway products, for the following warranty period.
1. Warranty Period: Two (2) years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design Manufacturer: Subject to compliance with requirements, provide new thermoplastic roofing system by Firestone Building Products, or a comparable product by one of the following:
   1. Thermoplastic Roofing Membrane:
      a. Duro-Last Roofing, Inc.
      b. Johns Manville
      c. Firestone Building Products
      d. GAF
      e. Versico Roofing Systems
   2. Polyisocyanurate Board Insulation:
      a. Insulation manufacturer as recommended by the thermoplastic membrane manufacturer in order to provide a total system warranty.

2.2 COMPOUNDED THERMOPLASTIC SHEET

A. Compounded Thermoplastic Sheet: Uniform, polyester-reinforced flexible sheet compounded resins, plasticizers, stabilizers, fillers, and pigments, of the following material, thickness, backing, exposed face color, and physical properties:
   1. Sheet Material: Reinforced thermoplastic membrane.
   2. Sheet Thickness:
      a. Base Bid: **45** mills, nominal, minimum.
      b. Alternate: 60 mils, nominal, minimum
   3. Exposed Face Color: BLACK for Canopies..
   4. Manufacturer is to provide written documentation that their membrane meets or exceeds all industry recommended testing and approvals.
      a. Indicate the testing/approval guidelines.

2.3 AUXILIARY MATERIALS

A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with membrane roofing.
   1. Furnish liquid-type auxiliary materials that meet VOC limits of authorities having jurisdiction.

B. Sheet Flashing: Manufacturer's standard sheet flashing of same material, type, reinforcement, thickness, and color as sheet membrane material.

C. Bonding Adhesive: Manufacturer's standard bonding adhesive for membrane and solvent-based bondign adhesive for base flashings.

D. Metal Termination Bars: Manufacturer's standard predrilled stainless-steel or aluminum bars, approximately 1 by 1/8 inch (25 by 3 mm) thick; with anchors.

E. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FMG 4470, designed for fastening membrane to substrate, and acceptable to membrane roofing system manufacturer.

F. Expansion Joints: Membrane manufacturer’s approved expansion joints for the width and conditions shown on the Drawings.

G. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint cov3ers,

termination reglets, cover strips, slip sheet, and other accessories recommended by roofing system manufacturer for intended use.

H. Breather Vent: 2-way breather vent per manufacturer's recommendations to provide total system warranty.

I. Curb Extensions: Where required to obtain 8" clearance from top of rooftop equipment curb to new roof level, provide new fabricated metal curb extension, minimum 16 gauge galvanized steel with 2x2 pressure treated nailer at top.

J. Provide wood nailers at all perimeter edges to accommodate additional roof insulation and metal edge system.

2.4 ROOF INSULATION

A. General: Provide preformed roof insulation boards that comply with requirements, selected from manufacturer's standard sizes and of thickness indicated.
1. Install polyisocyanurate insulation adhered as indicated and per manufacturer's recommendations over existing roofing.

B. Polyisocyanurate Board Insulation: Rigid, cellular polyisocyanurate thermal insulation with core formed by using HCFCs as blowing agents to comply with ASTM C 1289, Type II, felt or glass-fiber mat facer on both major surfaces.
1. The roof insulation specified shall be two layers of 1-1/2 inches thick, for a total of 3-inches, unless noted otherwise.

C. Provide preformed tapered insulation saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to provide positive drainage.
1. All of the tapered insulation required to construct the saddles, crickets and tapered edge strips shall be added on top of the base 3-inch new roof insulation. Tapered insulation shall have a minimum taper of 1/4-inch per foot.

2.5 INSULATION ACCESSORIES

A. General: Furnish roof insulation accessories recommended by insulation manufacturer for intended use and compatible with sheet roof material.

B. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FMG 4470, designed for fastening roof insulation to substrate, and acceptable to roofing system manufacturer.

C. Insulation Primer: Provide Insulation primer if recommended by insulation adhesive manufacturer.

D. Insulation Adhesive: Insulation manufacturer's recommended adhesive formulated to attach roof insulation to existing built-up roofing or other substrate.

PART 3 - EXECUTION

3.1 GENERAL

A. Conduct removal of existing roofing and coordinate installing new membrane roofing system components so insulation is not exposed to precipitation or left exposed at the end of the workday.

B. Provide temporary protection as required to prevent moisture from entering the building in roof work area.

C. Properly dispose of demolition materials or recycle off site.

D. Existing roof insulation and blocking / nailers are intended to be re-used if in good condition and approved by new roofing manufacturer for a complete warrantable system.

E. Comply with membrane roofing system manufacturer's written instructions for installing roof system.

3.2 EXAMINATION

A. Examine substrates, areas, and conditions under which roofing will be applied, with Installer present, for compliance with requirements.

B. Verify that roof openings and penetrations are in place and set and braced and that roof drains are properly clamped into position.

C. Verify that wood curbs and nailers are in place and secured and match thicknesses of insulation required.

D. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.3 PREPARATION

A. Power Wet Vacuum entire built-up roofing system to remove gravel ballast dirt and debris.

B. Remove old flashings in the area of work.

C. Displace or temporarily support existing gravity held equipment or construction such as wood stairs, non-curbed rooftop equipment and associated supports, etc. as required to install new roofing.

D. Temporarily remove existing exhaust fans or other equipment on short curbs that would not allow 8” of curb height above the new roof level after new insulation and roofing are added. Prep for new curb extensions.

E. Inspect existing insulation, remaining built-up roof and blocking for suitability for re-use. Notify Architect if wet or un-suitable insulation, or deteriorated or unsuitable blocking is found. Provide photo’s and a marked-up plan showing areas affected, and indicating quantities for replacement. Un-suitable materials will be replaced using unit prices.

F. Clean substrate of dust, debris, and other substances detrimental to roofing installation according to roofing system manufacturer’s written instructions. Remove sharp projections.

G. Prevent materials from migrating onto surfaces of other construction.

H. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of the roofing system at the end of the workday or

when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.

3.4 INSULATION INSTALLATION

A. Comply with membrane roofing system manufacturer's written instructions for installing roof insulation.

B. Install tapered insulation under area of roofing to conform to slopes indicated.

C. Install two 1-1/2-inch thick layers of insulation under area of roofing unless noted otherwise. Install 2 or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches (150 mm) in each direction.

D. Install insulation so as to maintain existing roof slope to drains.

E. Fully Adhered Insulation: Install each layer of insulation and secure to new or existing layer below using insulation manufacturer's recommended adhesive specifically designed for adhering specified board-type roof insulation to substrate.
1. Fasten insulation as required to resist uplift pressure at corners, perimeter, and field of roof.

F. Trim surface of insulation where necessary at roof drains so completed surface is flush and does not restrict flow of water.

G. Install insulation with long joints of insulation in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 1/4 inch with insulation.
1. Cut and fit insulation within 1/4 inch of nailers, projections and penetrations. Fill gaps exceeding 1/4 inch with insulation.

3.5 FULLY ADHERED ROOFING MEMBRANE INSTALLATION

A. Adhere roofing membrane over area to receive roofing according to roofing system manufacturer's written instructions. Unroll roofing membrane and allow to relax before installing.
1. Install sheet according to ASTM D 5082.

B. Start installation of roofing membrane in presence of roofing system manufacturer's technical personnel.

C. Accurately align roofing membranes and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.

D. Bonding Adhesive: Apply to substrate and underside of roof membrane at rate required by manufacturer, and allow to partially dry before installing roof membrane. Do not apply to splice area of roof membrane.

E. In addition to adhering, mechanically fasten roof membrane securely at terminations, penetrations, and perimeter of roofing.

F. Apply roofing membrane with side laps shingled with slope of roof deck where possible.

G. Seams: Clean seam areas, overlap roofing membrane, and hot-air weld side and end laps of roofing membrane according to manufacturer's written instructions to ensure a watertight seam installation.
1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of roofing membrane.
2. Repair tears, voids, and lapped seams in roofing membrane that does not meet requirements.

H. Replace defective roof drains or drain baskets.

I. Spread sealant or mastic bed over deck drain flange at roof drains and securely seal roofing membrane in place with clamping ring.

J. Install roofing membrane and auxiliary materials where required to tie into existing roofing

3.5 FLASHING INSTALLATION

A Install sheet flashings, preformed flashing, expansion joints and accessories and adhere to substrates according to membrane roofing system manufacturer's written instructions.

B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate and allow to partially dry. Do not apply bonding adhesive to seam area of flashing.

C. Flash penetrations and field-formed inside and outside corners with sheet flashing.

D. Clean seam areas and overlap and firmly roll sheet flashings into the adhesive. Weld side and end laps to ensure a watertight seam installation.

E. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.

F. Test lap edges with probe to verify seam weld continuity. Apply lap sealer and seal exposed edges of sheet flashing terminations.

3.6 SEAM INSTALLATION

A. Clean seam areas, overlap roofing membrane, and hot-air weld side and end laps of roofing membrane according to manufacturer's written instructions to ensure a watertight seam installation.

1. Weld Method: Hot air, as standard with roofing system manufacturer.

B. Repair tears, voids, and lapped seams in roofing membrane that does not meet requirements.

C. Test lap edges with probe to verify seam weld continuity. Apply seam caulk to seal cut edges of sheet membrane.

3.7 WALKWAY INSTALLATION

A. Flexible Walkways: Install walkway products in locations indicated. Adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

3.8 FIELD QUALITY CONTROL

A. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion and submit report to Architect.

B. Repair or remove and replace components of membrane roofing system where test results or inspections indicate that they do not comply with specified requirements.

PART 4 – INSTALLER'S WARRANTY

4.1 ROOFING INSTALLER'S WARRANTY

A. WHEREAS_____of_____, herein called the "Roofing Installer," has performed roofing and associated work ("work") on the following project:

1. Owner:_____.
2. Address: _____.
3. Building Name/Type: _____.
4. Address: _____.
5. Area of Work: _____.
6. Acceptance Date: _____.
7. Warranty Period: _____.
8. Expiration Date: _____.

B. AND WHEREAS Roofing Installer has contracted (either directly with Owner or indirectly as a subcontractor) to warrant said work against leaks and faulty or defective materials and workmanship for designated Warranty Period,

C. NOW THEREFORE Roofing Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period he will, at his own cost and expense, make or cause to be made such repairs to or replacements of said work as are necessary to correct faulty and defective work and as are necessary to maintain said work in a watertight condition.

D. This Warranty is made subject to the following terms and conditions:
1. Specifically excluded from this Warranty are damages to work and other parts of the building, and to building contents, caused by:
   a. lightning;
   b. peak gust wind speed exceeding_____mph;
   c. fire;
   d. failure of roofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition;
   e. faulty construction of parapet walls, copings, chimneys, skylights, vents, equipment supports, and other edge conditions and penetrations of the work;
   f. vapor condensation on bottom of roofing; and
   g. activity on roofing by others, including construction contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner.
2. When work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Roofing Installer and until cost and expense thereof have been paid by Owner or by another responsible party so designated.
3. Roofing Installer is responsible for damage to work covered by this Warranty but is not liable for consequential damages to building or building contents resulting from leaks or faults or defects of work.
4. During Warranty Period, if Owner allows alteration of work by anyone other than Roofing Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other work, and positioning of anything on roof, this Warranty shall become null and void on date of said alterations, but only to the

extent said alterations affect work covered by this Warranty. If Owner engages Roofing Installer to perform said alterations, Warranty shall not become null and void unless Roofing Installer, before starting said work, shall have notified Owner in writing, showing reasonable cause for claim, that said alterations would likely damage or deteriorate work, thereby reasonably justifying a limitation or termination of this Warranty.

5. During Warranty Period, if original use of roof is changed and it becomes used for, but was not originally specified for, a promenade, work deck, spray-cooled surface, flooded basin, or other use or service more severe than originally specified, this Warranty shall become null and void on date of said change, but only to the extent said change affects work covered by this Warranty.

6. Owner shall promptly notify Roofing Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Roofing Installer to inspect work and to examine evidence of such leaks, defects, or deterioration.

7. This Warranty is recognized to be the only warranty of Roofing Installer on said work and shall not operate to restrict or cut off Owner from other remedies and resources lawfully available to Owner in cases of roofing failure. Specifically, this Warranty shall not operate to relieve Roofing Installer of responsibility for performance of original work according to requirements of the Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.

E. IN WITNESS THEREOF, this instrument has been duly executed this_____day of_____, 20____.

1. Authorized Signature: _____.

2. Name: _____.

3. Title: _____.

End of Section 075420

SECTION 075600.13 - FLUID-APPLIED MEMBRANE ROOFING, INSULATED

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes fluid-applied roof membrane system on insulated wood deck, consisting of the following:

1. Base sheet.
2. Roof insulation and cover board.
3. Base-ply sheet.
4. Application of reinforced fluid-applied polyurethane roof membrane and membrane flashings.

1.2 ROOFING CONFERENCES

A. Roofing Preinstallation Conference: Conduct conference at Project site. Review methods and procedures related to roofing system.

1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative if applicable, roofing materials manufacturer's representative, roofing Installer including project manager and foreman, and installers whose work interfaces with or affects roofing including installers of roof accessories and roof-mounted equipment requiring removal and replacement as part of the Work.
2. Review methods and procedures related to preparation, including membrane roofing system manufacturer's written instructions.
3. Review drawings and specifications.
4. Review temporary protection requirements for existing roofing system that is to remain, during and after installation.
5. Review roof drainage during each stage of roofing and review roof drain plugging and plug removal procedures.
6. Review and finalize construction schedule, and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
7. Review base flashings, special roofing details, drainage, penetrations, equipment curbs, and condition of other construction that will affect re-coating.
8. Review HVAC shutdown and sealing of air intakes.

9. Review shutdown of fire-suppression, -protection, and -alarm and -detection systems.

10. Review procedures for asbestos removal or unexpected discovery of asbestos-containing materials.

11. Review governing regulations and requirements for insurance and certificates if applicable.

12. Review existing conditions that may require notification of Owner before proceeding.

1.3 DEFINITIONS

A. Roofing Terminology: Refer to ASTM D1079 "Standard Terminology Relating to Roofing and Waterproofing" and glossary in applicable edition of NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" for definition of terms related to roofing work in this Section.

1.4 ACTION SUBMITTALS

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

B. Sustainable Design Submittals:

1. Product Test Reports for Solar Reflectance: For roof coating, indicating that coated roof will comply with solar reflectance index requirement.

C. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work. Provide roof plan showing orientation and types of roof deck and orientation of membrane roofing and fastening spacings and patterns for mechanically fastened components.

1. Base flashings and terminations.

a. Indicate details meet requirements of NRCA and FMG required by this Section.

2. Tapered insulation, including slopes.

3. Crickets, saddles, and tapered edge strips, including slopes.

4. Insulation fastening patterns for corner, perimeter, and field-of-roof locations.

1.5 INFORMATIONAL SUBMITTALS

A. Contractor's Product Certificate: Submit notarized certificate, indicating products intended for Work of this Section, including product names and numbers and manufacturers' names, with statement indicating that products to be provided meet the requirements of the Contract Documents.

B. Qualification Data: For Installer, Manufacturer, and Roofing Inspector.

1. Letter written for this Project indicating manufacturer approval of Installer to apply specified products and provide specified warranty.

2. Certificate indicating Installer is qualified in Project jurisdiction to perform asbestos abatement.

C. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for components of roofing system.

D. Warranties: Unexecuted sample copies of special warranties.

E. Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including exterior and interior finish surfaces, which might be misconstrued as having been damaged by re-coating operations. Submit before Work begins.

F. Inspection Reports: Reports of Roofing Inspector. Include weather conditions, description of work performed, tests performed, defective work observed, and corrective actions required and carried out.

1. Submit report within 48 hours after inspection.

1.6 CLOSEOUT SUBMITTALS

A. Maintenance Data: To include in maintenance manuals.

B. Warranties: Executed copies of approved warranty forms.

1.7 QUALITY ASSURANCE

A. Installer Qualifications: An employer of workers trained and certified by manufacturer, including a full-time on-site supervisor with a minimum of five years' experience installing products comparable to those specified, able to communicate verbally with Contractor, Architect, and employees, and the following:

1. Qualified by the manufacturer to install manufacturer's product and furnish warranty of type specified.

B. Manufacturer Qualifications: Approved manufacturer listed in this Section, with minimum five years' experience in manufacture of specified products in successful use in similar applications.

1. Approval of Other Manufacturers and Comparable Products: Submit the following in accordance with project substitution requirements, within time allowed for substitution review:

a. Product data, including certified independent test data indicating compliance with requirements.

b. Samples of each component.

c. Sample submittal from similar project.

d. Project references: Minimum of five installations of specified products not less than five years old, with Owner and Architect contact information.

e. Sample warranty.

C. Roofing Inspector Qualifications: A technical representative of manufacturer not engaged in the sale of products and experienced in the installation and maintenance of the specified roofing system, qualified to perform roofing observation and inspection specified in Field Quality Control Article, to determine Installer's compliance with the requirements of this Project, and approved by the manufacturer to issue warranty certification. The Roofing Inspector shall be one of the following:

1. An authorized full-time technical employee of the manufacturer.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.

B. Handle and store roofing materials, and place equipment in a manner to avoid significant or permanent damage to deck or structural supporting members.

C. Protect materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting.

1.9 PROJECT / FIELD CONDITIONS

A. Protect building, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from roofing operations.

B. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.

C. Weather Limitations: Proceed with roofing work only when existing and forecasted weather conditions permit Work to proceed without water entering into existing roofing system or building.

1. Store all materials prior to application at temperatures between 60 and 90 deg. F (16 and 32 deg C).

2. Apply coatings within range of ambient and substrate temperatures recommended by manufacturer. Do not apply materials when air temperature is below 50 or above 110 deg. F (10 or above 43 deg C).

3. Do not apply roofing in snow, rain, fog, or mist.

D. Daily Protection: Coordinate installation of roofing so insulation and other components of roofing system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.

E. Owner will occupy portions of building immediately below roofing area. Conduct roofing so Owner's operations will not be disrupted. Provide Owner with not less than 72 hours' notice of activities that may affect Owner's operations.

1.10 WARRANTY

A. Manufacturer's Warranty: In which manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within warranty period, as follows.

1. Form of Warranty: Tremco "Plain and Simple" warranty form.

2. Scope of Warranty: Work of this Section.

3. Warranty Period: 40 years from date of completion.

4. Inspections by Manufacturer: To occur every five years following completion.

B. Manufacturer Inspection Services: By manufacturer's technical representative, to report maintenance responsibilities to Owner necessary for preservation of Owner's warranty rights. The cost of manufacturer's inspections is included in the Contract Sum.

1. Inspections to occur in following years: 2, 5, 10, 15, 20, and 25 following completion.

C. Installer Warranty: Installer's warranty signed by Installer, as follows.

1. Form of Warranty: Form acceptable to Roofing Manufacturer and Owner.

2. Scope of Warranty: Work of this Section.

3. Warranty Period: 2 years from date of completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design: The roof system specified in this Section is based upon products of Tremco CPG Inc, Beachwood, OH, (800) 562-2728, www.tremcoroofing.com that are named in other Part 2 articles. Provide specified products.

