

ADDENDUM NO. 7

July 26, 2021

**HANOVER CENTRAL HIGH SCHOOL ADDITIONS AND RENOVATIONS
Cedar Lake, IN 46303**

TO: ALL BIDDERS OF RECORD

This Addendum forms a part of and modifies the Bidding Requirements, Contract Forms, Contract Conditions, the Specifications, and the Drawings dated March 29, 2021 by Gibraltar Design. Acknowledge receipt of the Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of Pages ADD 7-1 through 7-4 and attached Specification Section 09 67 22 – Resinous Flooring.

GENERAL NOTE: This Re-Bid is ONLY for Bid Category No. 6 – Flooring. Bid opening is Thursday, August 12, 2021 at 10:00AM (CDST) in the Hanover Community Schools Administration Board Room

A. NOTICE OF BIDDING DEADLINE CHANGE

1. All references to the Bidding Deadline or the Bids Received Date are to change to August 12, 2021. Bids are due at 10:00 AM (CDST) and will be publicly read aloud immediately following the deadline.
 - a. Modify references in Specification Section - 00 00 10.

B. SPECIFICATION SECTION 00 00 20 - TABLE OF CONTENTS

1. **Add:**

Specification Section 09 67 22 - Resinous Flooring

C. SPECIFICATION SECTION 00 02 00 - NOTICE TO BIDDERS

1. Replace:

Specification Section 00 02 00 - Notice to Bidders with attached revised section.

D. SPECIFICATION SECTION 00 31 00 - BID FORM

1. Replace:

Specification Section 00 31 00 - Bid Form with attached revised section.

E. SPECIFICATION SECTION 00 43 50 - SUBCONTRACTORS AND PRODUCTS LIST

1. Replace:

Pages 3 through 5 with attached revised Specification Section 00 43 50 - Subcontractors and Products List

F. SPECIFICATION SECTION 01 12 00 - MULTIPLE CONTRACT SUMMARY

Under Article 3.03 Bid Categories, make the following adjustments:

1. Delete:

BID CATEGORY NO. 6 - FLOORING

2. Add:

BID CATEGORY NO. 6A - HARD TILE

General Requirements in Paragraph 3.02B above.

Section	01 21 00	Allowances
Section	07 84 00	Firestopping (As Applicable)
Section	07 90 00	Joint Sealants (As Applicable)
Section	09 31 00	Ceramic Tile

Clarification No. 1:

Regarding Specification Sections 07 84 00 Firestopping and 07 90 00 Joint Sealants; all contractors are to provide Firestopping and Joint Sealants in accordance with the Contract Documents. In general, the Contractor whose work creates a joint that requires firestopping or joint sealant (in the normal sequence of work) is to provide the firestopping or joint sealant. The **Bid Category No. 7 Contractor** is responsible for caulking at all hollow metal frames.

Clarification No. 2:

The **Bid Category No. 6A Contractor** shall vacuum the sub floor prior to installation of flooring materials.

3. **BID CATEGORY NO. 6B - CARPET**

General Requirements in Paragraph 3.02B above.

Section	01 21 00	Allowances
Section	07 84 00	Firestopping (As Applicable)
Section	07 90 00	Joint Sealants (As Applicable)
Section	09 68 00	Carpet

Clarification No. 1:

Regarding Specification Sections 07 84 00 Firestopping and 07 90 00 Joint Sealants; all contractors are to provide Firestopping and Joint Sealants in accordance with the Contract Documents. In general, the Contractor whose work creates a joint that requires firestopping or joint sealant (in the normal sequence of work) is to provide the firestopping or joint sealant. The **Bid Category No. 7 Contractor** is responsible for caulking at all hollow metal frames.

Clarification No. 2:

The **Bid Category No. 6B Contractor** shall vacuum the sub floor prior to installation of flooring materials.