1. Manufacturers of comparable products: Approved by Owner, Architect, or Owner's Consultant prior to bid.

B. Source Limitations: Obtain components for roofing system from same manufacturer as membrane roofing or manufacturer approved by membrane roofing manufacturer.

2.2 PERFORMANCE REQUIREMENTS

A. General: Provide roofing membrane and base flashings that remain watertight; do not permit the passage of water; and resist specified uplift pressures, thermally induced movement, and exposure to weather without failure.

1. Accelerated Weathering: Roofing system shall withstand 2000 hours of exposure when tested according to ASTM G152, ASTM G154, or ASTM G155.

2. Impact Resistance: Roof membrane shall resist impact damage when tested according to ASTM D3746/D3746M, ASTM D4272/D4272M, or the "Resistance to Foot Traffic Test" in FM Approvals 4470.

B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by roofing manufacturer based on testing and field experience.

C. Roofing System Design: Provide roofing system that is identical to systems that have been successfully tested by a qualified testing and inspecting agency in accordance with ANSI/FM 4474, UL 580, or UL 1897, and to resist uplift pressures.

D. SPRI Wind Design Standard: Manufacture and install copings and roof edge flashings tested according to ANSI/SPRI ES-1.

2.3 MATERIALS

A. General: Roofing materials recommended by roofing system manufacturer for intended use and compatible with components of existing membrane roofing system.

B. Temporary Roofing Materials: Selection of materials and design of temporary roofing is responsibility of Contractor.

C. General: Provide adhesive and sealant materials recommended by roofing manufacturer for intended use and compatible with built-up roofing.

1. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.

2.4 SHEET MATERIALS

A. Base Sheet:

1. Asphalt and glass-fiber roofing base and ply sheet for built up roofing systems, non-perforated asphalt-impregnated and coated, ASTM D4601 Type II .

a. Basis of design product: Tremco, BURmastic Glass Ply-28 lb.

b. Breaking Strength, minimum, ASTM D146: Machine direction, 90 lbf/in (15 kN/m); Cross machine direction, 70 lbf/in (12 kN/m).

c. Pliability, 1/2 inch (12.7 mm) radius bend, ASTM D146: No failures.

d. Weight, ASTM D228: 28 lb/100 sq. ft. (1.37 kg/m2).

B. Base-Ply Sheet:

1. SBS-modified asphalt coated composite polyester / fiberglass/fiberglass mat reinforced high tensile strength base sheet, ASTM D4601 Type II.

a. Basis of design product: Tremco, BURmastic Composite Ply HT.

b. Tensile Strength at 77 deg. F (25 deg. C), minimum, ASTM D5147: Machine direction, 165 lbf/in (725 N); Cross machine direction, 150 lbf/in (660 N).

c. Tear Strength at 77 deg. F (25 deg. C), minimum, ASTM D5147: Machine direction, 260 lbf (1150 N); Cross machine direction, 230 lbf (1120 N).

d. Thickness, minimum, ASTM D5147: 0.060 inch (1.5 mm).

C. Flashing Base-Ply Sheet: Same product as base-ply sheet.

2.5 FLUID-APPLIED ROOFING MEMBRANE

A. Polyurethane Elastomeric Fluid-Applied System: Two-coat reinforced fluid-applied roofing membrane formulated for application over prepared existing roofing substrate.

1. Base Coat:

a. Polyurethane Roof Coating System Base Coat: Single-part moisture-curing, for use with a compatible top coat.

1) Basis of design product: Tremco, AlphaGuard MTS Base Coat.

2) Combustion Characteristics, UL790: Maintains combustion characteristics of existing roof system.

3) Volatile Organic Compounds (VOC), maximum, ASTM D3960: 42 g/L.

4) Accelerated Weathering, 5000 hours, ASTM G154: Pass.

5) Hardness, Shore A, minimum, ASTM D2240: 85.

6) Solids, by volume, ASTM D2697, minimum: 87 percent.

7) Minimum Thickness, Base Coat on Smooth Surface: 48 mils (1.22 mm) wet.

2. Top Coat:

a. Polyurethane roof coating system top coat, low odor low VOC single-part, for application over compatible base coat.

1) Basis of design product: Tremco, AlphaGuard MTS Top Coat.

2) Combustion Characteristics, UL790: Maintains combustion characteristics of existing roof system.

3) Volatile Organic Compounds (VOC), maximum, ASTM D3960: 44 g/L.

4) Solar Reflectance Index (SRI), ASTM E1980: For white, not less than 108.

5) Accelerated Weathering, 5000 hours, ASTM G154: Pass.

6) Hardness, Shore A, minimum, ASTM D2240: 85.

7) Solids, by volume, ASTM D2697: 87.

8) Minimum Thickness: 48 mils (1.22 mm) wet over cured base coat.

9) Color: Custom match.

3. Reinforcing Fabric:

a. Polyester Reinforcing and Protection Fabric: 100 percent stitch-bonded mildew-resistant polyester fabric intended for reinforcement of compatible fluid-applied membranes and flashings and as a protection layer under pavers or stone aggregates.

1) Basis of design product: Tremco, Permafab.

2) Tensile Strength, Minimum, ASTM D1682: 50 lbf (23 kg) avg..

3) Elongation, Minimum, ASTM D1682: 60 percent.

4) Tear Strength, Minimum, ASTM D1117: 16 lbf (7.3 kg) avg..

5) Weight: 3 oz./sq. yd (102 g/sq. m).

4. Primers:

a. Primer for Intercoat and Substrate Adhesion: Single-part, quick-drying primer to promote adhesion of urethane products to previous urethane coats and to other approved surfaces.

1) Basis of design product: Tremco, Geogard Primer.

2) Volatile Organic Compounds (VOC), maximum, ASTM D3960: 100 g/L.

3) Coverage Rate, 400 sq. ft/ gal. (10 m2/ L): 4 mils (0.10 mm) wet.

2.6 ADHESIVE MATERIALS

A. Base-Ply Sheet Adhesive:

1. Cold-applied interply roofing adhesive, one-part moisture curing, formulated for compatibility and use with specified roofing membranes and flashings.

a. Basis of design product: Tremco, BURmastic Adhesive MC.

b. Volatile Organic Compounds (VOC), maximum, ASTM D6511: 250 g/L.

c. Nonvolatile Content, minimum, ASTM D6511: 72 percent.

B. Flashing Base-Ply Sheet Adhesive:

1. Flashing Adhesive, Solvent-free: Single component, multipurpose elastomeric flashing adhesive, specially formulated for use with specified roofing membranes and flashings, moisture curing, low odor.

a. Basis of design product: Tremco, Burmastic Flashing Adhesive MC.

b. Viscosity at 77 deg. F (25 deg. C), ASTM D2916: 260,000 cP (260 Pa*s).

c. Density at 77 deg. F (25 deg. C), ASTM D1475: 8.2 lb/gal (982 kg/m3).

d. Lap Shear Adhesion at 77 deg. F (25 deg. C), minimum, ASTM D146: 77 lbf (104.4 Nm).

e. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 222 g/L.

2.7 AUXILIARY ROOFING MEMBRANE MATERIALS

A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with existing roofing system and fluid-applied roofing system.

B. Joint Sealant: Elastomeric joint sealant compatible with applied coating, with movement capability appropriate for application.

1. Joint Sealant, Polyurethane: ASTM C920, Type S, Grade NS, Class 50 single-component moisture curing sealant, formulated for compatibility and use in dynamic and static joints; paintable.

a. Basis of design product: Tremco, TremSEAL Pro.

b. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 40 g/L.

c. Hardness, Shore A, ASTM C661: 40.

d. Adhesion to Concrete, ASTM C794: 35 pli.

e. Tensile Strength, ASTM D412: 350 psi (2410 kPa).

f. Color: Closest match to substrate.

C. Stripping Adhesive / Sealer:

1. Seam Sealer: Aromatic polyurethane sealer, single-component, high solids, moisture curing, formulated for compatibility and use with a variety of roofing and flashing substrates.

a. Basis of design product: Tremco, GEOGARD Seam Sealer.

b. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 189 g/L.

c. Tensile Strength, ASTM D412: 270 psi (1860 kPa).

d. Tear Strength, ASTM D412: 35 pli (6.13 kNm).

e. Elongation, ASTM D412: 220 percent.

f. Color: Gray.

D. Miscellaneous Accessories: Provide miscellaneous accessories recommended by roofing system manufacturer.

2.8 ROOF INSULATION

A. General: Preformed roof insulation boards manufactured or approved by roofing manufacturer, selected from manufacturer's standard sizes suitable for application, of thicknesses indicated.

B. Roof Insulation:

1. Board Insulation, Polyisocyanurate: CFC- and HCFC- free, with recycled content glass-fiber mat facer on both major surfaces, ASTM C1289 Type II Class 1.

a. Basis of design product: Tremco, Trisotech Insulation.

b. Compressive Strength, ASTM D1621: Grade 2: 20 psi (138 kPa).

c. Conditioned Thermal Resistance at 75 deg. F (24 deg. C): 14.4 at 2.5 inches (50.8 mm) thick.

2.9 INSULATION ACCESSORIES

A. General: Roof insulation accessories recommended by insulation manufacturer for intended use and compatible with built-up roofing.

B. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FM Global 4470, designed for fastening roof insulation to substrate and acceptable to roofing manufacturer.

C. Insulation Cant Strips: ASTM C208, Type II, Grade 1, cellulosic-fiber insulation board.

D. Wood Cant Strips: Comply with requirements in Division 06 rough carpentry section.

E. Tapered Edge Strips: ASTM C208, Type II, Grade 1, cellulosic-fiber insulation board.

F. Cover Board:

1. Gypsum panel, glass-mat-faced, primed, ASTM C1177/C1177M.

a. Basis of design product: Tremco/GP Gypsum DensDeck Prime.

b. Thickness: 1/4 inch (6 mm).

2. Gypsum panel, cellulosic fiber reinforced, water-resistant, ASTM C1278/C1278M.

a. Basis of design product: Tremco/USG Securock.

b. Thickness: 1/4 inch (6mm).

G. Substrate Joint Tape: 6- or 8-inch- (150- or 200-mm-) wide, coated, glass fiber.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:

1. Verify that roof openings and penetrations are in place and curbs are set and braced and that roof drain bodies are securely clamped in place.

2. Verify that, blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation. wood cants

B. Proceed with installation once unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Remove existing roofing and protect existing building in accordance with requirements of Division 07 Section "Preparation for Re-Roofing."

B. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing manufacturer's written instructions. Remove sharp projections.

C. Protect existing roofing system that is indicated to remain, and adjacent portions of building and building equipment.

1. Comply with warranty requirements of existing roof membrane manufacturer.

2. Mask surfaces to be protected. Seal joints subject to infiltration by coating materials.

3. Limit traffic and material storage to areas of existing roofing membrane that have been protected.

4. Maintain temporary protection and leave in place until replacement roofing has been completed.

D. Shut down air intake equipment in the vicinity of the Work in coordination with the Owner. Cover air intake louvers before proceeding with re-coating work that could affect indoor air quality or activate smoke detectors in the ductwork.

1. Verify that rooftop utilities and service piping affected by the Work have been shut off before commencing Work.

E. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday. Prevent debris from entering or blocking roof drains and conductors. Use roof-drain plugs specifically designed for this purpose. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast.

1. Do not permit water to enter into or under existing membrane roofing system components that are to remain.

3.3 MEMBRANE ROOFING INSTALLATION, GENERAL

A. Install roofing membrane according to roofing manufacturer's written instructions.

1. Commence installation of roofing in presence of manufacturer's technical personnel.

B. Coordinate installation of roofing so insulation and other components of roofing not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.

1. Provide tie-offs at end of each day's work to cover exposed roofing sheets and insulation with a course of coated felt set in roofing cement with joints and edges sealed.

2. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing.

3. Remove and discard temporary seals before beginning work on adjoining roofing.

C. Substrate-Joint Penetrations: Prevent fluid-applied materials and adhesives from penetrating substrate joints, entering building, or damaging built-up roofing components or adjacent building construction.

3.4 BASE SHEET INSTALLATION

A. Install lapped base-sheet course, extending sheet over and terminating beyond cants. Attach base sheet as follows:

1. Mechanically fasten to substrate.

3.5 INSULATION INSTALLATION

A. Comply with roofing manufacturer's written instructions for installing roof insulation.

B. Coordinate installing membrane roofing system components, so insulation is not exposed to precipitation or left exposed at the end of the workday.

C. Install insulation with long joints of insulation in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 1/4 inch (6 mm) with insulation.

1. Cut and fit insulation within 1/4 inch (6 mm) of nailers, projections, and penetrations.

D. Install insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 2.7 inches (70 mm) or greater, install two or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches (150 mm) in each direction.

1. Flat Insulation System on Sloped Roof Deck: Install insulation at minimum thickness as follows:

a. Minimum total thickness of Continuous Insulation: 1 inches.

E. Trim surface of insulation where necessary at roof drains so completed surface is flush and does not restrict flow of water.

F. Install tapered edge strips at perimeter edges of roof that do not terminate at vertical surfaces.

G. Mechanically Fastened Insulation: Install each layer of insulation and secure to deck using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to deck type.

1. Fasten insulation to resist uplift pressure at corners, perimeter, and field of roof.

H. Install cover boards over insulation with long joints in continuous straight lines with end joints staggered between rows. Offset joints of insulation below a minimum of 6 inches (150 mm) in each direction. Loosely butt cover boards together.

1. Fasten cover boards to resist uplift pressure at corners, perimeter, and field of roof.

2. Set cover board in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining cover in place.

3.6 BASE-PLY SHEET INSTALLATION

A. Install 2-ply base sheet starting at low point of roofing. Align base sheet without stretching. Shingle side laps of base a minimum of 4 inches (100 mm). Shingle in direction to shed water. Extend base sheets over edges and terminate above cants.

1. Embed base sheet in cold-applied membrane adhesive applied at rate required by roofing manufacturer.

B. Extend base flashing up walls or parapets a minimum of 8 inches (200 mm) above roofing and 6 inches (150 mm) onto field of roofing.

C. Mechanically fasten top of base flashing securely at terminations and perimeter of roofing.

1. Seal top termination of base flashing with.

D. Install stripping according to roofing manufacturer's written instructions where metal flanges and edgings are set on roofing.

1. Flashing Sheet Stripping: Install flashing sheet stripping in specified cold adhesive and extend onto roofing membrane.

3.7 FLUID-APPLIED FLASHING APPLICATION

A. Fluid-Applied Flashing and Detail Base Coat Application: Complete base coat and fabric reinforcement at parapets, curbs, penetrations, and drains prior to application of field of fluid-applied membrane. Apply base coat in accordance with manufacturer's written instructions.

1. Extend coating minimum of 8 inches (200 mm) up vertical surfaces and 4 inches onto horizontal surfaces.

2. Back roll to achieve minimum coating thickness indicated on Part 2 product listing, unless greater thickness is recommended by manufacturer; verify thickness of base coat as work progresses.

3. Reinforcing Fabric: Embed fabric reinforcement into wet base coat. Lap adjacent flashing pieces of fabric minimum 3 inches (75 mm) along edges and 6 inches (150 mm) at end laps.

a. Roll surface of fabric reinforcing to completely embed and saturate fabric. Leave finished base coat with fabric free of pin holes, voids, or openings.

4. Roll surface of fabric reinforcing to completely embed and saturate fabric. Leave finished base coat with fabric free of pin holes, voids, or openings.

5. Allow base coat to cure prior to application of top coat.

3.8 FLUID-APPLIED MEMBRANE APPLICATION

A. Base Coat: Apply base coat to field of membrane in accordance with manufacturer's written instructions.

1. Apply base coat on prepared and primed surfaces and spread coating evenly.

2. Back roll to achieve minimum coating thickness indicated on Part 2 product listing, unless greater thickness is recommended by manufacturer; verify thickness of base coat as work progresses.

3. Reinforcing Fabric: Embed fabric reinforcement into wet base coat. Lap adjacent flashing pieces of fabric minimum 3 inches (75 mm) along edges and 6 inches (150 mm) at end laps.

a. Roll surface of fabric reinforcing to completely embed and saturate fabric. Leave finished base coat with fabric free of pin holes, voids, or openings.

4. Roll surface of fabric reinforcing to completely embed and saturate fabric. Leave finished base coat with fabric free of pin holes, voids, or openings.

5. Allow base coat to cure prior to application of top coat.

B. Top Coat: Apply top coat to field of membrane and flashings uniformly in a complete, continuous installation.

1. Prime base coat prior to application of top coat if top coat is not applied within 72 hours of the base coat application, using manufacturer's recommended primer.

2. Apply top coat extending coating up vertical surfaces and out onto horizontal surfaces. Install top coat over field base coat and spread coating evenly.

3. Back roll to achieve minimum coating thickness indicated on Part 2 product listing, unless greater thickness is recommended by manufacturer; verify thickness of base coat as work progresses.

4. Avoid foot traffic on new fluid-applied membrane for a minimum of 24 hours.

3.9 FIELD QUALITY CONTROL

A. Roofing Inspector: Contractor shall engage a qualified roofing inspector for a minimum of 3 full-time days on site, per 40-hour crew week, to perform roof tests and inspections and to prepare start up, interim, and final reports. Roofing Inspector's quality assurance inspections shall comply with criteria established in Quality Control and Quality-assurance Guidelines for the Application of Membrane Roof Systems."

B. Roof Inspection: Contractor shall engage roofing system manufacturer's technical personnel to inspect roofing installation, and submit report to the Owner, Architect and Owner's Consultant. Notify Owner, Architect and Owner's Consultant 48 hours in advance of dates and times of inspections. Inspect work as follows:

1. Upon completion of preparation of first component of work, prior to application of re-coating materials.

2. Following application of re-coating to flashings and application of base coat to field of roof.

3. Upon completion of re-coating but prior to re-installation of other roofing components.

C. Repair fluid-applied membrane where test inspections indicate that they do not comply with specified requirements.

D. Arrange for additional inspections, at Contractor's expense, to verify compliance of replaced or additional work with specified requirements.

3.10 PROTECTING AND CLEANING

A. Protect roofing system from damage and wear during remainder of construction period.

B. Correct deficiencies in or remove coating that does not comply with requirements, repair substrates, and reapply coating.

C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 075600.13

SECTION 076200 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Miscellaneous formed sheet metal fabrications.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.
B. Shop Drawings: For sheet metal flashing and trim.
   1. Include plans, elevations, sections, and attachment details.
   2. Distinguish between shop- and field-assembled work.
   3. Include identification of finish for each item.
   4. Include pattern of seams and details of termination points, expansion joints and expansion-joint covers, direction of expansion, roof-penetration flashing, and connections to adjoining work.
C. Samples: For each exposed product and for each color and texture specified.

1.4 QUALITY ASSURANCE

A. Fabricator Qualifications: Employs skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance.

1.5 WARRANTY

A. Special Warranty on Finishes: Manufacturer agrees to repair finish or replace sheet metal flashing and trim that shows evidence of deterioration of factory-applied finishes within specified warranty period.
   1. Finish Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. General: Sheet metal flashing and trim assemblies shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.
B. Sheet Metal Standard for Flashing and Trim: Comply with SMACNA's "Architectural Sheet Metal Manual" requirements for dimensions and profiles shown unless more stringent requirements are indicated.
C. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes.

2.2 SHEET METALS

A. General: Protect mechanical and other finishes on exposed surfaces from damage by applying strippable, temporary protective film before shipping.
B. Aluminum Sheet: ASTM B 209 (ASTM B 209M), alloy as standard with manufacturer for finish required, with temper as required to suit forming operations and performance required.
   1. Color Anodic Finish, Coil Coated: AAMA 611, AA-M12C22A42/A44, Class I, 0.018 mm or thicker.
      a. Color: As selected by Architect from Manufacturer's full range.

2.3 MISCELLANEOUS MATERIALS

A. General: Provide materials and types of fasteners, protective coatings, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and as recommended by manufacturer of primary sheet metal unless otherwise indicated.
B. Fasteners:
   1. Blind Fasteners: High-strength aluminum or stainless-steel rivets suitable for metal being fastened.
   2. Fasteners for Aluminum Sheet: Aluminum or Series 300 stainless steel.
C. Elastomeric Sealant: ASTM C 920, elastomeric silicone polymer sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.
D. Bituminous Coating: Cold-applied asphalt emulsion according to ASTM D 1187.

2.4 FABRICATION, GENERAL

A. General: Custom fabricate sheet metal flashing and trim to comply with details shown and recommendations in cited sheet metal standard that apply to design, dimensions, geometry, metal thickness, and other characteristics of item required. Fabricate sheet metal flashing and trim in shop to greatest extent possible.
   1. Obtain field measurements for accurate fit before shop fabrication.
   2. Form sheet metal flashing and trim to fit substrates without excessive oil canning, buckling, and tool marks; true to line, levels, and slopes; and with exposed edges folded back to form hems.
   3. Conceal fasteners and expansion provisions where possible. Do not use exposed fasteners on faces exposed to view.
B. Expansion Provisions: Form metal for thermal expansion of exposed flashing and trim.
C. Sealant Joints: Where movable, nonexpansion-type joints are required, form metal to provide for proper installation of elastomeric sealant according to cited sheet metal standard.
D. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.
E. Fabricate cleats and attachment devices of sizes as recommended by cited sheet metal standard for application, but not less than thickness of metal being secured.
F. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints where necessary for strength.

PART 3 - EXECUTION

3.1 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. Use fasteners, 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, levels, and slopes. 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. Install exposed sheet metal flashing and trim with limited oil canning, and free of buckling and tool marks.
4. Torch cutting of sheet metal flashing and trim is not permitted.

B. Metal Protection: Where dissimilar metals contact each other, or where metal contacts pressure-treated wood or other corrosive substrates, protect against galvanic action or corrosion by painting contact surfaces with bituminous coating or by other permanent separation as recommended by sheet metal manufacturer or cited sheet metal standard.

1. Coat concealed side of uncoated-aluminum and stainless-steel sheet metal flashing and trim with bituminous coating where flashing and trim contact wood, ferrous metal, or cementitious construction.

C. Fasteners: Use fastener sizes that penetrate wood blocking or sheathing not less than 1-1/4 inches (32 mm) for nails and not less than 3/4 inch (19 mm) for wood screws.

D. Conceal fasteners and expansion provisions where possible in exposed work and locate to minimize possibility of leakage. Cover and seal fasteners and anchors as required for a tight installation.

E. Seal joints as required for watertight construction. Prepare joints and apply sealants to comply with requirements in Section 079200 "Joint Sealants."

F. Rivets: Rivet joints in uncoated aluminum where necessary for strength.

3.2 CLEANING AND PROTECTION

A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.

B. Clean off excess sealants.

C. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions.

END OF SECTION 076200

SECTION 077100 - ROOF SPECIALTIES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Roof-edge specialties.
B. Preinstallation Conference: Conduct conference at Project site.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.
B. Shop Drawings: For roof specialties.
   1. Include plans, elevations, expansion-joint locations, keyed details, and attachments to other work. Distinguish between plant- and field-assembled work.
C. Samples: For each type of roof specialty and for each color and texture specified.

1.3 INFORMATIONAL SUBMITTALS

A. Product Test Reports: For tests performed by a qualified testing agency.
B. Sample warranty.

1.4 CLOSEOUT SUBMITTALS

A. Maintenance Data: For roofing specialties to include in maintenance manuals.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: A qualified manufacturer offering products meeting requirements that are FM Approvals listed for specified class and SPRI ES-1 tested to specified design pressure.
B. Manufacturers: Edge metal manufacturer as recommended by the roof membrane manufacturer in order to provide a total system warranty.

1.6 WARRANTY

A. Special Warranty on Painted Finishes: Manufacturer agrees to repair finish or replace roof specialties that show evidence of deterioration of factory-applied finishes within specified warranty period.
   1. Fluoropolymer Finish: Deterioration includes, but is not limited to, the following:
      a. Color fading more than 5 Hunter units when tested according to ASTM D2244.
      b. Chalking in excess of a No. 8 rating when tested according to ASTM D4214.
      c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
   2. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. FM Approvals' Listing: Manufacture and install roof-edge specialties that are listed in FM Approvals' "RoofNav" and approved for windstorm classification, Class 1-90. Identify materials with FM Approvals' markings.
B. SPRI Wind Design Standard: Manufacture and install roof-edge specialties tested according to SPRI ES-1 and capable of resisting the following design pressures:
   1. Design Pressure: As indicated on Drawings.
C. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, hole elongation, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Provide clips that resist rotation and avoid shear stress as a result of thermal movements. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
   1. Temperature Change (Range): 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

2.2 ROOF-EDGE SPECIALTIES

A. Roof-Edge Fascia: Manufactured, two-piece, roof-edge fascia consisting of snap-on metal fascia cover in section lengths not exceeding 12 feet (3.6 m) and a continuous metal receiver with integral drip-edge cleat to engage fascia cover and secure single-ply roof membrane. Provide matching corner units.
   1. Basis-of-Design Product: Match Existing Profile using manufactures listed below:
      a. ATAS International, Inc.
      b. Cheney Flashing Company.
      c. Metal-Era, Inc.
      d. PAC-CLAD; Petersen Aluminum Corporation; a Carlisle company.
   2. Metallic-Coated Steel Sheet Fascia Covers: Zinc-coated (galvanized) steel, 24 gauge.
      a. Surface: Smooth, flat finish.
      b. Finish: Two-coat fluoropolymer.
      c. Color: As selected by Architect from manufacturer's full range.
   3. Corners: Factory mitered and mechanically clinched and sealed watertight.
   4. Splice Plates: Concealed, of same material, finish, and shape as fascia cover.
   5. Receiver: Galvanized-steel sheet, nominal 0.040-inch (1.02-mm) thickness.
   6. Fascia Accessories: Soffit trim and Spillout scuppers.

2.3 UNDERLAYMENT MATERIALS

A. Self-Adhering, High-Temperature Sheet: Minimum 30 to 40 mils (0.76 to 1.0 mm) 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. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      a. Carlisle Coatings & Waterproofing Inc.
      b. GCP Applied Technologies Inc.
      c. Henry Company.
      d. Metal-Fab Manufacturing, a Drexel Metals Company.

2. Thermal Stability: ASTM D1970/D1970M; stable after testing at 240 deg F (116 deg C).
3. Low-Temperature Flexibility: ASTM D1970/D1970M; passes after testing at minus 20 deg F (29 deg C).

B. Felt: ASTM D226/D226M, Type II (No. 30), asphalt-saturated organic felt, nonperforated.
C. Slip Sheet: Rosin-sized building paper, 3-lb/100 sq. ft. (0.16-kg/sq. m) minimum.

2.4 MISCELLANEOUS MATERIALS

A. Fasteners: Manufacturer's recommended fasteners, suitable for application and designed to meet performance requirements. Furnish the following unless otherwise indicated:
1. Exposed Penetrating Fasteners: Gasketed screws with hex washer heads matching color of sheet metal.
2. Fasteners for Copper Sheet: Copper, hardware bronze, or passivated Series 300 stainless steel.
3. Fasteners for Aluminum: Aluminum or Series 300 stainless steel.
4. Fasteners for Stainless-Steel Sheet: Series 300 stainless steel.
5. Fasteners for Zinc-Coated (Galvanized) Steel Sheet: Series 300 stainless steel or hot-dip zinc-coated steel according to ASTM A153/A153M or ASTM F2329.

B. Elastomeric Sealant: ASTM C920, elastomeric silicone polymer sealant of type, grade, class, and use classifications required by roofing-specialty manufacturer for each application.
C. Butyl Sealant: ASTM C1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type joints with limited movement.
D. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D1187/D1187M.
E. Asphalt Roofing Cement: ASTM D4586, asbestos free, of consistency required for application.

PART 3 - EXECUTION

3.1 UNDERLAYMENT INSTALLATION

A. Self-Adhering Sheet Underlayment: Apply primer if required by manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation. Apply wrinkle free, in shingle fashion to shed water, and with end laps of not less than 6 inches (152 mm) staggered 24 inches (610 mm) between courses. Overlap side edges not less than 3-1/2 inches (90 mm). Roll laps with roller. Cover underlayment within 14 days.
1. Apply continuously under roof-edge specialties and reglets and counterflashings.
2. Coordinate application of self-adhering sheet underlayment under roof specialties with requirements for continuity with adjacent air barrier materials.

B. Felt Underlayment: Install with adhesive for temporary anchorage to minimize use of mechanical fasteners under roof specialties. Apply in shingle fashion to shed water, with lapped joints of not less than 2 inches (50 mm).
C. Slip Sheet: Install with tape or adhesive for temporary anchorage to minimize use of mechanical fasteners under roof specialties. Apply in shingle fashion to shed water, with lapped joints of not less than 2 inches (50 mm).

3.2 INSTALLATION, GENERAL

A. General: Install roof specialties according to manufacturer's written instructions. Anchor roof specialties securely in place, with provisions for thermal and structural movement. Use fasteners, solder, protective coatings, separators, underlayments, sealants, and other miscellaneous items as required to complete roof-specialty systems.
   1. Install roof specialties level, plumb, true to line and elevation; with limited oil-canning and without warping, jogs in alignment, buckling, or tool marks.
   2. Provide uniform, neat seams with minimum exposure of solder and sealant.
   3. Install roof specialties to fit substrates and to result in weathertight performance. Verify shapes and dimensions of surfaces to be covered before manufacture.
   4. Torch cutting of roof specialties is not permitted.
   5. Do not use graphite pencils to mark metal surfaces.
B. Metal Protection: Protect metals against galvanic action by separating dissimilar metals from contact with each other or with corrosive substrates by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.
   1. Bed flanges in thick coat of asphalt roofing cement where required by manufacturers of roof specialties for waterproof performance.
C. Expansion Provisions: Allow for thermal expansion of exposed roof specialties.
   1. Space movement joints at a maximum of 12 feet (3.6 m) with no joints within 18 inches (450 mm) of corners or intersections unless otherwise indicated on Drawings.
   2. When ambient temperature at time of installation is between 40 and 70 deg F (4 and 21 deg C), set joint members for 50 percent movement each way. Adjust setting proportionately for installation at higher ambient temperatures.
D. Fastener Sizes: Use fasteners of sizes that penetrate substrate not less than recommended by fastener manufacturer to achieve maximum pull-out resistance.
E. Seal concealed joints with butyl sealant as required by roofing-specialty manufacturer.
F. Seal joints as required for weathertight construction. Place sealant to be completely concealed in joint. Do not install sealants at temperatures below 40 deg F (4 deg C).

3.3 ROOF-EDGE SPECIALITIES INSTALLATION

A. Install cleats, cants, and other anchoring and attachment accessories and devices with concealed fasteners.
B. Anchor roof edgings with manufacturer's required devices, fasteners, and fastener spacing to meet performance requirements.

3.4 CLEANING AND PROTECTION

A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
B. Clean and neutralize flux materials. Clean off excess solder and sealants.
C. Remove temporary protective coverings and strippable films as roof specialties are installed.

END OF SECTION 077100

SECTION 07 9200 - JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specifications Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes joint sealants for the following applications, including those specified by reference to this Section and following applications:
   1. Exterior joints in the following vertical surfaces and horizontal nontraffic surfaces:
      a. Head joints in limestone masonry parapet copings.
      b. Control and expansion joints in unit masonry.
      c. Flashing re-bar penetrations
      d. Flashing lap joints
      e. Joints between different materials listed above.
      f. Other joints as indicated.

1.3 PERFORMANCE REQUIREMENTS

A. Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.
B. Provide warranted sealant installations as indicated. Provide all testing and all other requirements of the sealant manufacturer to obtain the desired warranty.

1.4 SUBMITTALS

A. Product Data: For each joint-sealant product indicated.
B. Samples: For each type and color of joint sealant required, provide Samples with joint sealants in 1/2-inch- (13-mm-) wide joints formed between two 6-inch- (150-mm-) long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.
C. Product Certificates: For each type of joint sealant and accessory, signed by product manufacturer.
D. SWRI Validation Certificate: For each elastomeric sealant specified to be validated by SWRI's Sealant Validation Program.
E. Qualification Data: For Installer and testing agency.
F. Preconstruction Field Test Reports: When requested by owner, indicate which sealants and joint preparation methods resulted in optimum adhesion to joint substrates based on preconstruction testing specified in "Quality Assurance" Article.
G. Compatibility and Adhesion Test Reports: From sealant manufacturer, indicating the following:
   1. Materials forming joint substrates and joint-sealant backing have been tested for compatibility and adhesion with joint sealants.
   2. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.
H. Field Test Report Log: For each elastomeric sealant application.

I. Product Test Reports: Based on comprehensive testing of product formulations performed by a qualified testing agency, indicating that sealants comply with requirements.
J. Warranties: Special warranties specified in this Section.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized Installer who is approved or licensed for installation of elastomeric sealants required for this Project.
B. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.
C. Preconstruction Compatibility and Adhesion Testing: Submit to joint-sealant manufacturers, for testing indicated below, samples of materials that will contact or affect joint sealants.
    1. Schedule sufficient time for testing and analyzing results to prevent delaying the Work.
    2. Use ASTM C 1087 or manufacturer's standard test method to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.
    3. Submit number required by the sealant manufacturer, but no less than six pieces of each type of material, including joint substrates, shims, joint-sealant backings, secondary seals, and miscellaneous materials.
    4. For materials failing tests, obtain joint-sealant manufacturer's written instructions for corrective measures including use of specially formulated primers.
    5. Testing will not be required if joint-sealant manufacturers submit joint preparation data that are based on previous testing of current sealant products for adhesion to, and compatibility with, joint substrates and other materials matching those submitted.
D. Product Testing: Obtain test results for "Product Test Reports" Paragraph in "Submittals" Article from a qualified testing agency based on testing current sealant formulations within a 36-month period preceding the commencement of the Work.
    1. Testing Agency Qualifications: An independent testing agency qualified according to ASTM C 1021 to conduct the testing indicated, as documented according to ASTM E 548.
    2. Test elastomeric joint sealants for compliance with requirements specified by reference to ASTM C 920, and where applicable, to other standard test methods.
    3. Test elastomeric joint sealants according to SWRI's Sealant Validation Program for compliance with requirements specified by reference to ASTM C 920 for adhesion and cohesion under cyclic movement, adhesion-in-peel, and indentation hardness.
E. Preconstruction Field-Adhesion Testing: Before installing elastomeric sealants, field test their adhesion to Project joint substrates as follows:
    1. Locate test joints where indicated on Project or, if not indicated, as directed by Construction Manager.
    2. Conduct field tests for each application indicated below:
        a. Each type of elastomeric sealant and joint substrate indicated.
        b. Each type of non-elastomeric sealant and joint substrate indicated.
    3. Notify Construction Manager seven days in advance of dates and times when test joints will be erected.
        a. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C 1193.

1) For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.

4. Report whether sealant in joint connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each type of product and joint substrate. For sealants that fail adhesively, retest until satisfactory adhesion is obtained.
5. Evaluation of Preconstruction Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing, in absence of other indications of noncompliance with requirements, will be considered satisfactory. Do not use sealants that fail to adhere to joint substrates during testing.

F. Mockups: Build mockups incorporating sealant joints, as follows, to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution:
1. Joints in mockups of assemblies specified in other Sections that are indicated to receive elastomeric joint sealants, which are specified by reference to this Section.

1.6 PROJECT CONDITIONS

A. Do not proceed with installation of joint sealants under the following conditions:
1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer.
2. When joint substrates are wet.
3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
4. Contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

1.7 WARRANTY

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

B. Special Manufacturer's Warranty: Manufacturer's standard form in which elastomeric sealant manufacturer agrees to furnish elastomeric joint sealant materials 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: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Products: Subject to compliance with requirements, provide one of the products listed in other Part 2 articles.

2.2 MATERIALS, GENERAL

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

B. Colors of Exposed Joint Sealants: As indicated under sealant types.

2.3 ELASTOMERIC JOINT SEALANTS

A. Elastomeric Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.

B. Stain-Test-Response Characteristics: Where elastomeric sealants are specified to be nonstaining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.

C. Silicone Sealant (Sealant A): A medium-modulus, one-part, pre-pigmented, neutral-cure, non-staining silicone joint sealant: Where joint sealants of this type are indicated, provide products complying with the following:
   1. Products: Provide one of the following:
      a. 756 SMS; Dow Corning.
      b. Sikasil WS-295; Sika Corporation
   2. Application: Exterior masonry joints including coping head joints, flashing penetrations, and other joints as indicated
   3. Primer: manufacturer's recommended primer for each substrate, if required, based on compatibility and adhesion tests.
   4. Color: To be selected by Owner/Architect from special and custom colors.

E. Butyl Sealant (Sealant B): A one part non-skinning, permanently tacky butyl metal flashing sealant that allows metal lap joints to expand and contract. Where joint sealants of this type are indicated, provide products complying with the following:
   1. Products: Provide one of the following:
      a. Lap Rite; Masonpro
      b. Sikalastomer 511; Sika Corporation
   2. Color: Manufacturer's standard gray or beige.
   5. Application: Lap joints within stainless steel thru-wall flashing.

2.4 JOINT-SEALANT BACKING

A. General: Provide sealant backings of material and type that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

B. Cylindrical Sealant Backings (Backer Rod): ASTM C 1330, Type C (closed-cell material with a surface skin), polyurethane foam rod, oversized 20 to 50 percent larger than joint width, as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

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

2.5 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, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.

C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants.
   1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant.
      a. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:
         1) Limestone
         2) Masonry
   2. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants or paint, if applicable. Nonporous joint substrates include the following:
      a. Metal.
B. Joint Priming: Prime joint substrates, where recommended in writing by joint-sealant manufacturer, based on 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 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.