Clarification No. 3:

The **Bid Category No. 6B Contractor** is to include in their bid, 20 man-hours for work to be performed by a skilled carpenter journeyman at the direction of the Construction Manager throughout the duration of the project. At the end of the project, unused hours will be converted into a dollar amount and returned to the Owner as a deduct Change Order.

4. **BID CATEGORY NO. 6C - RESILIENT & RESINOUS FLOORING**

General Requirements in Paragraph 3.02B above.

Section	01 21 00	Allowances
Section	07 84 00	Firestopping (As Applicable)
Section	07 90 00	Joint Sealants (As Applicable)
Section	09 65 13	Resilient Flooring
Section	09 67 22	Resinous Flooring

Clarification No. 1:

Regarding Specification Sections 07 84 00 Firestopping and 07 90 00 Joint Sealants; all contractors are to provide Firestopping and Joint Sealants in accordance with the Contract Documents. In general, the Contractor whose work creates a joint that requires firestopping or joint sealant (in the normal sequence of work) is to provide the firestopping or joint sealant. The **Bid Category No. 7 Contractor** is responsible for caulking at all hollow metal frames.

Clarification No. 2:

The **Bid Category No. 6C Contractor** shall vacuum the sub floor prior to installation of flooring materials.

Clarification No. 3:

The **Bid Category No. 6C Contractor** is to include in their bid, 20 man-hours for work to be performed by a skilled carpenter journeyman at the direction of the Construction Manager throughout the duration of the project. At the end of the project, unused hours will be converted into a dollar amount and returned to the Owner as a deduct Change Order.

Clarification No. 4:

The **Bid Category No. 6C Contractor** is to include \$5,000 in their bid for costs associated with the submittal website and document management subscription. Any unused amount will be credited back to the Owner as a deductive Change Order.

G. SPECIFICATION SECTION 01 21 00 - CONTRACT ALLOWANCES

Under Article 3.03, make the following adjustments:

1. Add:

K. Bid Category No. 6A	Hard Tile	\$5,000
L. Bid Category No. 6B	Carpet	\$5,000
M. Bid Category No. 6C	Resilient & Resinous Flooring	\$5,000

H. SPECIFICATION SECTION 01 32 00 - SCHEDULES AND REPORTS

1. Replace:

The Guideline Schedule in its entirety with the attached revised Guideline Schedule.

SECTION 00 02 00 - NOTICE TO BIDDERS

NOTICE TO BIDDERS

Notice is hereby given that sealed bids will be received:

By: Hanover Community School Corporation
9520 W. 133rd Avenue
Cedar Lake, IN 46303

For: Hanover Central High School Additions and Renovations
Rebid of Bid Category No. 6 - Flooring
10120 W. 133rd Avenue
Cedar Lake, IN 46303

At: Hanover Community School Corporation
Administration Building
9520 W. 133rd Avenue
Cedar Lake, IN 46303

Until: 10:00AM (CST), on August 12, 2021

Bid Opening: Bids will be publicly opened and read aloud at 10:00AM (CST), on August 12, 2021, at the Hanover Community School Corporation Administration Building Conference Room.

All work for the complete construction of the Project will be under one or more prime contracts with the Owner based on bids received and on combinations awarded. The Construction Manager will manage the construction of the Project.

Construction shall be in full accordance with the Bidding Documents which are on file with the Owner and may be examined by prospective bidders at the following locations:

Office of the Construction Manager
The Skillman Corporation
8006 Aetna Street
Merrillville, IN 46410

The Skillman Plan Room
www.skillmanplanroom.com

Prime and Non-Prime Contract Bidders must place an order on www.skillmanplanroom.com to be able to download documents electronically or request printed documents. There is no cost for downloading the bidding documents. Bidders desiring printed documents shall pay for the cost of printing, shipping, and handling. Reprographic Services are provided by:

Reprographic Arts, 1017 Franklin St., Michigan City, IN 46360, Phone (219) 872-9111

Bid security in the amount of ten percent (10%) of the Bid must accompany each Bid in accordance with the Instructions to Bidders.