3.3 INSTALLATION

A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
C. Install sealant backings of type 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.

D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
   1. Place sealants so they directly contact and fully wet joint substrates.
   2. Completely fill recesses in each joint configuration.
   3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified 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 configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.
G. 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.

3.4 PROTECTION

A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with required areas are indistinguishable from original work.

3.5 JOINT-SEALANT SCHEDULE

A. SEALANT A: Exterior masonry joints including coping head joints, flashing penetrations, and other joints as indicated
B. SEALANT B: Lap joints within stainless steel thru-wall flashing.

END OF SECTION - 079200

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. Aluminum and steel.
2. Plaster.

1.2 DEFINITIONS

A. MPI Gloss Level 1: Not more than five units at 60 degrees and 10 units at 85 degrees, according to ASTM D 523.

B. MPI Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.

C. MPI 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. MPI Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D 523.

E. MPI Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523.

F. MPI 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.

1. Include printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.

B. Samples: For each type of paint system and each color and gloss of topcoat.

1.4 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. Owner will select one surface to represent surfaces and conditions for application of each paint system.

a. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft. (9 sq. m).
b. Other Items: Owner will designate items or areas required.

2. Final approval of color selections will be based on mockups.

a. If preliminary color selections are not approved, apply additional mockups of additional colors selected by Owner at no added cost to Owner.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Products: Subject to compliance with requirements, provide one of the products listed in the Exterior Painting Schedule for the paint category indicated or Architect approved equal.

2.2 PAINT, GENERAL

A. MPI Standards: Products shall comply with MPI standards indicated and shall be listed in its "MPI Approved Products Lists."

B. Material Compatibility:

1. Materials for use within each paint system shall be 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, products shall be recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.

C. VOC Content: Products shall comply with VOC limits of authorities having jurisdiction.

D. Colors: As selected by Owner from manufacturer’s full range.

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. Masonry (Clay and CMUs, and EIFS finish coat): 12 percent.

2. Wood: 15 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 Architectural Painting Specification 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.

C. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection.

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. Aluminum and Steel Substrates:

1. Acrylic System:

a. Prime Coat: Pro Industrial Pro Cryl Universal Primer (SW B66 Series)

b. Intermediate Coat: Emerald Rain Refresh Exterior Acrylic (SW K47 Series)
c. Topcoat: Emerald Rain Refresh Exterior Acrylic (SW k47 Series)
d. Sheen: Verify required sheen with Owner.

B. EIFS Substrates:

1. Acrylic System

a. Prime Coat: Loxon Concrete and Masonry Primer (SW LX02 Series)
b. Intermediate Coat: To match topcoat.
c. Topcoat: Emerald Rain Refresh Acrylic (SW K47 Series)
d. Sheen: Verify required sheen with Owner.

END OF SECTION 099113

SECTION 099123 – INTERIOR PAINTING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes all labor, materials, tools and other equipment, services and supervision required to complete all interior and exterior painting work, including:
   1. Moisture testing of substrates.
   2. Surface preparation of all new and existing substrates as required for acceptance of paint, including cleaning, small crack repair, patching, caulking, and making good surfaces and areas to the limits defined under the MPI Preparation requirements.
   3. Sealing or priming of all new and existing surfaces for repainting per MPI requirements.
   4. Provision of safe and adequate ventilation as required over and above temporary ventilation supplied by others, where toxic and/or volatile/flammable materials are being used.

1.2 DEFINITIONS

A. MPI Gloss Level 1: Not more than five units at 60 degrees and 10 units at 85 degrees, according to ASTM D 523.
B. MPI Gloss Level 2: Not more than 10 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.
C. MPI Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.
D. MPI Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D 523.
E. MPI Gloss Level 5: 35 to 70 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.
   1. Include Printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.
B. Samples: For each type of paint system and in each color and gloss of topcoat. Provide Draw-downs for each paint type as indicated in drawings.

1.4 QUALITY ASSURANCE

A. All materials, preparation and workmanship shall conform to requirements of the latest edition of the Architectural Painting Specification Manual by the Master Painters Institute (MPI).
B. 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. Architect will select one surface to represent surfaces and conditions for application of each paint system.
      a. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft. (9 sq. m).
      b. Other Items: Architect will designate items or areas required.
   2. Final approval of color selections will be based on mockups.
      a. If preliminary color selections are not approved, apply additional mockups of additional colors selected by Architect at no added cost to Owner.

C. All surfaces requiring repainting shall be inspected by the Painting Contractor who shall notify the Architect and General Contractor in writing of any defects or problems, prior to commencing repainting or after preparation work.

1.5 PROJECT CONDITIONS

A. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F. Maintain storage containers in a clean condition, free of foreign materials and residue.
B. Apply waterborne paints only when temperatures of surfaces to be painted and surrounding air are between 50 and 90 deg F.
C. Apply solvent-thinned paints only when temperatures of surfaces to be painted and surrounding air are between 45 and 95 deg F.
D. Do not apply paint when relative humidity exceeds 85 percent; or at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis-of-Design Product: Subject to compliance with requirements, provide products indicated in finish systems schedules or comparable products by one of the following:
1. Basis-of-Design: Sherwin Williams.
2. Benjamin Moore.
3. PPG Industries.
4. Pratt & Lambert.
5. Substitutions: See Section 012500 - Substitution Procedures.

2.2 PAINT, GENERAL

A. MPI Standards: Products shall comply with MPI standards indicated and shall be listed in its "MPI Approved Products Lists."
B. Material Compatibility:
1. Materials for use within each paint system shall be 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, products shall be recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.
C. VOC Content: Products shall comply with VOC limits of authorities having jurisdiction.
D. Colors: Provide colors in accordance with University Master Interior Paint Color Palette, based on Sherwin-Williams colors. Refer to Drawings for color selections.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Prior to commencement of Work, thoroughly examine (and test as required) all interior conditions and surfaces scheduled to be painted / repainted and report in writing to the Owner and General Contractor any conditions or surfaces that will adversely affect work of this section.
B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
1. Concrete: 12 percent.
2. Masonry (CMUs): 12 percent.
3. Gypsum Board: 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 Architectural Painting Specification Manual" and “MPI Repainting Manual” applicable to substrates and paint systems indicated.
B. Prepare all surfaces in accordance with MPI requirements.
C. Sand, clean, dry, etch, neutralize and/or test all surfaces under adequate illumination, ventilation and temperature requirements.
D. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
   1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
E. Protect all adjacent interior surfaces and areas, including door hardware and rating and instruction labels on doors, frames, equipment, piping, etc., from painting and repainting operations and damage by drop cloths, shields, masking, templates, or other suitable protective means and make good any damage caused by failure to provide such protection.

3.3 APPLICATION

A. Apply paints according to manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
B. Sand and dust between each coat to provide an anchor for next coat and to remove defects in previous coat (runs, sags, etc.) visible from a distance up to 1000 mm (39 inches).
C. Do not apply finishes on interior surfaces that are not sufficiently dry. Unless manufacturer’s directions state otherwise, each coat shall be sufficiently dry and hard before a following coat is applied.
D. 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 INTERIOR PAINTING SCHEDULE

A. CMU Substrates: All exposed CMU construction.
   1. Latex System MPI INT 4.2A: All spaces unless noted otherwise.
      a. Block Filler: Block filler, latex, interior/exterior, MPI #4.
         1) Benjamin Moore: Ultra Spec Int/Ext High-Build Block Filler 571/K571.
         2) PPG: Glidden Concrete Coatings Block Filler Int/Ext Primer 3010-1200.
         3) S-W: Loxon Block Surfacer B42 Series
         4) Substitutions: See Section 012500 - Substitution Procedures.
      b. Intermediate Coat: Latex, interior, matching topcoat.
      c. Topcoat: Latex, interior (MPI Gloss Level 3), MPI #52.
         1) Benjamin Moore: Super Hide Zero VOC Interior Eggshell.
         2) PPG: Speedhide Zero Interior Zero VOC Latex Satin.
         3) S-W: ProMar 200 Zero VOC Interior Latex Eggshell.
         4) Substitutions: See Section 012500 - Substitution Procedures.
      d. Existing Masonry Primer Coat:
         1) S-W: Loxon Concrete and Masonry Primer, LX02 Series
         2) Substitutions: See Section 012500 - Substitution Procedures.

B. Steel Substrates: Metal doors and frames and other steel surfaces.
   1. Institutional Low-Odor/VOC Latex System MPI INT 5.1S:
      a. Prime Coat: Primer, rust inhibitive, water based MPI #107.
         1) Benjamin Moore: Super Spec HP D.T.M. Acrylic Low Lustre P25.
         2) PPG: Pitt-Tech Plus Int/Ext DTM Industrial Primer 90-909.
         3) S-W: Pro Industrial Pro-Cryl Universal Primer, B66-310 Series.
         4) Substitutions: See Section 012500 - Substitution Procedures.
      b. Topcoats: Latex, interior, institutional low odor/VOC (MPI Gloss Level 5), MPI #147.
         1) Benjamin Moore: Ultra Spec 500 Zero VOC Interior Gloss Finish N540.
         2) PPG: Glidden Diamond 450 No VOC Interior Semi-Gloss 7400N.
         3) S-W: Pro Industrial Acrylic Gloss Coating, B66-660 Series.
         4) Substitutions: See Section 012500 - Substitution Procedures.
   2. Water-Based Dry-Fall System MPI INT 5.1C:
      a. Prime Coat: Shop primer specified in Section where substrate is specified.
      b. Topcoat: Dry fall, latex, flat, MPI #118.
         1) Benjamin Moore: Super Kote 5000 Dry Fall Acrylic Latex N110.
         2) PPG: Glidden Professional Waterborne Flat Dryfall 1280.
         3) S-W: Pro Industrial Waterborne Acrylic Dry Fall B42W00181.
         4) Substitutions: See Section 012500 - Substitution Procedures.

C. Gypsum Board Substrates:
   1. Latex over Latex Sealer System MPI INT 9.2A:
      a. Prime Coat: Primer sealer, MPI #50.
         1) Benjamin Moore: Ultra Spec 500 Zero VOC Interior Latex Primer N534.
         2) PPG: Speedhide Zero Interior Zero VOC Latex Sealer 6-4900XI.
         3) S-W: ProMar 200 Zero VOC Latex Primer, B28W2600.
         4) Substitutions: See Section 012500 - Substitution Procedures.
      b. Intermediate Coat: Latex, interior, matching topcoat.
      c. Topcoat: Latex, interior (MPI Gloss Level 3), MPI #52.
         1) Benjamin Moore: Ultra Spec 500 Zero VOC Interior Eggshell Finish N538.
         2) PPG: Glidden Diamond 350 Interior Eggshell 1403.
         3) S-W: ProMar 200 Zero VOC Latex Egg-Shell, B20-2600 Series.
         4) Substitutions: See Section 012500 - Substitution Procedures.

D. Wet Areas (shower rooms, changing areas, toilet rooms, janitors closets, front kitchen):

   One component Epoxy Paint – Color indicated on drawings.
   1. CMU, New/Bare
      a. Prime Coat: Pro Industrial Heavy Duty Block Filler, B42 Series
      b. Intermediate Coat: Pro Industrial Pre Catalyzed Waterbased Epoxy K46 Semi-gloss
      c. Topcoat: Pro Industrial Pre Catalyzed Waterbased Epoxy K46 Semi-gloss
      d. Substitutions: See Section 012500 - Substitution Procedures.

   2. CMU /Brick, previously painted
      a. Primer: PrepRite ProBlock Latex, B51 Series
      b. Intermediate Coat: Pro Industrial Pre Catalyzed Waterbased Epoxy K46 Semi-gloss
      c. Topcoat: Pro Industrial Pre Catalyzed Waterbased Epoxy K46 Semi-gloss
      d. Substitutions: See Section 012500 - Substitution Procedures.

3. Gypsum Board
   a. Walls:
      1) Primer: PrepRite ProBlock Latex, B51 Series
      2) Intermediate Coat: Pro Industrial Pre Catalyzed Waterbased Epoxy K46 Semi-gloss
      3) Topcoat: Pro Industrial Pre Catalyzed Waterbased Epoxy K46 Semi-gloss
      4) Substitutions: See Section 012500 - Substitution Procedures.

   b. Ceilings:
      1) Primer: PrepRite ProBlock Latex, B51 Series
      2) Intermediate Coat: Pro Industrial Pre Catalyzed Waterbased Epoxy K46 Semi-gloss
      3) Topcoat: Pro Industrial Pre Catalyzed Waterbased Epoxy K46 Semi-gloss
      4) Substitutions: See Section 012500 - Substitution Procedures.

END OF SECTION 099123

SECTION 09 9600 - HIGH-PERFORMANCE COATINGS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes surface preparation and field application of high-performance coating systems.

1.2 SUBMITTALS

A. Product Data: For each product indicated.
B. Samples: Manufacturer's color charts showing the full range of colors available for each type of finish-coat material indicated.
C. Warranties: Provide a sample of manufacturer and applicator's warranty.

1.3 QUALITY ASSURANCE

A. Qualifications: Provide factory trained and authorized installers with a minimum of three years experience in installing work similar to the specified work. Submit written evidence of authorization from the manufacturer that contractor is an approved applicator.
B. Benchmark Samples (Mockups): Provide a full-coat benchmark finish sample of each color and type of coating required. Comply with procedures specified in PDCA P5.
   1. Miscellaneous Areas and Items: In area or on item selected.
   2. Final approval of finishes will be made from benchmark samples.
   3. Approved benchmark samples may become part of the completed Work if undisturbed at time of Substantial Completion.
C. Pre-Installation Conference: Before starting the work specified herein, a pre-installation conference shall be held to discuss all aspects of the project.
D. Manufacturer's Technical Assistance: Provide a representative to attend the pre-installation conference and review existing conditions and application procedures at project startup and periodically during the progression of the project.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F (7 deg C). Maintain containers used in storage in a clean condition, free of foreign materials and residue.

1.5 PROJECT CONDITIONS

A. Examination of Existing Conditions: Contractor shall examine existing conditions affecting this work and shall report all unsatisfactory conditions to the proper authority and will not proceed until these conditions have been corrected. Commencing work implies acceptance of existing conditions as satisfactory to the outcome of this work.
B. Apply coatings only when temperature of surfaces to be coated and surrounding air temperatures are between 45 and 95 deg F (7 and 35 deg C).
C. Do not apply coatings in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.
   1. Allow wet surfaces to dry thoroughly before proceeding with or continuing coating operation.

2. Work may continue during inclement weather only if areas and surfaces to be coated are enclosed and temperature within the area can be maintained within limits specified by manufacturer during application and drying periods.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Products of the following manufacturers are listed in other Part 2 articles and use the abbreviated names shown in parentheses:
   1. Devoe High Performance Coatings (Devoe)

2.2 MATERIALS, GENERAL

A. Material Compatibility: For each finish indicated, provide separate component coat materials of one manufacturer that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
B. Material Quality: Provide manufacturer's highest grade of the various high performance coatings specified. Materials not displaying manufacturer's product identification are not acceptable.
C. VOC Classification: Provide Low VOC high-performance coating materials, including undercoats, and finish-coat materials.
D. Provide high performance coatings suitable for use on weathered or previously rusted steel substrates, and the following
   1. Exceptional corrosion protection.
   2. Suitable for salt and fresh water immersion.
   3. Low temperature cure to 0 degrees F.
E. Colors: As selected by Owner and Architect from manufacturer's standard color range.
F. Cleanup Solvent: As recommended per manufacturer, T-10 Thinner.

2.3 EXTERIOR HIGH-PERFORMANCE COATINGS

A. Recommended Film Thickness: As recommended per manufacturer, 4 to 8 mils dry and 5.9 to 11.7 mils wet.
B. Epoxy primer / topcoat: High performance multi-purpose, surface tolerant, two – component chemically – cured epoxy semi-gloss coating.
   1. Bar-Rust 235; (Devoe)
   2. To be used at concealed locations not exposed to UV light.
   3. Color: As selected by Architect from Manufacturer's standard range of colors
C. Urethane topcoat: High performance two-component chemically cured aliphatic urethane gloss finish.
   1. Devthane 379 (Devoe)
   2. To be used at UV exposed locations.
   3. Colors: Blended to match color selected from standard color wheel by Sherwin Williams, PPG, Glidden, or similar commercial paint.

PART 3 - EXECUTION

3.1 EXAMINATION

A. With Applicator present, examine substrates and conditions under which high-performance coatings will be applied, for compliance with coating application requirements.

1. Apply coatings only after unsatisfactory conditions have been corrected and surfaces to receive coatings are thoroughly dry.
2. Start of application is construed as Applicator's acceptance of surfaces within that particular area.

B. Coordination of Work: Review other Sections in which other coatings are provided to ensure compatibility of total systems for various substrates. On request, furnish information on characteristics of specified finish materials to ensure compatible coats.

3.2 APPLICATION

A. General: Application of coatings indicates Applicator's acceptance of surfaces and conditions.

B. Preparation:
1. Remove plates, machined surfaces, and similar items already in place that are not to be coated. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and coating.
   a. After completing coating operations, reinstall items that were removed; use workers skilled in the trades involved.
2. Cleaning: Before applying high-performance coatings, clean substrates of substances that could impair bond of coatings. Remove oil and grease before cleaning.
3. Provide barrier coats over incompatible primers or remove primers and reprime substrate.
4. Roughen to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods to prepare surfaces.
   a. Use abrasive blast-cleaning methods if recommended by coating manufacturer.
   b. Determine alkalinity and moisture content of surfaces by performing appropriate tests. If surfaces are sufficiently alkaline to cause the finish paint to blister and burn, correct this condition before application. Do not coat surfaces if moisture content exceeds that permitted in manufacturer's written instructions.
5. Ferrous-Metal Substrates: Clean ungalvanized ferrous-metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale, loose rust and other foreign substances.
   a. Use solvent or mechanical cleaning methods that comply with SSPC recommendations.
   b. Hand tool-clean steel surfaces as recommended by coating manufacturer and according to SSPC-SP 2. Process removes all loose mill scale, loose rust, loose paint, and other detrimental foreign matter by hand chipping, scraping, sanding and wire brushing.
   c. Treat bare and sandblasted or pickled clean metal with a metal treatment wash coat before priming.
6. Nonferrous-Metal Substrates: Clean nonferrous and galvanized surfaces. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods.

C. Material Preparation:
1. Maintain containers used in mixing and applying coatings in a clean condition, free of foreign materials and residue.
2. Stir materials before applying to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into the material. Remove film and, if necessary, strain coating material before using.
3. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of the same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.

D. Coating Application:
   1. Do not apply high-performance coatings over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to forming a durable coating film.
   2. Apply coatings to exposed surfaces, including areas visible when permanent or built-in fixtures, and similar components are in place, and maintain system integrity and provide desired protection.
      a. Coat surfaces behind movable equipment same as similar exposed surfaces. Before final installation, coat surfaces behind permanently fixed equipment or furniture with prime coat only.
      b. Coat back sides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.

E. Scheduling Coating: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for coating as soon as practicable after preparation and before subsequent surface deterioration.
   1. Do not apply succeeding coats until previous coat has cured as recommended by manufacturer.
   2. Where manufacturer's written instructions require sanding, sand between applications to produce a smooth, even surface.
   3. Allow sufficient time between successive coats to permit proper drying. Do not recoat surfaces until coating has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and application of another coat does not cause undercoat to lift or lose adhesion.
   4. If undercoats or other conditions show through final coat, apply additional coats until cured film has a uniform coating finish, color, and appearance. Give special attention to edges, corners, crevices, welds, exposed fasteners, and similar surfaces to ensure that they receive a dry film thickness equivalent to that of flat surfaces.

F. Application Procedures: Apply coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.
   1. Brush Application: Use brushes best suited for material applied and of appropriate size for the surface or item being coated.
      a. Apply first coats by brush unless manufacturer's written instructions permit using roller or mechanical applicators.
      b. Brush out and work brush coats into surfaces in an even film.
      c. Eliminate cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections. Neatly draw glass lines and color breaks.
   2. Rollers: Use rollers of carpet, velvet back, or high-pile sheep's wool as recommended by manufacturer for the material and texture required.
   3. Spray Equipment: Use mechanical methods to apply coating if permitted by manufacturer's written instructions and governing regulations.
      a. Use spray equipment with orifice size recommended by manufacturer for material and texture required.
      b. Apply each coat to provide the equivalent hiding of brush-applied coats.
      c. Do not double back with spray equipment building-up film thickness of two coats in one pass, unless recommended by manufacturer.

G. Minimum Coating Thickness: Apply each material no thinner than manufacturer's recommended spreading rate. Provide total dry film thickness of the entire system as recommended by manufacturer.

H. Prime Coats: Before applying topcoats, apply a prime coat of material, as recommended by manufacturer, to material required to be coated or finished that has not been prime coated by others.
   1. Recoat primed and sealed substrates if there is evidence of suction spots or unsealed areas in first coat, to ensure a topcoat with no burn-through or other defects caused by insufficient sealing.

I. Preparing and coating steel concealed in masonry or concrete:
   1. Use Devoe “Bar-Rust 235” for entire coating thickness.
   2. At removal of stone and masonry, bracing wall and beam shall be the responsibility of the Contractor.
   3. Remove corroded steel as required. Steel shall be free from loose rust, loose paint, and other loose detrimental foreign matter.
   4. The minimum cleaning standard shall be SSPC-SP3. Clean steel to meet manufacturers minimum requirements. Do not blast clean steel.
   5. Report any loss of Section to the Architect for review and recommendations.
   6. Coat steel as required by manufacturer. Minimum dry film thickness (DFT) shall be 8 mils. Apply in two (2) coats if necessary to provide minimum DFT.

J. Preparing and coating steel exposed to weather and ultraviolet rays:
   1. Preparations and coating thickness to be similar to concealed steel in item “I” above.
   2. Provide a prime coat of Devoe “Bar-Rust 235”.
   3. Provide a topcoat of Devoe “Devthane 379”.

K. Completed Work: Match approved Samples for color, texture, and coverage. Remove, refinish, or recoat work that does not comply with specified requirements.

L. Cleanup: At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
   1. After completing coating application, clean spattered surfaces. Remove spattered coatings by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

M. Protect work of other trades, whether being coated or not, against damage from coating operation. Correct damage by cleaning, repairing, replacing, and recoating, as approved by Architect, and leave in an undamaged condition.
   1. Provide "Wet Paint" signs to protect newly coated finishes. After completing coating operations, remove temporary protective wrappings provided by others to protect their work.
   2. At completion of construction activities of other trades, touch up and restore damaged or defaced coated surfaces. Comply with procedures specified in PDCA P1.

END OF SECTION 099600

SECTION 099726 - CEMENTITIOUS COATINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes surface preparation and application of cementitious coating systems on the following substrates:

1. Exterior pre-cast concrete masonry units.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples for Initial Selection: For each type of topcoat product.

C. Samples for Verification: In each color and gloss of topcoat.

1. Submit Samples on actual substrate, not less than 8 inches (200 mm) square**,** with mortar joint in center.
2. Apply coats on Samples in steps to show each coat required for system.
3. Label each coat of each Sample.
4. Label each Sample for location and application area.

1.4 INFORMATIONAL SUBMITTALS

A. Material Certificates: For each cementitious coating, from manufacturer.

B. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency or performed by a qualified testing agency, for each product formulation.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that are from same production run (batch mix) as materials applied and that are packaged with protective covering for storage and identified with labels describing contents.

1. Quantity: Furnish an additional 5 percent of each color applied.

1.6 QUALITY ASSURANCE

A. Mockups: Apply mockups of coating 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. Architect will select one actual substrate of each type to represent surfaces and conditions for application of coating.

2. Apply mockups after permanent lighting and other environmental services have been activated.
3. Final approval of color selections will be based on mockups.

a. If preliminary color selections are not approved, apply additional mockups of colors selected by Architect at no added cost to Owner.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in manufacturer's original, new, unopened packages and containers bearing manufacturer's name and label, and the following information:

1. Product name or title of material.
2. Manufacturer's stock number and date of manufacture.
3. Contents by volume, for pigment and vehicle constituents.
4. Application instructions.
5. Color name and number.
6. Handling instructions and precautions.

B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F (7 deg C). Maintain containers used in storage of coatings in a clean condition, free of foreign materials and residue.

1. Protect cementitious coating materials from freezing. Keep materials dry and storage area neat and orderly. Remove waste daily. Take necessary measures to ensure that workers and work areas are protected from health hazards resulting from handling, mixing, and applying the coating.

1.8 FIELD CONDITIONS

A. Apply coatings only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F (10 and 35 deg C).

B. Do not apply coatings when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Products: Subject to compliance with requirements available products that may be incorporated into the Work include but are not limited to products listed in the Cementitious Coating Schedule for the paint category indicated.

B. Source Limitations: Obtain cementitious coating materials from single source and from single manufacturer.

2.2 CEMENTITIOUS COATINGS

A. Polymer-Modified Cementitious Coating: Containing Portland cement, polymer, and hydrated lime or aggregates.

1. Compressive Strength: Not less than 3500 psi (24.1 MPa) at 28 days according to ASTM C109/C109M.
2. Tensile Strength: Not less than 350 psi (2.41 MPa at 28 days according to ASTM C109/C109M.

B. Colors: As selected by Architect from manufacturer's full range.

C. Other Materials: Provide crack fillers, block fillers, and related materials that are compatible with cementitious finish-coat materials and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements and other conditions affecting performance of the Work.

B. Verify suitability of substrates, including surface conditions and compatibility.

C. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.

1. Beginning coating application constitutes Contractor's acceptance of substrates and conditions.

3.2 PREPARATION

A. Comply with the manufacturer's written instructions for mixing and preparing materials and as applicable to substrates indicated.

B. Remove plates, machined surfaces, and similar items already in place that are not to be coated. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and coating.

1. After completing coating operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.

C. Clean substrates of substances that could impair bond of coatings, including dirt, oil, grease, incompatible coatings, and loose substrate materials.

D. Cementitious and Masonry Surfaces: Remove release agents, curing compounds, efflorescence, and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.

E. Crack Repair: Fill cracks according to manufacturer's written instructions before coating surfaces.

1. Cracks Larger Than 1/32 Inch (0.8 mm): Cut out static cracks, voids, or honeycombing larger than 1/32 inch (0.8 mm) and patch with materials recommended in writing by coating manufacturer. Identify dynamic cracks and treat according to manufacturer's written instructions before beginning application.

3.3 APPLICATION

A. Apply coatings according to manufacturer's written instructions. Use applicators and techniques suited for coating and substrate indicated.

1. Dampen substrate of surfaces to receive cementitious coatings one hour before beginning application to prevent surface drag. Immediately before applying coatings, redampen substrate. Substrates shall be saturated and the surface dry at time of application.
2. Brushes: Use Tampico or masonry brushes best suited for material being applied.
3. Spray Equipment: Use spray equipment recommended in writing by manufacturer for material and texture required.

B. Apply coating to achieve material thickness as recommended in writing by manufacturer, but not less than the following:

1. First Coat: Apply polymer-modified cementitious coating material at the rate of 2 lb./sq. yd. (1 kg/sq. m) to achieve a total cured thickness of 25 mils (0.6 mm).
2. Second Coat: Apply polymer-modified cementitious coating material at the rate of 1 lb./sq. yd. (0.5 kg/sq. m) to achieve a total cured thickness of 15 mils (0.4 mm).
3. Apply additional coats when undercoats or other conditions show through final coat until cured film is of uniform coating finish, color, and appearance.

C. On previously coated surfaces, apply coating to achieve material thickness as recommended in writing by manufacturer, but not less than the following:

1. Apply polymer-modified cementitious coating material at the rate of 1 lb/sq. yd. (0.5 kg/sq. m) to achieve a total cured thickness of 15 mils (0.4 mm).
2. Apply additional coats when undercoats or other conditions show through final coat until cured film is of uniform coating finish, color, and appearance.

D. Brush Application: Brush out and work brush coats into surfaces in an even film, filling all pores and voids at rate recommended in writing by manufacturer to achieve cured material thickness indicated. Finish coat with smooth, horizontal strokes.

E. Spray Application: Apply each coat according to manufacturer's written instructions to provide the equivalent hiding of brush-applied coats. Follow spray application with a general light brooming of coated surface to impart a slight texture.

3.4 FIELD QUALITY CONTROL

A. Testing of Coating Materials: Owner reserves the right to invoke the following procedure at any time and as often as Owner deems necessary during the period when coating operations are being conducted:

1. The owner will engage the services of a qualified testing agency to sample coating materials being used. Samples of material delivered to Project site will be taken, identified, sealed, and certified in the presence of Contractor.
2. The testing agency will perform tests for compliance with product requirements specified.
3. Owner may direct Contractor to stop coating application if test results show materials being used do not comply with requirements. Contractor shall remove noncomplying materials from Project site, pay for testing, and recoat surfaces coated with rejected materials. Contractor will be required to remove rejected materials from previously coated surfaces if, on recoating with complying materials, the two coatings are incompatible.

3.5 CLEANING AND PROTECTION

A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.

B. After completing coating application, clean spattered surfaces. Remove spattered coatings by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

C. Protect work of other trades against damage from coating application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

D. At completion of construction activities of other trades, touch up and restore damaged or defaced coated surfaces.

3.6 CEMENTITIOUS COATING SCHEDULE

A. Above-Grade Concrete and Masonry:

1. Polymer-Modified Cementitious Coating:

a. Prime Coat: As recommended in writing by the topcoat manufacturer.
b. Intermediate Coat: As recommended in writing by topcoat manufacturer.
c. Topcoat: Polymer-modified cementitious coating.

END OF SECTION 099726

GENESEE COUNTY
DEPARTMENT OF FISCAL SERVICES

County Administration Building
324 S. Saginaw St., Suite 9A
Flint, Michigan 48502
(810) 257-3030

Derrick Jones
Purchasing Administrator

April 29, 2026

ADDENDUM #1
Genesee County Invitation to Bid # 26-491
Masonry Repairs at Genesee County Courthouse & Jail

Genesee County's Purchasing Department is issuing this addendum for the purpose of announcing the following information:

- The due date for this project remains Thursday, May 21, 2026. All bids must be submitted to the Purchasing Department before 2:00 PM (Local Time). Bids will be time-stamped using the time clock located in the Fiscal Services Department. The only acceptable evidence of the time of receipt of the bid is that of the aforementioned time clock. The bid opening will take place on the same day (5/21/2026) at approximately 2:05 PM, and it is open to the public. The Purchasing Department will announce the following information during the bid opening: vendor's name and price submitted.
- This addendum contains pages 042000-1 through 042000-18 of the "Detailed Specification," which is not included in the online document. Please note that the proposal form listed in the table of contents (Series # 004000) of the "Detailed Specification" is currently on pages 14-16 of the invitation to bid letter document.

The due date for this request remains Thursday, May 21, 2026, before 2:00 PM (EDT).

Vendors must indicate receipt of this addendum by adding the following on the Signature Page (item #6) and on the exterior of the envelope containing your proposal:

ADDENDUM #1 RECEIVED

ALL BIDS MUST BE RECEIVED AT:
GENESEE COUNTY PURCHASING DEPARTMENT
324 S. SAGINAW ST., STE. 9A
FLINT, MI 48502

Derrick Jones, Purchasing Administrator
G:/bid2/2026/26-491.add1

SECTION 04 2000 - UNIT MASONRY

PART 1 GENERAL

1.1 SECTION INCLUDES

1. Concrete block.
2. Mortar and grout.
3. Reinforcement and anchorage.
4. Flashings.
5. Cavity wall insulation.
6. Lintels.
7. Accessories.
8. Products installed under this section:
   a. Cast stone units set in masonry; furnished by Section 04 4200 - Exterior Stone Cladding.
   b. Manufactured reglets embedded in unit masonry; furnished by Section 07 6200 - Sheet Metal Flashing and Trim.
9. Products furnished under this section:
   a. Dovetail anchor slots for connecting masonry to cast-in-place concrete; installed by Section 03 3000 - Cast-in-Place Concrete.

1.2 REFERENCE STANDARDS

A. ACI 315 - Guide to Presenting Reinforcing Steel Design Details; 2018.
B. ASTM D1056 - Standard Specification for Flexible Cellular Materials—Sponge or Expanded Rubber 2020.
C. ASTM D2000 - Standard Classification System for Rubber Products in Automotive Applications 2018.
D. NFPA 285 - Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components 2019.
E. ASTM A240/A240M - Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications 2020a.
F. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement 2020.
G. ASTM C90 - Standard Specification for Loadbearing Concrete Masonry Units 2021.
H. ASTM C91/C91M - Standard Specification for Masonry Cement 2018.
I. ASTM C144 - Standard Specification for Aggregate for Masonry Mortar 2018.
J. ASTM C150/C150M - Standard Specification for Portland Cement 2021.
K. ASTM C207 - Standard Specification for Hydrated Lime for Masonry Purposes 2018.
L. ASTM C216 - Standard Specification for Facing Brick (Solid Masonry Units Made From Clay or Shale) 2021.
M. ASTM C270 - Standard Specification for Mortar for Unit Masonry 2019a, with Editorial Revision.
N. ASTM C404 - Standard Specification for Aggregates for Masonry Grout 2018.
O. ASTM C476 - Standard Specification for Grout for Masonry 2020.
P. ASTM C1072 - Standard Test Methods for Measurement of Masonry Flexural Bond Strength 2019.

Q. ASTM C979/C979M - Standard Specification for Pigments for Integrally Colored Concrete 2016.
R. ASTM C1148 - Standard Test Method for Measuring the Drying Shrinkage of Masonry Mortar 1992a (Reapproved 2014).
S. ASTM C1314 - Standard Test Method for Compressive Strength of Masonry Prisms 2021.
T. ASTM C 1329 - Standard Specification for Mortar Cement - 2016.
U. ASTM C1714/C1714M - Standard Specification for Preblended Dry Mortar Mix for Unit Masonry 2019a.
V. ASTM D226/D226M - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing 2017.
W. ASTM E514/E514M - Standard Test Method for Water Penetration and Leakage Through Masonry 2020.
X. BIA Technical Notes No. 7 - Water Penetration Resistance - Design and Detailing 2017.
Y. BIA Technical Notes No. 13 - Ceramic Glazed Brick Exterior Walls 2017.
Z. TMS 402/602 - Building Code Requirements and Specification for Masonry Structures 2016.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Product Coordination and Limitations: Provide products that when combined with materials and components of other sections, form exterior wall assemblies as detailed on Drawings, that comply with NFPA 285 testing and acceptance criteria.

1.4 SUBMITTALS

A. See Section 01 4000 - Quality Requirements, for submittal procedures.
B. Product Data: Provide data for the following:
   1. Masonry Units:
      a. Include data on material properties.
      b. Masonry units used in structural masonry, include data and calculations establishing average net-area compressive strength of units.
   2. Cementitious materials. Include name of manufacturer, brand name and type.
   3. Mortar admixtures.
   4. Preblended, dry mortar mixes. Include description of type and proportion of ingredients.
   5. Grout mixes. Include description of type and proportion of ingredients.
   6. Sound Isolating anchors.
   7. Anchors, ties, weep/cavity vent, preformed control-joint gaskets, cavity drainage material, and metal accessories.
C. Shop Drawings: Indicate pertinent dimensions, materials, anchorage, size and type of fasteners, and accessories for masonry.
   1. Masonry Units: Indicate sizes, profiles, coursing, and locations of special units.
   2. Reinforcing: Indicate bending, lap lengths, and placement of unit masonry reinforcing bars.
      a. Comply with ACI 315.
   3. Flashings: Provide details of embedded flashings including end dams, corners, drips, weeps.
D. Mix Designs: For each type of mortar and grout. Include description of type and proportions of ingredients.

1. Include test reports for mortar mixes required to comply with property specification. Test according to ASTM C 109/C 109M for compressive strength, ASTM C 1506 for water retention, and ASTM C91/C 91M for air content.
2. Include test reports, according to ASTM C 1019, for grout mixes required to comply with compressive strength requirements.

E. Samples: Submit 3 samples of standard block, decorative block, facing brick, ceramic glazed facing brick, and ceramic glazed structural clay facing tile units to illustrate color, texture, and extremes of color range.

F. Manufacturer's Certificate: Certify that water repellent admixture manufacturer has certified masonry unit manufacturer as an approved user of water repellent admixture in the manufacture of concrete block.

G. Test Reports:
1. Concrete masonry manufacturer's test reports for units with integral water repellent admixture.
2. Masonry Veneer Anchors: At wall cavities greater than 4-1/2 inches, provide masonry veneer anchor manufacturer's test reports indicating compliance with TMS 402/602 for lateral load requirements; wall cavity depth includes airspace and cavity wall insulation thickness.

H. NFPA 285 Documentation: For each product, submit documentation listing compatible materials and components that when used together in wall assemblies as detailed on Drawings, comply with NFPA 285 testing and acceptance criteria.

I. Manufacturer's Qualification Statement.

J. Installer's Qualification Statement.

K. Cold-Weather and Hot-Weather Procedures: Detail description of methods, material, and equipment to be used to comply with requirements.

1.5 QUALITY ASSURANCE

A. Comply with provisions of TMS 402/602, except where exceeded by requirements of Contract Documents.

B. Fire Rated Assemblies: Comply with applicable codes and UL Assembly Numbers indicated.

C. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section with minimum 5 years of documented experience.

D. Installer Qualifications: Company specializing in performing work of the type specified and with at least 5 years of documented experience.

1.6 MOCK-UP

A. Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for material and execution.

B. Construct a masonry wall as a mock-up panel sized 8 feet long by 6 feet high; include mortar, accessories, structural backup, wall openings, flashings (with lap joint, corner, and end dam), through-wall flashing (omit masonry above half of flashings, wall insulation, and sealant-filled joint at least 16 inches long in exterior wall in mock-up.

C. Include lower corner of window opening at upper corner of exterior wall mockup. Make opening approximately 12 inches wide by 16 inches high.