The successful Bidders will be required to furnish Performance and Payment Bonds for one hundred percent (100%) of their Contract amount prior to execution of Contracts.

Contractors submitting bids for the performance of any Work as specified in this building Project should make such Bids to **Hanover Community School Corporation**. Contractors are advised that the Contract as finally entered into with any successful Bidder may be entered into with either the School Corporation or the Building Corporation or certain portions of the Contract may be entered into by both the School Corporation and the Building Corporation.

The Owner reserves the right to accept or reject any Bid (or combination of Bids) and to waive any irregularities in bidding. All Bids may be held for a period not to exceed 60 days before awarding contracts.

Hanover Community School Corporation

By: Mrs. Mary Tracy-MacAulay, Superintendent

END OF SECTION 00 02 00

CONTRACTOR'S BID FOR PUBLIC WORKS FORM NO. 96

Format (Revised 2013)
(Amended for HCSC)

Hanover Central High School
Additions and Renovations
Hanover Community School Corporation
Cedar Lake, IN

PART I

(To be completed for all bids. Please type or print)

Date (month, day, year): _____

BIDDER (Firm) _____

Address _____ P.O. Box _____

City/State/Zip _____

Telephone Number: _____ Email Address: _____

Person to contact regarding this Bid _____

Pursuant to notices given, the undersigned offers to furnish labor and/or materials necessary to complete the public works project of:

Insert Category No. (s) and Name(s)

Of public works project, ***Hanover Central High School Additions and Renovations***, in accordance with Plans and Specifications prepared by ***Gibraltar Design, 9102 N. Meridian St., Ste. #300, Indianapolis, IN 46260***, as follows:

BASE BID

For the sum of _____
(Sum in words)

_____ DOLLARS (\$ _____)
(Sum in figures)

The undersigned acknowledges receipt of the following Addenda:

Receipt of Addenda No. (s) _____

Bidder agrees that this Bid shall remain in force for a period of sixty (60) consecutive calendar days from the due date, and Bids may be accepted or rejected during this period. Bids not accepted within said sixty (60) consecutive calendar days shall be deemed rejected.

Has visited the jobsite	YES	NO
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Bidder has included their Written Drug Testing Plan that covers all employees of the bidder who will perform work on the public work project and meets or exceeds the requirements set in IC 4-13-18-5 or IC 4-13-18-6.

Bidder has included:

DBE:	YES _____%	NO _____
MBE:	YES _____%	NO _____
WBE:	YES _____%	NO _____
VBE:	YES _____%	NO _____

The undersigned further agrees to furnish a bond or certified check with this Bid for an amount specified in the Notice to Bidders. If Alternate Bids apply, submit a proposal for each in accordance with the Plans and Specifications.

If additional units of material included in the contract are needed, the cost of units must be the same as that shown in the original contract if accepted by the governmental unit. If the bid is to be awarded on a unit bases, the itemization of the units shall be shown on a separate attachment.

The contractor and his subcontractors, if any, shall not discriminate against or intimidate any employee, or applicant for employment, to be employed in the performance of this contract, with respect to any matter directly or indirectly related to employment because of race, religion, color, sex, national origin, or ancestry. Breach of this covenant may be regarded as a material breach of the contract.

I, the undersigned bidder, or agent as a contractor on a public works project, understand my statutory obligation to use steel products made in the United States (I.C. 5-16-8-2). I hereby certify that I and all subcontractors employed by me for this project will use U.S. steel on this project if awarded. I understand that violations hereunder may result in forfeiture of contractual payments.

ALTERNATE BIDS

A blank entry or an entry of "No Bid", "N/A", or similar entry on any Alternate will cause the bid to be rejected as non-responsive only if that Alternate is selected. If no change in the bid amount is required, indicate "No Change".