D. Locate where directed.

E. Where masonry is to match existing, erect mockups adjacent and parallel to existing surface.

F. Clean one-half of exposed faces of mockups with masonry cleaner as indicated.

G. Approval of mockups is for color, texture, and blending of masonry units; relationship of mortar and sealant colors to masonry unit colors; tooling of joints; and aesthetic qualities of workmanship.
   1. Approval of mockups is also for other materials and construction qualities specifically approved by Architect in writing.
   2. Approval of mockups does not constitute approval of deviations from Contract Documents contained in the mock-ups unless Architect specifically approves such deviations in writing.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver, handle, and store masonry units by means that will prevent mechanical damage and contamination by other materials.
B. Store masonry units on elevated platforms in a dry location. If units are not stored in a enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.
C. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
D. Deliver preblended, dry mortar mix in moisture-resistant containers. Store preblended, dry mortar mix in delivery containers on elevated platforms in a dry location or in covered weatherproof dispensing silos.
E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.
F. Handle and store ceramic glazed masonry units in protective cartons or trays. Do not remove from protective packaging until ready for installation.

1.8 FIELD CONDITIONS

A. Protection of Masonry: During construction, cover tops of walls, protections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.
   1. Extend cover a minimum of 24 inches (600 mm) down both sides of walls, and hold cover securely in place.
   2. Where one wythe of multi-wythe masonry walls is completed in advance of other wythes, secure cover a minimum of 24 inches (600 mm) down face next to unconstructed wythe, and hold cover in place.
B. Do not apply uniform floor or roof loads for at least 12 hours and concentrated loads for at least three days after building masonry walls or columns.
C. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.
   1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over wall surface.
   2. Protect sills, ledges, and projections from mortar droppings.
   3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.
   4. Turn scaffold boards near the wall on edge at the end of each day to prevent rain from splashing mortar and dirt onto completed masonry.
D. 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 TMS 602/ACI 530.1/ASCE 6.

1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F (4 deg C) and higher and will remain so until masonry has dried, but not less than seven days after completing cleaning.
2. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6.

PART 2 PRODUCTS

2.1 UNIT MASONRY, GENERAL

A. Masonry Standard: Comply with TMS 602/ACI 530.1/ASCE 6, except as modified by requirements in the Contract Documents.
B. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated. Do not use units where such defects are exposed in the completed Work and will be within 20 feet (6 m) vertically and horizontally of a walking surface.
C. Fire-Resistance Ratings: Comply with requirements for fire-resistance-rated assembly designs indicated.
   1. Where fire-resistance-rated construction is indicated, units shall be listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction.

2.2 CONCRETE MASONRY UNITS

C. Concrete Block: Comply with referenced standards and as follows:
   1. Size: Standard units with nominal face dimensions of 16 by 8 inches and nominal depths as indicated on drawings for specific locations.
   2. Special Shapes: Provide non-standard blocks configured for corners, lintels, headers, control joint edges, and other detailed conditions.
   3. Exposed Outside Block Corners: Provide bullnose, radiused, corners unless otherwise indicated on Drawings.
      a. Field-ground radiused corners are not permitted.
      b. Stop bullnose at bulkhead/soffits.
      c. Provide square corners at door frame even with block and bullnose where door frame is set back from corner.
   4. Load-Bearing and Non-Loadbearing Units: ASTM C90, normal weight.
      a. Standard Units:
         2) Exposed Faces: Manufacturer's standard color and texture as approved by Architect per ASTM C90.
         3) Manufacturers:
            (a) Consumers Concrete Corp.: www.consumersconcrete.com.
            (b) Echelon by Oldcastle: www.echelonmasonry.com.
            (c) Fendt Builder's Supply, Inc.: www.fendtproducts.com.
            (d) Grand Blanc Cement Products: www.grandblanccementproducts.com.
            (e) Michigan Certified Products, Inc.: www.micertconcrete.com.
            (f) National Block Company: www.nationalblock.com.
            (g) Substitutions: See Section 012500 - Substitution Procedures.
   5. Units with Integral Water Repellent: Concrete block units as specified in this section with polymeric liquid admixture added to concrete masonry units at the time of manufacture.
      a. Locations: Provide at exposed exterior concrete block and elsewhere as indicated.
      b. Performance of Units with Integral Water Repellent:

2) Water Permeance: When tested per ASTM E514/E514M and for a minimum of 72 hours.
   (a) No water visible on back of wall above flashing at the end of 24 hours.
   (b) No flow of water from flashing equal to or greater than 0.032 gallons per hour at the end of 24 hours.
   (c) No more than 25 percent of wall area above flashing visibly damp at end of test.
3) Flexural Bond Strength: ASTM C1072; minimum 10 percent increase.
4) Compressive Strength: ASTM C1314; maximum 5 percent decrease.
5) Drying Shrinkage: ASTM C1148; maximum 5 percent increase in shrinkage.

c. Limitations:
   2) Use only in combination with mortar containing integral water repellent admixture.
   3) Source Limitations: Use water repellent admixtures for masonry units and mortar from a single manufacturer.

d. Products:
   2) BASF Corp.; MasterPel 240: www.master-builders-solutions.basf.us.
   3) Euclid Chemical Company (The); an RPM company; Eucon Blocktite Admixture: www.euclidchemical.com.
   4) GCP Applied Technologies Inc.; Dry-Block Block Admixture: www.gcpat.com.
   5) Substitutions: See Section 012500 - Product Requirements.

2.3 BRICK UNITS

A. General: Provide shapes indicated and as follows, with exposed surfaces matching finish and color of exposed faces of adjacent units:
   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 stretcher units cannot accommodate special conditions, including those at corners, movement joints, bond beams, sashes, and lintels.
   3. Provide special shapes for applications requiring brick of size, form, color, and texture on exposed surfaces that cannot be produced by sawing.
   4. Provide special shapes for applications where shapes produced by sawing would result in sawed surfaces being exposed to view.

B. Manufacturers: Provide products from the manufacturer listed for each brick type.
   1. Brick Tech Architectural, Inc.: www.interstatebrick.com.
   2. Belden Brick Company
   3. Substitutions: See Section 012500 – Substitution Procedures.

C. Facing Brick:
   1. Special shapes: Provide molded units as required by conditions indicated, unless standard units can be sawn to produce equivalent effect.
   2. B-1: Field Brick.
      a. Manufacturer: Belden Brick Company
         (a) Substitutions: See Section 012500 – Substitution Procedures.
      b. ASTM C216, Type FBS, Grade SW.
      c. Size (Actual): Match Existing (Modular).
      d. Color/Blend: Match Existing.

2.4 MORTAR AND GROUT MATERIALS

A. Masonry Cement: ASTM C91/C91M.
B. Mortar Cement: ASTM C1329.
C. Portland Cement: ASTM C150/C150M, Type I.
D. Hydrated Lime: ASTM C207, Type S.
E. Mortar Aggregate: ASTM C144.
F. Grout Aggregate: ASTM C404.
G. Pigments for Colored Mortar: Pure, concentrated mineral pigments specifically intended for mixing into mortar and complying with ASTM C979/C979M.
   1. Color(s): Match Existing
   2. Manufacturers:
      a. Davis Colors: www.daviscolors.com.
      b. Lambert Corporation: www.lambertusa.com.
      c. Solomon Colors: www.solomoncolors.com/sle.
      d. Substitutions: See Section 012500 - Product Requirements.
H. Water: Clean and potable.
I. Integral Water Repellent Admixture for Mortar: Polymeric liquid admixture added to mortar at the time of manufacture.
   1. Locations: Provide at exposed exterior concrete block and elsewhere as indicated.
   2. Limitations:
      a. Use only in combination with masonry units manufactured with integral water repellent admixture.
      b. Source Limitations: Use water repellent admixtures for masonry units and mortar from a single manufacturer.
   3. Meet or exceed performance specified for water repellent admixture used in masonry units.
   4. Products:
      a. BASF Corp.; MasterPel 210MA: www.master-builders-solutions.basf.us.
      b. Euclid Chemical Company (The); an RPM company; Blocktite Mortar Admixture: www.euclidchemical.com.
      c. GCP Applied Technologies Inc.; Dry-Block Mortar Admixture: www.gcpat.com.
      d. Substitutions: See Section 012500 - Product Requirements.
J. Packaged Dry Material for Mortar for Unit Masonry:
   1. Contractor's option, prepackaged dry material for mortar may be used subject to compliance with mortar requirements of this section including, but not limited to, the following:
      a. Mortar Types: As indicated.
      b. Color(s): Match Existing
      c. Use only water repellent admixture for mortar from the same manufacturer as water repellent admixture in masonry units.
   2. Portland Cement Based: Premixed Portland cement, hydrated lime, and sand; complying with ASTM C1714/C1714M and capable of producing mortar of the specified strength in accordance with ASTM C270 with the addition of water only.
      a. Manufacturers:
         1) Amerimix, an Oldcastle brand; www.amerimix.com.
         2) The QUIKRETE Companies; wwwquikcrete.com.
         3) SPEC MIX, Inc.: www.specmix.com.
         4) Substitutions: See Section 012500 - Substitution Procedures.

3. Masonry Cement Based: Premixed masonry cement and mason's sand; complying with ASTM C1714/C1714M and capable of producing mortar of the specified strength in accordance with ASTM C270 with the addition of water only.
   a. Manufacturers:
      1) Amerimix, an Oldcastle brand; www.amerimix.com.
      2) The QUIKRETE Companies; wwwquikcrete.com.
      3) SPEC MIX, Inc.: www.specmix.com.
      4) Substitutions: See Section 012500 – Substitution Procedures.

K. Packaged Dry Material for Grout for Masonry: Premixed cementitious materials and dried aggregates; capable of producing grout of the specified strength in accordance with ASTM C476 with the addition of water only.
   1. At Contractor's option, prepackaged dry material for grout may be used subject to compliance with grout requirements of this section.
   2. Manufacturers:
      a. Amerimix, an Oldcastle brand; www.amerimix.com.
      b. The QUIKRETE Companies; wwwquikcrete.com.
      c. SPEC MIX, Inc.: www.specmix.com.
      d. Substitutions: See Section 012500 - Substitution Procedures.

2.5 REINFORCEMENT AND ANCHORAGE

A. Manufacturers:
   1. Basis-of-Design Product: The design for each item specified is based on the product named. Provide either the named product or a comparable product by one of the following:
      a. Fero Corp.; www.ferocorp.com.
      b. Heckmann Building Products; www.heckmannbuildingprods.com.
      c. Hohmann & Barnard, Inc.; www.h-b.com.
      d. Wire-Bond; www.wirebond.com.
      e. Substitutions: See Section 012500 - Substitution Procedures.

B. Reinforcing Steel: ASTM A615/A615M, Grade 60 (60,000 psi), deformed billet bars; Uncoated.

C. Reinforcing Bar Positioners: 0.156 inch, ASTM A1064/A1064M steel wire, hot dip galvanized after fabrication to 16 CFR 1201 Class B.
   1. Basis-of-Design Product: Hohmann & Barnard, Inc.; www.h-b.com: RB and RB-Twin Rebar Positioners.

D. Reinforcing Bar Lap Joint Ties: ASTM A1064/A1064M steel wire, mill galvanized to 16 CFR 1201 Class 3.
   1. Basis-of-Design Product: Hohmann & Barnard, Inc.; www.h-b.com: Spyra-Lox Rebar Lap- Joint Tie.

E. Single Wythe Joint Reinforcement: Truss or ladder type; ASTM A1064/A1064M steel wire, hot dip galvanized after fabrication to 16 CFR 1201 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 1/2 inch of mortar coverage on each exposure.
   1. Basis-of-Design Product: Hohmann & Barnard, Inc.; www.h-b.com: 120 Truss-Mesh or 220 Ladder-Mesh.

F. Adjustable Multiple Wythe Joint Reinforcement: Truss or ladder type with adjustable ties or tabs spaced at 16 in on center ASTM A1064/A1064M steel wire, hot dip galvanized after fabrication to ASTM A153/153M, Class B; 0.1483 inch side rods with 0.1483 inch cross rods and adjustable components of 0.1875 inch wire; width of components

as required to provide not more than 1 inch and not less than 1/2 inch of mortar coverage from each masonry face.

1. Basis-of-Design Product: Hohmann & Barnard, Inc.; www.h-b.com: 170 Truss LOX-ALL Adjustable Eye Wire or 270 Ladder LOX-ALL Adjustable Eye Wire with 2X-HOOK.

G. Rigid Anchors: Fabricate from steel bars 1-1/2 inches wide by 1/4 inch thick by 24 inches long, with ends turned up 2 inches; hot dip galvanized to ASTM A153/A153M Class B.
   1. Basis-of-Design Product: Hohmann & Barnard, Inc.; www.h-b.com: 344 Rigid Partition Anchor.

H. Partition Top Anchors: 0.1875 inch thick metal plate with a 3/8 inch diameter metal rod 6 inches long welded to plate and with closed-end plastic tube fitted over rod that allows rod to move in and out of tube; hot dip galvanized to ASTM A153/A153M Class B.
   1. Basis-of-Design Product: Hohmann & Barnard, Inc.; www.h-b.com: PTA-420-HS and PTA Tubes.

I. Dovetail Anchor Slots for Connecting to Concrete: 2-piece anchors that permit differential movement between masonry and concrete frame, sized to provide not more than 1 inch and not less than 1/2 inch of mortar coverage from masonry face.
   1. Concrete frame: Dovetail anchors of bent steel, nominal 1 inch width by 1 inch deep by 0.03 in thick, with trapezoidal wire ties 0.1875 inch thick, hot dip galvanized to ASTM A 153/A 153M, Class B.
      a. Basis-of-Design Product: Hohmann & Barnard, Inc.; www.h-b.com: 305 Dovetail Slot with 315 Flexible Dovetail Brick Ties.

J. Adjustable Anchors for Connecting to Structural Steel Framing: 2-piece anchors that permit differential movement between masonry and steel frame, sized to provide not more than 1 inch and not less than 1/2 inch of mortar coverage from masonry face.
   1. Crimped wire anchors for welding to frame, 0.25 inch thick, with trapezoidal wire ties 0.1875 inch thick, hot dip galvanized to ASTM A 153/A 153M, Class B.
   2. Basis-of-Design Product: Hohmann & Barnard, Inc.; www.h-b.com: 359/359FP anchors with 301W or VBT ties.

K. Adjustable Masonry Veneer Anchors: 2-piece anchors that permit differential movement between masonry veneer and structural backup, hot dip galvanized to ASTM A 153/A 153M, Class B.
   1. For cold-formed metal framing and sheathing back-up.
   2. Anchor plates: Not less than 0.075 inch thick, designed for fastening to structural backup through sheathing by two fasteners.
   3. Wire ties: Rectangular shape, 0.1875 inch thick.
   4. Vertical adjustment: Not less than 2 inches.
   5. Basis-of-Design Product: Hohmann & Barnard, Inc.; www.h-b.com: HB-213 anchors with 2X-HOOK.

L. Sound Isolating Anchors.
   1. Provide as indicated on the Drawings.
      a. Basis of Design Product: Provide PSB-M isolators as manufactured by Kinetics. Texture Wire cut or as follows:
         1) Mason Industries AB-716.

2.6 FLASHINGS

A. Flexible Fabric Flashing - Self-Adhering: Self-adhering stainless steel/polymer fabric flashing. ASTM A240/A240M; 2 mil type 304 stainless steel sheet bonded on one

side to one sheet of polymer fabric. Flashing shall be self-adhering using a pressure-sensitive adhesive.

1. Type 304 stainless steel.
   a. Thickness: 2 mils, miniumum.
2. Basis-of-Design Product: Provide York Manufacturing, Inc.; York 304: www.yorkmfg.com, or one of the following products:
   a. Hohmann & Barnard, Inc.; Mighty-Flash SA: www.h-b.com.
   b. Wire-Bond; Bond-N-Flash SA: www.wirebond.com.
   c. Substitutions: See Section 012500 - Substitution Procedures.
3. Factory-Fabricated Inside and Outside Flashing Corners and End Dams: Stainless steel.
   a. Manufacturer shall be the same as flexible fabric flashing manufacturer.
4. Factory-Fabricated Drip Plates including Inside and Outside Corners: Stainless steel.
   a. Pre-formed smooth drip plates with hemmed edges.
   b. Manufacturer shall be the same as stainless steel/polymer fabric flashing manufacturer.
5. Flashing Sealant/Adhesives: Silicone, polyurethane, or silyl-terminated polyether/polyurethane or other type required or recommended by flashing manufacturer; type capable of adhering to type of flashing used.
   a. Manufacturer shall be the same as flexible fabric flashing manufacturer.

2.7 CAVITY WALL INSULATION

A. Extruded Polystyrene Board, ASTM C 578-, Type IV, 25 psi minimum compressive strength, unfaced, R5.6 per inch. Provide thickness as indicated on the drawings.
   1. Basis-of-Design: Styrofoam Cavitymate Ultra Extruded Polystyrene Foam Insulation as manufactured by The Dow Chemical Company.
   2. Equal products as manufactured by one of the following companies are also acceptable:
      a. DiversiFoam Products.
      b. Owens Corning.

B. Adhesive and Joint Filler: Type as recommended and approved by the insulation manufacturer.

2.8 ACCESSORIES

A. Preformed Control Joints: Rubber material. Provide with corner and tee accessories, fused joints. ASTM D2000, 2AA-805.
   1. Manufacturers:
      a. Hohmann & Barnard, Inc: www.h-b.com/sle.
      b. WIRE-BOND: www.wirebond.com/#sle.
      c. Substitutions: See Section 012500 - Substitution Procedures.

B. Compressible Joint Filler: Closed cell neoprene; oversized 50 percent to joint width; self expanding; in maximum lengths available. ASTM D1056, Grade 2A1.
   1. Manufacturers:
      a. Hohmann & Barnard, Inc: www.h-b.com/sle.
      b. WIRE-BOND: www.wirebond.com/#sle.
      c. Substitutions: See Section 012500 - Substitution Procedures.