****MARK "ADD" OR "DEDUCT" FOR EACH ALTERNATE****

Alternate Bid No. 1 - New Early Childcare Classroom and FACS Lab

Change the Base Bid the sum of _____
(sum in words)

_____ DOLLARS (\$_____) ADD
DEDUCT
(sum in figures)

Alternate Bid No. 2 - Slope Metal Roof Replacement

Change the Base Bid the sum of _____
(sum in words)

_____ DOLLARS (\$_____) ADD
DEDUCT
(sum in figures)

Alternate Bid No. 3 - Gas Heating/DX Cooling DOAS Unit A1

Change the Base Bid the sum of _____
(sum in words)

_____ DOLLARS (\$_____) ADD
DEDUCT
(sum in figures)

Alternate Bid No. 4 - New Gas Heating/DX Cooling DOAS Unit B1

Change the Base Bid the sum of _____
(sum in words)

_____ DOLLARS (\$_____) ADD
DEDUCT
(sum in figures)

Alternate Bid No. 5 - New Piping Distribution System to Units A and B

Change the Base Bid the sum of _____
(sum in words)

_____ DOLLARS (\$_____) ADD
(sum in figures) DEDUCT

Alternate Bid No. 6 - Hubbell Lighting

Change the Base Bid the sum of _____
(sum in words)

_____ DOLLARS (\$_____) ADD
(sum in figures) DEDUCT

Alternate Bid No. 7 - VCT Manufactured by Armstrong

Change the Base Bid the sum of _____
(sum in words)

_____ DOLLARS (\$_____) ADD
(sum in figures) DEDUCT

PART II

(For projects of \$150,000 or more – IC 36-1-12-4)

These statements to be submitted under oath by each bidder with and as a part of his bid. (Attach additional pages for each section as needed.)

SECTION I EXPERIENCE QUESTIONNAIRE

1. What public works projects has your organization completed for the period of one (1) year prior to the date of the current bid?

Contract Amount	Class of Work	Completion Date	Name and Address of Owner

2. What public works projects are now in process of construction by your organization?

Contract Amount	Class of Work	Completion Date	Name and Address of Owner

3. Have you ever failed to complete any work awarded to you?_____If so, where and why?

4. List references from private firms for which you have performed work.

SECTION II PLAN AND EQUIPMENT QUESTIONNAIRE

1. Explain your plan or layout for performing proposed Work. (Examples could include a narrative of when you could begin, complete the project, number of workers, etc. and any other information which you believe would enable the governmental unit to consider your bid.)

2. Please list the names and addresses of all subcontractors (i.e. persons or firms outside your own firm who have performed part of the work) that you have used on public works projects during the past five (5) years along with a brief description of the work done by each subcontractor.

3. If you intend to sublet any portion of the work, state the name and addresses of each subcontractor, equipment to be used by the subcontractor, and whether you will require a bond. However, if you are unable to currently provide a listing, please understand a listing must be provided prior to contract approval. Until the completion of the proposed project, you are under a continuing obligation to immediately notify the governmental unit in the event that you subsequently determine that you will use a subcontractor on the proposed project.

4. What equipment do you have available to use for the proposed Project? Any equipment used by subcontractors may also be required to be listed by the governmental unit.

5. Have you into contracts or received offers for all materials which substantiate the prices used in preparing your proposal? If not, please explain the rationale used which corroborate the process listed.

SECTION III CONTRACTOR'S FINANCIAL STATEMENT

Attachment of Bidder's financial statement is mandatory. Any Bid submitted without said financial statement as required by statute shall thereby be rendered invalid. The financial statement provided hereunder to the governing body awarding the Contract must be specific enough in detail so that said governing body can make a proper determination of the Bidder's capability for completing the Project if awarded.

SECTION IV CONTRACTOR NON-COLLUSION AFFIDAVIT

The undersigned Bidder or agent, being duly sworn on oath, says that he has not, nor has any other member, representative, or agent of the firm, company, corporation or partnership represented by him, entered into any combination, collusion or agreement with any person relative to the price to be bid by anyone at such letting nor to prevent any person from bidding nor to induce anyone to refrain from bidding, and that this Bid is made without reference to any other bid and without any agreement, understanding or combination with any other person in reference to such bidding.

He further says that no person or persons, firms, or corporations has, have, or will receive directly or indirectly, any rebate, fee, gift, commission, or thing of value on account of such contract.

SECTION V OATH AND AFFIRMATION

I HEREBY AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE FACTS AND INFORMATION CONTAINED IN THE FOREGOING BID FOR PUBLIC WORKS ARE TRUE AND CORRECT

Dated at _____ this _____ day of _____, 20

(Name of Organization)

By

(Title of Person Signing)

ACKNOWLEDGEMENT

STATE OF _____)
) SS:
COUNTY OF _____)

Before me, a Notary Public, personally appeared the above-named

Swore that the statements contained in the foregoing document are true and correct.

Subscribed and sworn to before me this _____ day of _____,

(Title)

Notary Public

My Commission Expires: _____

County of Residence: _____

END OF SECTION 00 31 00

1.03 CIVIL AND ARCHITECTURAL WORK SUBCONTRACTORS AND PRODUCTS LIST

BID CATEGORY NO. _____
(Insert Category No. and Name)

NAME OF BIDDER _____

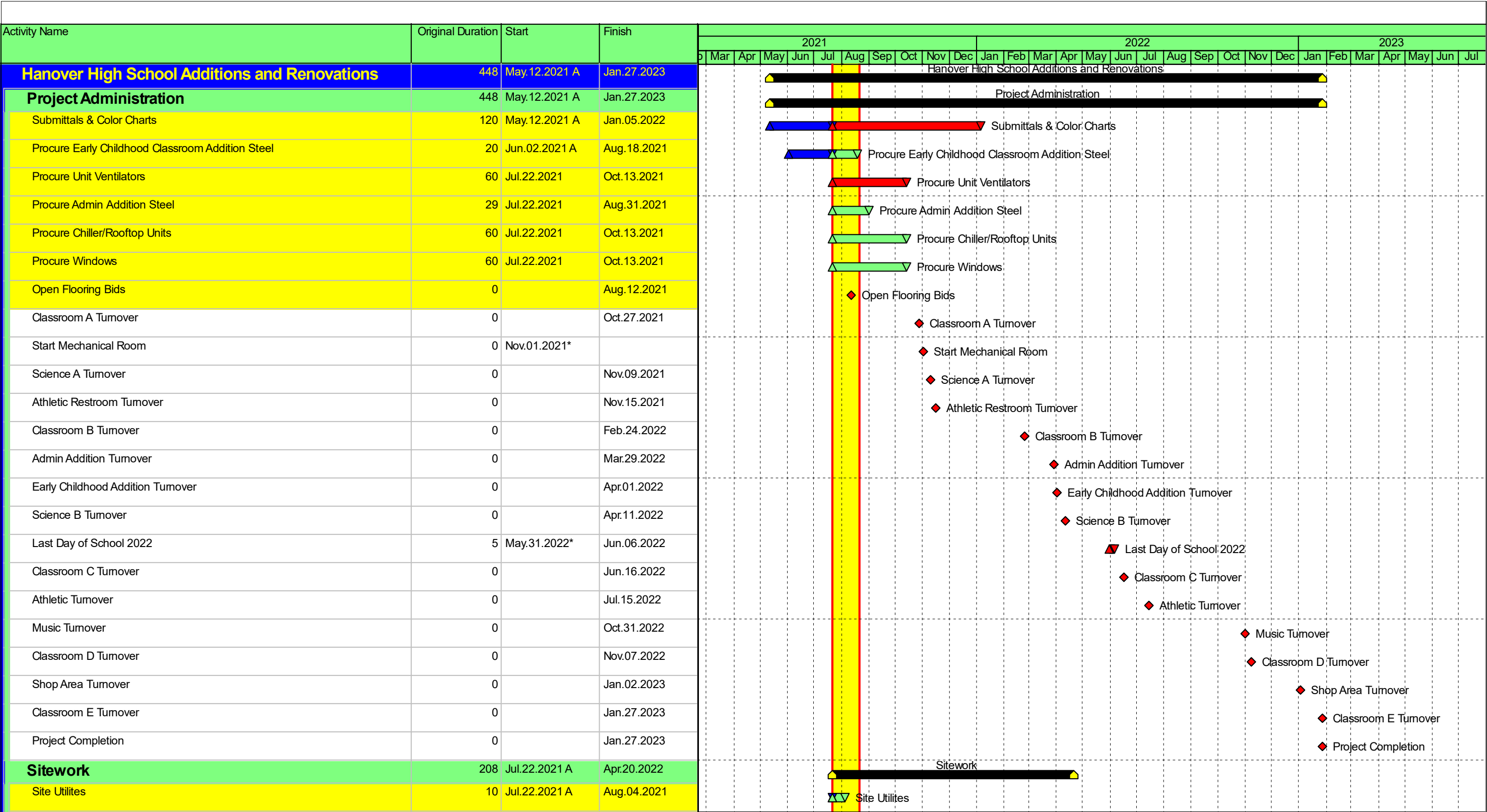
The undersigned hereby submits the following Subcontractors and Products List which becomes a part of the undersigned Contract proposal. Subcontractor purchased material, equipment, and labor shall be under the direct management and control of the Prime Contractor. If a dual listing of manufacturers and subcontractors is herein made, it is understood the Architect/Engineer (not the Contractor) will select the manufacturer or subcontractor of his choice.