C. Cavity Mortar Control/Drainage Material: Semi-rigid polyethylene or polyester mesh panels, sized to thickness of wall cavity, and designed to prevent mortar droppings from clogging weeps and cavity vents and allow proper cavity drainage.
   1. Mortar Diverter: Semi-rigid mesh designed for installation at flashing locations.
      a. Full depth of cavity and 10 inches high, with dovetail-shaped notches 7 inches deep that prevent clogging with mortar droppings.
      b. Basis-of-Design Product: Provide Hohmann & Barnard, Inc.; www.h-b.com; Mortar Trap or a comparable product by one of the following:
         1) Advanced Building Products Inc.; www.advancedbuildingproducts.com.
         2) Heckmann Building Products; www.heckmannbuildingprods.com.
         3) Mortar Net Solutions; www.mortarnet.com.
         4) Wire-Bond; www.wirebond.com.
         5) Substitutions: See Section 012500 - Substitution Procedures.
D. Building Paper: ASTM D226/D226M, Type I ("No.15") asphalt felt.
E. Termination Bars: Stainless steel, 1/8 inch thick by 1-1/2 inch high with 3/8 inch sealant flange at top; compatible with flashing membrane and adhesives.
   1. Manufacturers:
      a. Advanced Building Products Inc.; www.advancedbuildingproducts.com
      b. Heckmann Building Products; www.heckmannbuildingprods.com.
      c. Hohmann & Barnard, Inc.; www.h-b.com.
      d. Wire-Bond; www.wirebond.com.
      e. York Manufacturing, Inc.; www.yorkmfg.com
      f. Substitutions: See Section 012500 - Substitution Procedures.
F. Weep Inserts and Cavity Vents:
   1. Type: Plastic cellular/honeycomb design.
   2. Color(s): As selected by Architect from manufacturer's full range.
   3. Basis-of-Design Product: Provide Hohmann & Barnard, Inc.; www.h-b.com; QV Quadro- Vent or a comparable product by one of the following:
      a. Advanced Building Products Inc.; www.advancedbuildingproducts.com.
      b. Heckmann Building Products; www.heckmannbuildingprods.com.
      c. Mortar Net Solutions; www.mortarnet.com.
      d. Wire-Bond; www.wirebond.com.
      e. Substitutions: See Section 012500 - Substitution Procedures.
G. Mortar and Grout Screen: 1/4 inch square, polypropylene monofilament screening for preventing grout flow; width sized to match masonry widths.
   1. Basis-of-Design Product: Provide Hohmann & Barnard, Inc.; www.h-b.com; MGS or a comparable product by one of the following:
      a. Heckmann Building Products; www.heckmannbuildingprods.com.
      b. Wire-Bond; www.wirebond.com.
      c. Substitutions: See Section 012500 - Substitution Procedures.
H. Masonry Cleaners:
   1. 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.
      a. Basis-of-Design Products: Provide PROSOCO, Inc.; www.prosoco.com: Sure Klean 600 or Sure Klean Vana Trol or a comparable product by one of the following:
         1) Diedrich Technologies, Inc.; www.diedrichtechnologies.com.
         2) Substitutions: See Section 012500 - Substitution Procedures.

2.9 LINTELS

A. Masonry Lintels: Masonry lintels made from bond beam CMUs matching adjacent CMUs in color, texture, and weight classification; reinforcing bars as indicated, and filled with grout.
B. Loose Steel Lintels: As indicated on drawings

2.10 MORTAR AND GROUT MIXING

A. Mortar for Unit Masonry: ASTM C270, using the Proportion Specification.
   1. Masonry below grade and in contact with earth: Type M.
   2. Exterior, loadbearing masonry: Type S.
   3. Exterior, non-loadbearing masonry: Type N.
   4. Interior, loadbearing masonry: Type N.
   5. Interior, non-loadbearing masonry: Type N.
   6. Precast concrete units: Same Type as wall masonry in which unit is set.
   7. Limestone units: Same Type as wall masonry in which unit is set.
   8. Pointing Mortar: Type N.
B. Colored Mortar: Proportion selected pigments and other ingredients to match Architect's sample, without exceeding manufacturer's recommended pigment-to-cement ratio.
C. Grout: ASTM C476; consistency required to fill completely volumes indicated for grouting; fine grout for spaces with smallest horizontal dimension of 2 inches or less; coarse grout for spaces with smallest horizontal dimension greater than 2 inches.
   1. Grout Strength: 3000 psi at 28 days, unless otherwise indicated.
D. Admixtures: Add to mixture at manufacturer's recommended rate and in accordance with manufacturer's instructions; mix uniformly.
E. Mixing: Use mechanical batch mixer and comply with referenced standards.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that field conditions are acceptable and are ready to receive masonry.
B. Verify that foundations are within tolerances specified.
C. Verify that related items provided under other sections are properly sized and located.
D. Verify that built-in items are in proper location, and ready for roughing into masonry work.
E. Verify that reinforcing dowels are properly placed.

3.2 PREPARATION

A. Direct and coordinate placement of metal anchors supplied for installation under other sections.

3 INSTALLATION, GENERAL

A. Thickness: Build cavity and composite walls and other masonry construction to full thickness shown. Build single-wythe walls to actual widths of masonry units, using units of widths indicated.
B. Build chases and recesses to accommodate items specified in this and other Sections.

C. Leave openings for equipment to be installed before completing masonry. After installing equipment, complete masonry to match construction immediately adjacent to opening.
D. 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 laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.
E. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures. Mix units from several pallets or cubes as they are placed.
F. Matching Existing Masonry: Match coursing, bonding, color, and texture of existing masonry.

3.2 COURSING

A. Establish lines, levels, and coursing indicated. Protect from displacement.
B. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness.
C. Existing Masonry: Match coursing and bonding of existing masonry unless otherwise indicated.
D. Concrete Masonry Units: Unless otherwise indicated:
   1. Bond: Running.
   2. Coursing: One unit and one mortar joint to equal 8 inches.
   3. Mortar Joints: Concave.
   4. Mortar Joint Thickness: 3/8 inch.

3.3 PLACING AND BONDING

A. Lay hollow masonry units with face shell bedding on head and bed joints.
B. Buttering corners of joints or excessive furrowing of mortar joints is not permitted.
C. Remove excess mortar and mortar smears as work progresses.
D. Remove excess mortar with water repellent admixture promptly. Do not use acids, sandblasting or high-pressure cleaning methods.
E. Interlock intersections and external corners.
F. Tooth-in new masonry work with existing, unless otherwise indicated on Drawings.
G. Tooth-in cutting and patching masonry work unless otherwise indicated on Drawings.
H. Do not shift or tap masonry units after mortar has achieved initial set. Where adjustment must be made, remove mortar, and replace.
I. Perform job site cutting of masonry units with proper tools to provide straight, clean, unchipped edges. Prevent broken masonry unit corners or edges.
J. Cut mortar joints flush where wall tile is scheduled, or resilient base is scheduled.
K. Isolate the top joint of masonry partitions from horizontal structural framing members and slabs or decks with compressible joint filler.
L. Isolate cast stone units and precast architectural concrete units from clay masonry with building paper or similar method of providing a continuous bond break/slip plane.
M. Set cast-stone trim units in full bed of mortar with full vertical joints. Fill dowel, anchor, and similar holes.
   1. Clean soiled surfaces with fiber brush and soap powder and rinse thoroughly with clear water.
   2. Allow cleaned surfaces to dry before setting.
   3. Wet joint surfaces thoroughly before applying mortar.

4. Rake out mortar joints for pointing with sealant.

3.4 WEEPS INSERTS/CAVITY VENTS

A. Install weep inserts in veneer and cavity walls at 24 inches on center horizontally above through-wall flashing, above shelf angles and lintels, and at bottom of walls.
B. Install cavity vents in veneer and cavity walls at 24 inches on center horizontally below shelf angles and lintels and near top of walls.

3.5 CAVITY MORTAR CONTROL

A. Do not permit mortar to drop or accumulate into cavity air space or to plug weep/cavity vents.
B. Provide not less than 2 inches of airspace between back of masonry veneer and face of insulation.
   1. Keep airspace clean of mortar droppings and other materials during construction. Bevel beds away from airspace, to minimize mortar protrusions into airspace. Do not attempt to trowel or remove mortar fins protruding into airspace.
C. For cavity walls, build inner wythe ahead of outer wythe to accommodate accessories.
D. Install cavity mortar diverter at base of cavity and at other flashing locations as recommended by manufacturer to prevent mortar droppings from blocking weep/cavity vents.

3.6 HORIZONTAL JOINT REINFORCEMENT AND ANCHORAGE - SINGLE WYTHE MASONRY AND CAVITY WALL MASONRY

A. Unless otherwise indicated on drawings or specified under specific wall type, install horizontal joint reinforcement 16 inches on center.
B. Place masonry joint reinforcement in first and second horizontal joints above and below openings. Extend minimum 16 inches each side of opening.
C. Place continuous joint reinforcement in the first and second joint below top of walls.
D. Lap joint reinforcement ends minimum 6 inches.
E. Masonry to Structural Steel and Concrete:
   1. Provide an open space not less than 1/2 inch wide between masonry and structural steel or concrete unless otherwise indicated. Keep open space free of mortar and other rigid materials.
   2. Fasten anchors to structural framing and embed in masonry joints as masonry is laid. Unless otherwise indicated on drawings or closer spacing is indicated under specific wall type, space anchors at maximum of 24 inches horizontally and 24 inches vertically.
F. Embed ties and anchors in mortar joint and extend into masonry unit a minimum of 1-1/2 inches with at least 5/8-inch mortar cover to the outside face of the anchor.

3.7 MASONRY VENEER REINFORCEMENT AND ANCHORAGE

A. Masonry Back-Up: Embed anchors to bond veneer at maximum 16 inches on center vertically and 16 inches on center horizontally. Place additional anchors at perimeter of openings and ends of panels, so maximum spacing of anchors is 8 inches on center.
B. Stud Back-Up: Secure veneer anchors to stud framed back-up and embed into masonry veneer at maximum 16 inches on center vertically and 16 inches on center hori-

zontally. Place additional anchors at perimeter of openings and ends of panels, so maximum spacing of anchors is 8 inches on center.

C. Embed ties and anchors in mortar joint and extend into masonry veneer unit a minimum of 1-1/2 inches with at least 5/8 inch mortar cover to the outside face of the anchor.

3.8 MASONRY FLASHINGS

A. General:
   1. Install masonry flashings according to manufacturer's instructions and as indicated on the Drawings.
   2. Remove or cover protrusions or sharp edges that could puncture flashings.
   3. Lap end joints of flashings at least 6 inches, minimum, and seal watertight with flashing sealant/adhesive.
   4. Whether or not specifically indicated, install masonry flashing to divert water to exterior at all locations where downward flow of water will be interrupted.
      a. Extend flashings full width at such interruptions and at least 6 inches, minimum, into adjacent masonry or turn up at least 8 inches, minimum, to form watertight pan at non-masonry construction.
   5. Terminate flashing up 8 inches minimum on vertical surface of backing:
      a. Install vertical leg of flashing over fluid-applied or self-adhered air/vapor barriers over backing or per manufacturer's direction, unless otherwise indicted.
      b. Anchor vertical leg of flashing into backing with a termination bar and sealant.
   6. Install flashing in accordance with manufacturer's instructions and BIA Technical Notes No. 7, unless more stringent requirements are specified in this section.

B. Flexible Fabric Flashing:
   1. Use factory-fabricated drip plates, corners and end dams.
   2. Extend flexible fabric flashing to within 1/4 inch of exterior face of masonry overlapping metal drip plate.
   3. Extend flexible fabric flashing full width of cavity space and turn up inner masonry wythe or sheathing at least 14 inches.
   4. Secure flexible fabric flashing to wall with continuous termination bar and apply sealant across top of termination bar.

3.9 LINTELS

A. Install loose steel lintels over openings.

B. Install reinforced unit masonry lintels over openings where steel lintels are not scheduled.
   1. Unless otherwise indicated, reinforce as follows:
      a. Openings to 48 inches: Place two, No. 4 reinforcing bars 1 inch from bottom web.
      b. Openings from 48 inches to 80 inches: Place two, No. 5 reinforcing bars 1 inch from bottom web.
      c. Openings over 80 inches: Reinforce openings as detailed.
   2. Do not splice reinforcing bars.
   3. Support and secure reinforcing bars from displacement. Maintain position within 1/2 inch of dimensioned position.
   4. Place and consolidate grout fill without displacing reinforcing.
   5. Allow masonry lintels to attain specified strength before removing temporary supports.

C. Where the Drawings do not indicate otherwise, provide reinforced unit masonry lintels at all openings and penetrations wider than 12 inches in brick and 24 inches in CMU.
D. Maintain minimum 8 inch bearing on each side of opening unless otherwise indicated.

3.10 BOND BEAMS

A. Bond Beams: At bond beams or other locations for horizontally reinforced masonry, provide special masonry units or saw to accommodate reinforcement.
B. Reinforce bond beams with 2, No. 5 bars, 1 inch from bottom web unless otherwise indicated.
C. Lap reinforcing bar splices minimum 24 bar diameters, unless otherwise indicated.
D. Place and consolidate grout fill without displacing reinforcing.

3.11 VERTICAL MASONRY REINFORCEMENT

A. Reinforcement: Size and place vertical masonry reinforcement to comply with TMS 402/602 requirements and as indicated on Drawings.
B. Place and consolidate grout fill without displacing reinforcing.

3.12 GROUTING

A. Reinforced Hollow Unit Masonry: Keep vertical cores to be grouted clear of mortar, including bed area of first course.
B. Perform grouting by means of high-lift technique, except in locations that mandate use of low- lift grouting technique.
   1. Do not use high-lift grouting where size of cavities mandates use of fine grout.
C. Low-Lift Grouting:
   1. Limit height of pours to 12 inches.
   2. Limit height of masonry to 16 inches above each pour.
   3. Pour grout only after vertical reinforcing is in place; place horizontal reinforcing as grout is poured. Prevent displacement of bars as grout is poured.
   4. Place grout for each pour continuously and consolidate immediately; do not interrupt pours for more than 1-1/2 hours.
D. High-Lift Grouting:
   1. Verify that horizontal and vertical reinforcement is in proper position and adequately secured before beginning pours.
   2. Clean out masonry cells and other cavities to be grouted by high pressure water spray or compressed air. Remove debris, allow to dry, and inspect before sealing cleanout openings.
   3. Hollow Masonry: Limit lifts to maximum 4 feet and pours to maximum height of 24 feet.
   4. Place grout for spanning elements in single, continuous pour.

3.13 GROUTED COMPONENTS

A. Support and secure reinforcing bars from displacement. Maintain position within 1/2 inch of dimensioned position.
B. Place and consolidate grout fill without displacing reinforcing.
C. At bearing locations, fill masonry cores with grout for a minimum 12 inches either side of opening.

3.14 CONTROL AND EXPANSION JOINTS

A. Do not continue horizontal joint reinforcement through control or expansion joints.
B. Install preformed control joint device in continuous lengths. Seal butt and corner joints in accordance with manufacturer's instructions.
   1. Refer to Section 07 9200 - Joint Sealants for sealant installation.
C. Control Joints to be spaced at no greater than the least of 1.5 times the height of the masonry wall, 24'-0" max, or as shown on design documents. Control Joints shall be provided within 12'-0" or .75 times the height of the masonry wall of the corners of the wall construction.

3.15 BUILT-IN WORK

A. As work progresses, install built-in metal door frames, glazed frames, anchor bolts, plates, and reglets and other items to be built into the work and furnished under other sections.
B. Install built-in items plumb, level, and true to line.
C. Bed anchors of metal door and glazed frames in adjacent mortar joints. Fill frame voids solid with grout.
   1. Fill adjacent masonry cores with grout minimum 12 inches from framed openings.

3.16 TOLERANCES

A. Dimensions and Locations of Elements:
   1. Location of elements in plan; do not vary from that indicated on Drawings by more than:
      a. Plus or minus 1/2 inch.
   2. Dimensions in cross section; do not vary from that indicated on Drawings by more than:
      a. Minus 1/4 inch.
      b. Plus 1/2 inch.
   3. Maximum Variation from Alignment of Columns and Pilasters: 1/4 inch.
   4. Maximum Variation From Unit to Adjacent Unit: 1/16 inch.
   5. Maximum Variation from Plane of Wall: 1/4 inch in 10 ft and 1/2 inch in 20 ft or more.
   6. Maximum Variation from Plumb: 1/4 inch per story non-cumulative; 1/2 inch in two stories or more.
   7. Maximum Variation from Level Coursing: 1/8 inch in 3 ft and 1/4 inch in 10 ft; 1/2 inch in 30 ft.
   8. Maximum Variation from Cross Sectional Thickness of Walls: 1/4 inch.
   9. Lines and Levels:
      a. Maximum variation from level:
         1) Includes, but is not limited to, the following:
            (a) Lintels.
            (b) Sills.
            (c) Parapets.
            (d) Reveals.
            (e) Other conspicuous lines.
         2) Do not vary from level by more than:
            (a) 1/4 inch in 20 feet.

(b) 1/2 in in 40 feet or more.

b. Maximum variation from plumb:
   1) Includes, but is not limited to, the following:
      (a) External corners.
      (b) Control and expansion joints.
      (c) Reveals.
      (d) Other conspicuous lines.
   2) Do not vary from plumb by more than:
      (a) 1/4 inch in 20 feet.
      (b) 1/2 in in 40 feet or more.

10. Mortar Joint Thickness: Do not vary thickness indicated by more than plus or minus 1/8 inch.

3.17 FIELD QUALITY CONTROL

A. An independent testing agency will perform field quality control tests, as specified in Section 01 4000 - Quality Requirements.

3.18 CLEANING

A. Protect surrounding elements and finishes from damage due to cleaning procedures.
B. Appearance Standard: Cleaned surfaces are to have a uniform appearance as viewed from 10 feet away, subject to Architect's approval.
C. Remove excess mortar and mortar droppings.
D. Clean soiled surfaces with cleaning solution.
E. Apply masonry cleaners to masonry surfaces according to manufacturer's written instructions; use brush or spray application.
   1. Periodically during rinsing, test pH of rinse water running off of cleaned area to determine that chemical cleaner is completely removed.
      a. Repeat rinsing until tested pH of water runoff is between 6.7 and 7.5.

END OF SECTION - 042000

CONSTRUCTION WORK CONTRACT

This Contract for Professional Work (the "Contract") is by and between the County of Genesee, a Michigan Municipal Corporation, whose principal place of business is located at 1101 Beach Street, Flint, Michigan 48502 (the "County"), and Spartan Construction Group INC., a MI INC., whose principal place of business is located at 30956 Industrial Rd, Livonia, MI 48150 (the "Contractor") (the County and the Contractor together, the "Parties").

1. Scope of Work

The Contractor agrees to perform the Work described on Exhibit A (the "Work").

2. Work Schedule

2.1 Within 5 days of execution of this Contract, the County and the Contractor will cooperate to establish a schedule for performance of the Work (the "Work Schedule") indicating the starting and completion dates for each portion of the Work, including any interim contractually required completion dates. The Work shall be scheduled in order to minimize disruption to County operations.

2.2 The Work Schedule shall indicate that the Work must be substantially complete by 8/30/27, with a final completion by 9/30/27.

2.3 The Parties agree that time is of the essence for performance of this Contract, and any unjustified delay by the Contractor will result in damages to the County.

3. Compensation

The Contractor shall be paid a lump sum of $6,424,000.00 for the performance of the Work. Upon completion of the Work, the Contractor must provide to the County an invoice in a form acceptable to the County, along with any necessary supporting documentation. The County will pay the Contractor within sixty (60) days of the County's acceptance of the invoice and supporting documentation.

4. Taxes

The County is a Michigan Municipal Corporation. The Contractor acknowledges that the County is exempt from Federal Excise Tax and Michigan Sales and Use Tax.