CIVIL AND ARCHITECTURAL WORK

Subcontractor/Manufacturer	Division 09 - Finishes		Value
	09 31 00	Ceramic Tile	
	09 65 13	Resilient Flooring	
	09 67 22	Resinous Flooring	
	09 68 00	Carpet	

Name of Bidder:	Date:
Address:	
City/State/Zip:	
Telephone:	
By:	

END OF SECTION 00 43 50



Activity Name	Original Duration	Start	Finish	2021												2022												2023						
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Strip & Stock Topsoil	3	Jul.29.2021	Aug.02.2021																															
Site Lighting	10	Mar.09.2022	Mar.22.2022																															
Concrete Curbs & Walks	6	Mar.23.2022	Mar.30.2022																															
Site Furnishings	2	Mar.23.2022	Mar.24.2022																															
Asphalt Paving	5	Mar.31.2022	Apr.06.2022																															
Asphalt Striping	2	Apr.07.2022	Apr.08.2022																															
Final Grading	5	Apr.07.2022	Apr.13.2022																															
Landscaping	5	Apr.14.2022	Apr.20.2022																															
Early Childhood Classroom Addition	175	Aug.02.2021	Apr.01.2022																															
Building Core & Shell	170	Aug.02.2021	Mar.25.2022																															
Building Pad	3	Aug.02.2021	Aug.04.2021																															
Footings & Foundations	15	Aug.05.2021	Aug.25.2021																															
Underground Sanitary	5	Aug.26.2021	Sep.01.2021																															
Structural Steel Framing, Detailing, Joists & Deck	24	Sep.02.2021	Oct.05.2021																															
Roofing	15	Oct.06.2021	Oct.26.2021																															
Exterior Metal Stud Framing & Sheathing	15	Oct.06.2021	Oct.26.2021																															
Underground Electrical & Technology	5	Oct.06.2021	Oct.12.2021																															
Cavity Insulation	5	Oct.27.2021	Nov.02.2021																															
Face Brick, Split Face CMU & Cut Stone Sills	20	Nov.03.2021	Nov.30.2021																															
Roofing Details	10	Dec.01.2021	Dec.14.2021																															
Sun Shades	5	Dec.01.2021	Dec.07.2021																															
Exterior Windows	5	Dec.15.2021	Dec.21.2021																															
EIFS	8	Mar.09.2022	Mar.18.2022																															
Exterior Storefronts	5	Mar.21.2022	Mar.25.2022																															
Interior Buildout	123	Oct.13.2021	Apr.01.2022																															
Slab-on-Grade	10	Oct.13.2021	Oct.26.2021																															
In-Wall Plumbing Rough-ins	10	Oct.27.2021	Nov.09.2021																															
In-Wall Electrical Rough-ins	10	Oct.27.2021	Nov.09.2021																															