5. Contract Administrator

The contract administrator for this Contract is Raymond Zanke (the "Contract Administrator"). The Contractor acknowledges that the Contract Administrator is the primary County contact for notices and instructions related to this Contract. The Contractor agrees to provide a copy of all notices related to this Contract to the Contract Administrator.

6. Inspection and Acceptance

All goods and equipment provided with the Work are received subject to inspection and testing. If goods are defective or fail to meet the specifications, the County shall have the right to reject the goods or to require the Contractor to correct the defects. The Contractor shall correct the defects at no cost to the County or pay the County for expenses incurred by the County in correcting the defects. Rejected goods will be held for forty-five days after delivery awaiting instructions from the Contractor. After the forty-five day period, the County will dispose of the goods and the County shall have no further liability to the Contractor. The Contractor is responsible for the costs of handling, packing, and transportation incurred in returning or disposing of defective or non-conforming goods.

7. Condition of Worksite

The Contractor must keep the worksite clean and free from the accumulation of waste materials and refuse caused by the performance of the Work. Upon completion of the Work, Contractor shall remove all waste materials, refuse, tools, equipment, machinery, and surplus materials, and shall leave the worksite in "broom-clean" condition.

8. Prevailing Wage Addendum

The Contractor acknowledges that Section 3-302(3) of the Genesee County Purchasing Regulations highly recommends the Contractor and its subcontractors to pay laborers and mechanics not less than the prevailing wage rates and fringe benefits for corresponding classes of laborers and mechanics employed on similar projects in the area. The Contractor agrees to use its best efforts to comply with the provisions of the Prevailing Wage Addendum attached as Exhibit C to this Contract.

9. Warranties

The Contractor warrants that:

9.1 The Work will be performed in a good and workmanlike manner and in accordance with generally acceptable practices in the construction industry.

9.2 For a period of one (1) year following completion of the Work, the Work and any goods provided with the Work shall conform to the specifications and be free of defects in workmanship or materials.

9.3 The Contractor will comply with all federal, state, and local laws in the performance of the Work.

9.4 All materials furnished under this Agreement must be new unless otherwise specified in this Agreement.

9.5 The Contractor will comply with the requirements of any federal or state grants used to fund or support this Contract. Copies of any applicable grant agreements are available upon request

9.6 The Contractor will obtain and maintain all applicable licenses and permits necessary to provide the Work for the entire term of this Contract.

Breach of any of these warranties is cause for termination of this Contract. The Contractor agrees to indemnify, defend, and hold the County, its officials, officers, agents, and employees harmless from any and all claims, damages, or liability, including defense costs, arising out of the Contractor's breach of these warranties.

10. Insurance Requirements and Indemnification

10.1 Insurance Requirements

The Contractor shall at all times maintain in full force and effect for duration of the term of this agreement the following insurance coverages. All coverage shall be with insurance companies licensed and admitted to write business in the State of Michigan, having an AM Best rating of at least A- and acceptable to Genesee County. In addition, the County reserves the right to modify or waive at any time any applicable insurance requirements based on the scope of services provided at the discretion of the County's Risk Manager or other authorized representative of the County.

☐ **COMMERCIAL GENERAL LIABILITY:** Occurrence form, with limits of liability not less than $1,000,000 per occurrence/$2,000,000 aggregate. Coverage shall include bodily injury, personal injury, property damage (broad form), premises/operations, blanket contractual liability, independent contractors' coverage, products/completed operations, explosion, collapse and underground hazard, if applicable, and a per project aggregate. Limits may be satisfied using primary and excess/umbrella liability policies. The policy shall name Genesee County, including all employees, elected and appointed officials and volunteers, all boards, commissions, and/or authorities, and their board members, employees, and volunteers as additional insureds. Coverage shall be primary and noncontributory with a waiver of subrogation in favor of Genesee County.

☐ **AUTOMOBILE LIABILITY:** Including Michigan No-Fault coverages, with limits of liability not less than $1,000,000 per occurrence combined single limit for bodily injury and property damage. Coverage shall include all owned, non-owned, and hired vehicles. Limits may be satisfied using primary and excess/umbrella liability policies. -. The policy shall name Genesee County, including all employees, elected and appointed officials and volunteers, all boards, commissions, and/or authorities, and their board members, employees, and volunteers as additional insureds.

☐ **WORKERS' COMPENSATION AND EMPLOYER'S LIABILITY:** as required by and in accordance with all applicable statutes of the State of Michigan, including Employers' Liability Coverage.

Worker's Compensation – Required limits:
Coverage A – Coverage will include statutory requirements.
Coverage B – Employers Liability
$500,000 each Person
$500,000 each Person by Disease
$500,000 Policy Limit - Disease

☐ **PROFESSIONAL LIABILITY (Errors & Omissions):** in an amount not less than $1,000,000 per occurrence and $1,000,000 aggregate. If this policy is a claims made form, the Contractor shall be required to keep said policy in force, or purchase "tail" coverage for a minimum of three (3) years after the termination of this contract.

☐ **BUILDERS RISK COVERAGE:** is to be purchased to cover subject property for all risks of loss (including theft and sinkhole), subject to a waiver of coinsurance, and covering off-site storage, transit and installation risks as indicated in the Installation Floater and Motor Truck Cargo insurance described hereafter, if such coverages are not separately provided. If flood and/or earthquake risks exist, flood and earthquake insurance are to be purchased. If there is loss of income, extra expense and/or expediting expense exposure, such coverage is to be purchased. If boiler and machinery risks are involved, boiler and machinery insurance, including coverage for testing, is to be purchased. The Builders Risk insurance is to be endorsed to cover the interests of all parties, including the County and all vendors and subcontractors.

☐ **POLLUTION LIABILITY:** The Contractor shall procure and maintain for the duration of this contract Pollution Liability insurance in an amount not less than one million dollars ($1,000,000) aggregate. If this policy is on a claims made form, the Contractor shall be required to keep said policy in force, or purchase "tail" coverage for a minimum of 3 years after the termination of this contract.

☐ **OWNERS' AND CONTRACTORS' PROTECTIVE (OCP) LIABILITY INSURANCE:** The Contractor shall procure and maintain during the life of this contract, a separate Owners' and Contractors' Protective Liability Policy with limits of liability not less than $1,000,000 per occurrence and aggregate combines single limit for Personal Injury, Bodily Injury, and Property Damage. Genesee County shall be "Named Insured" on said coverage. Thirty (30) days' Notice of Cancellation shall apply to this policy.

☐ **CONTRACT BOND REQUIREMENTS:** The contractor shall furnish satisfactory performance and/or lien bonds in every contract exceeding $50,000.00 (Fifty-Thousand Dollars) for the construction, alteration, or repair of any public building or public work or improvement of the County. The contractor shall furnish to the County at their own cost a performance bond and a payment bond which shall become binding upon the award of the contract to the contractor. Such bonds shall be issued by a surety admitted in the state of Michigan and must be acceptable to the County. The penal sum of the bonds shall each be one hundred percent (100%) of the original Contract Price. MCL 129.201 et seq.

Required Insurance Documentation

1. **Certificate of Insurance**

The vendor must provide a Certificate of Insurance evidencing the required insurance set forth above. The Certificate of Insurance must reference the contract/bid number.

The Certificate Holder should be listed as follows:

Genesee County
Attn: Risk Management
1101 Beach Street, Flint, MI 48502

2. Endorsements

The vendor/contractor must also provide the following endorsements, including but not limited to:

a. An additional insured endorsement (equivalent in coverage to ISO form CG 20 10 and CG 20 37) naming the "Genesee County, including all employees, elected and appointed officials and volunteers, all boards, commissions, and/or authorities, and their board members, employees, and volunteers as additional insureds" as additional insureds under the general liability policy. No person or department should be identified as the additional insured. Coverage afforded shall be considered primary and any other insurance or self- insurance, maintained by or available to the County shall be considered secondary and/or excess.

b. An endorsement to each policy stating that such policy shall not be cancelled or reduced in coverage except after thirty (30) days prior written notice to County. Cancellation, material restriction, nonrenewal or lapse of any of the required policies shall be grounds for immediate termination of the Agreement by the County. If any of the required coverages expire during the term of the contract, the vendor shall deliver renewal certificates, endorsements, and/or policies to County at least ten (10) days prior to the expiration date.

c. A primary & noncontributory endorsement (equivalent in coverage to ISO form CG 20 01).

d. A waiver of subrogation endorsement (equivalent in coverage to ISO form CG 24 04).

In lieu of required endorsements, a copy of the policy sections, where coverage is provided for additional insured and cancellation notice, may be acceptable. Copies of all policies mentioned above shall be furnished, if so requested.

10.2 Indemnification

The Contractor agrees to indemnify, defend, and hold the County, its officials, officers, agents, and employees harmless from any and all claims, damages, or liability, including defense costs, arising out of the Contractor's performance of the Work or presence on the County's property or worksite.

11. Suspension of Work

11.1 Order to Suspend Performance

Upon written order of the Contract Administrator, the Contractor agrees to immediately suspend performance of the Work. The Contractor shall not be entitled to compensation for any Work performed during any period in which the Contract Administrator has directed that the Work be suspended.

11.2 Necessary Actions Before Suspension

If immediate suspension of the Work would cause harm, injury, or damage to persons or property, the Contractor must immediately notify the Contract Administrator of the nature of such harm, injury, or damage, and obtain written authorization from the Contract Administrator to take such necessary action as to prevent or minimize such harm, injury or damage. Actions authorized by the Contract Administrator pursuant to this paragraph are compensable.

12. Bonds

The Contractor must furnish separate performance and payment bonds to the Customer. The performance and payment bonds must set forth a penal sum in an amount not less than 95% of the Contract Sum. Each bond furnished by the Contractor must incorporate by reference the terms of this Contract as fully as though they were set forth verbatim in the bonds. The penal sum of both the performance and payment bonds will be automatically increased in the amount of any increase to the Contract Sum. The performance and payment bonds furnished by the Contractor must be issued by a surety, or sureties acceptable to the County.

13. Termination

13.1 Termination for Cause

If the Contractor is in breach of any provision of this Contract, and such breach continues for fourteen (14) days after written notice is issued to the Contractor by the County of the breach, the County may terminate this Contract. Such termination for cause is effective upon receipt of the notice of termination by the Contractor.

In addition to any other remedies provided by law or this Contract, the Contractor shall be responsible for all costs incurred by the County as a result of the Contractor's breach and termination, including any costs to obtain substitute performance.

13.2 Immediate Termination

If the County, in its discretion, determines that the Contractor's breach of this Contract constitutes a threat to public health, safety, or welfare, the County may terminate this Contract immediately upon notice to the Contractor.

In addition to any other remedies provided by law or this Contract, the Contractor shall be responsible for all costs incurred by the County as a result of the Contractor's breach and termination, including any costs to obtain substitute performance.

13.3 Termination for Convenience

If the County determines that it is in the County's best interests, the County may terminate this Contract upon thirty (30) days' written notice to the Contractor.

The County shall pay for all work properly performed up to the effective date of the notice of termination.

13.4 Termination for Lack of Funding

If this Contract is funded by public funds or a grant from a public or private entity, and the funds are not appropriated or the grant is discontinued, the County may terminate this Contract by written notice specifying the date of termination.

The County shall pay for all work properly performed up to the effective date of the notice of termination.

14. Nondiscrimination

The Contractor covenants that it will not discriminate against an employee or applicant of employment with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of race, color, religion, national origin, age, sex, gender identity, gender expression, sexual orientation, height, weight, marital status or a disability that is unrelated to the individual's ability to perform the duties of a particular job or position, and that it will require the same non-discrimination assurances from any subcontractor who may be used to carry out duties described in this contract. Contractor covenants that it will not discriminate against businesses that are owned by women, minorities or persons with disabilities in providing Work covered by this Contract, and that it shall require the same assurances from subcontractors. Breach of this covenant shall be regarded as a material breach of this contract.

15. Freedom of Information Act

This Contract and all attachments, as well as all other information submitted by the Contractor to the County, are subject to disclosure under the provisions of MCL 15.231, *et seq*., known as the "Freedom of Information Act".

16. Intellectual Property

Any intellectual property created by the Contractor in the performance of the Services shall be considered a work made for hire, and any and all rights in such intellectual property shall belong solely to the County. Upon the County's request, the Contractor agrees to execute any documents necessary to convey ownership of such intellectual property to the County.

17. Audit Rights

17.1 Certification of Accurate Information

Contractor certifies that all information provided to the County by the Contractor relating to the award or modification of this Contract, or any payment or dispute related to this Contract, is true and correct. The

Contractor further certifies that its accounting system conforms to generally accepted accounting principles.

17.2 Inspection

The Contractor agrees that the County may inspect the Contractor's plant, place of business, or worksite to ensure compliance with the terms of this Contract. If this Contract is funded or supported with any state or federal grant funds, the state or federal agencies responsible for administering the applicable grants may examine the Contractor's plant, place of business, or worksite to ensure compliance with the terms of this Contract and the terms of the applicable grant.

17.3 Audit

The Contractor agrees that the County may examine the Contractor's records to ensure compliance with the terms of this Contract. If this Contract is funded or supported with any state or federal grant funds, the state or federal agencies responsible for administering the applicable grants may examine the Contractor's records to ensure compliance with the terms of this Contract and the terms of the applicable grant.

17.4 Records Retention

The Contractor agrees to maintain any business records related to this Contract or the Contractor's performance under this Contract for a period of at least three (3) years after final payment.

18. Identity Theft Prevention

18.1 In the event that the Contractor will obtain identifying information during the performance of the Services, the Contractor must take reasonable precautions to ensure that such identifying information is protected from unauthorized disclosure and is used only for the purpose of performing the Services.

18.2 For the purposes of this Paragraph, "identifying information" means any name or number that may be used, alone or in conjunction with any other information, to identify a specific person, including but not limited to name, address, telephone number, social security number, date of birth, driver's license number, taxpayer identification number, or routing code.

19. Independent Contractor

The Contractor and its agents and employees are independent contractors and are not the employees of the County.

20. General Provisions

20.1 Entire Contract

This Contract, consisting of the following documents and Exhibits, embodies the entire Contract between the Parties.

20.1.1. The Contract – This Professional Services Contract

20.1.2. Exhibit A – Description of the Work

20.1.3. Exhibit B – Payment Schedule

20.1.4. Exhibit C – Prevailing Wage Addendum

There are no promises, terms, conditions, or obligations relating to the Services other than those contained herein. In the event of a conflict between this Contract and any Exhibit, the terms of this Contract shall control.

20.2 No Assignment

The Contractor may not assign or subcontract this Contract without the express written consent of the County.

20.3 Modification

This Contract may be modified only in writing executed with the same formalities as this Contract.

20.4 Binding Effect

The provisions of this Contract shall apply to and bind the heirs, executors, administrators, and assigns all of the parties hereto.

20.5 Headings

The paragraph headings in this Contract are used only for ease of reference, and do not limit, modify, construe, and or interpret any provision of this Contract.

20.6 Governing Law and Venue

This Contract is entered into under the laws of the State of Michigan. Any litigation between the Parties arising out of this Contract must be initiated within two years of the cause of action accruing and must be brought in a court of competent jurisdiction in Genesee County, Michigan.

20.7 Subpoena Power

The Contractor acknowledges and understands that the Chairperson of the Genesee County Board of Commissioners, pursuant to MCL 46.3(5), as amended, has the power to administer oaths, issue subpoenas, and compel a person's attendance in the same manner as a court of law. The Contractor agrees to submit to this power with respect to this Contract.

21.8 Severability and Survival

In the event that any provision of this Contract is deemed by any court of competent jurisdiction to be legally ineffective, such decision shall have no effect on the remaining provisions of this Contract.

21.9 Interpretation

Each Party has had opportunity to have this Contract reviewed by legal counsel and has had equal opportunity to contribute to its contents. In the event of any dispute concerning the interpretation of this Contract, there shall be no presumption in favor of any interpretation solely because the form of this Contract was prepared by the County.

21.10 Remedies

All remedies specified in this Contract are non-exclusive. The County reserves the right to seek any and all remedies available under this Contract and applicable law in the event that the Contractor fails to abide by the terms of this Contract.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the Parties have caused this Contract to be executed by their duly authorized agents.

Spartan Construction Group, INC

By:_____
Matthew Spisak
President

Date:_____

GENESEE COUNTY

By:_____
Dale Weighill, Chairperson
Board of Commissioners

Date:_____

EXHIBIT A
Description of the Work

See attached Detailed Specifications, Drawings, and Addendum #1

EXHIBIT C
Prevailing Wage Addendum

1. Contractor and each subcontractor shall pay their laborers and mechanics not less than the prevailing wage rates and fringe benefits for corresponding classes of laborers and mechanics employed on similar projects in the area as of the date of this Contract. For the purposes of this Addendum, a contractor or subcontractor shall be in compliance if the contractor pays wages consistent with the prevailing wage rates published by the United States Department of Labor as of the effective date of this Contract, which can be found at https://sam.gov/content/wage-determinations.

2. The Contractor and each subcontractor shall keep and maintain a daily sign-in sheet for employees present at the worksite. Such sign-in sheet shall record the time each employee arrived at the worksite, and the time each employee left the worksite.

3. The Contractor and each subcontractor shall submit to the County certified payroll records on Form WH-347, with the accompanying payroll certification, within seven (7) days of the end of each pay period.

4. The Contractor shall not misclassify work assignments.

5. The Contractor shall ensure that any persons paid at apprentice rates are properly registered with the US Office of Apprenticeship program.

6. If any person believes that the Contractor or a subcontractor has not paid wages in accordance with the Effective Prevailing Wage Rates for the project, the person must submit a written complaint to the Genesee County Purchasing Director. The written complaint shall state that the complaining party agrees to abide by the provisions of this Addendum.

7. The Purchasing Director will provide a copy of the complaint to the Michigan Fair Contracting Center (the "Auditor"). The Auditor shall conduct an audit of certified payroll and provide a written report to the Purchasing Director when completed. The report shall document whether prevailing wages were paid, and note any deficiencies. The Contractor and all subcontractors shall comply with any requests for information or documentation from the Auditor during the compliance audit. The Auditor may conduct onsite interviews of workers during a compliance audit.

8. If the Auditor determines that the Effective Prevailing Wage Rates were not properly paid, the contractor or subcontractor responsible for the wage payments at issue shall remedy the deficiency. The County may withhold payments to the general contractor until such deficiency is remedied.

9. If the Auditor determines that prevailing wages were not properly paid, the Contractor or the subcontractor responsible for the prevailing wage payments at issue shall compensate the Auditor for the compliance audit at the rates to be specified. The Owner may withhold payments otherwise due under the Contract to enforce this requirement. If the Auditor determines that prevailing wages were properly paid, the complaining party shall compensate the Auditor for the compliance audit at the rates to be specified. The Auditor shall provide the party responsible for payment of the costs of the compliance audit with a written invoice, and the responsible party shall pay all amounts due within thirty (30) days of the date of the invoice. The Auditor shall provide a copy of the invoice to the Purchasing Director.

10. The Contractor shall include this Addendum in each subcontract entered into on this project, and shall furnish a copy of the Effective Prevailing Wage Rates to each subcontractor.