- Actual Work
- Remaining Work
- Critical Remaining Work
- Milestone
- Summary

220060.04 Hanover High School Additions and Renovations

Revised Guideline Schedule Jul.26.21



Activity Name	Original Duration	Start	Finish	2021												2022												2023						
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Interior CMU Walls	10	Oct.27.2021	Nov.09.2021																															
Metal Stud Framing	10	Oct.27.2021	Nov.09.2021																															
Ductwork	10	Oct.27.2021	Nov.09.2021																															
Above Ceiling Piping	10	Nov.10.2021	Nov.23.2021																															
Mechanical Units	5	Nov.10.2021	Nov.16.2021																															
Above Ceiling Electrical & Technology	10	Nov.24.2021	Dec.07.2021																															
Drywall & Tape	20	Dec.08.2021	Jan.04.2022																															
Painting & Wall Coatings	15	Jan.05.2022	Jan.25.2022																															
Ceilings	12	Jan.26.2022	Feb.10.2022																															
Light Fixtures	12	Jan.26.2022	Feb.10.2022																															
Mechanical Trim	12	Jan.26.2022	Feb.10.2022																															
Metal Lockers	10	Jan.26.2022	Feb.08.2022																															
Electrical Devices & Trim	5	Feb.11.2022	Feb.17.2022																															
Tile	10	Feb.11.2022	Feb.24.2022																															
Wall Coverings	2	Feb.11.2022	Feb.14.2022																															
Casework & Millwork	6	Feb.15.2022	Feb.22.2022																															
Markerboards & Tackboards	3	Feb.23.2022	Feb.25.2022																															
Plumbing Fixtures	4	Feb.25.2022	Mar.02.2022																															
Flooring	15	Feb.28.2022	Mar.18.2022																															
Toilet Partitions	3	Mar.03.2022	Mar.07.2022																															
Toilet Accessories	2	Mar.08.2022	Mar.09.2022																															
Doors & Hardware	5	Mar.21.2022	Mar.25.2022																															
Punchlist Completion	5	Mar.28.2022	Apr.01.2022																															
Admin Addition	179	Jul.22.2021	Mar.29.2022																															
Building Core & Shell	179	Jul.22.2021	Mar.29.2022																															
Footings & Foundations	20	Jul.22.2021	Aug.18.2021																															
Underground Sanitary	10	Aug.19.2021	Sep.01.2021																															

- Actual Work
- Remaining Work
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220060.04 Hanover High School Additions and Renovations

Revised Guideline Schedule Jul.26.21



Activity Name	Original Duration	Start	Finish																																
				2021												2022												2023							
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	
Structural Steel Framing, Detailing, Joists & Deck	30	Sep.01.2021	Oct.12.2021																																
Exterior Metal Stud Framing & Sheathing	15	Oct.13.2021	Nov.02.2021																																
Roofing	20	Oct.13.2021	Nov.09.2021																																
Underground Electrical & Technology	5	Oct.13.2021	Oct.19.2021																																
Cavity Insulation	10	Nov.03.2021	Nov.16.2021																																
Face Brick, Split Face CMU & Cut Stone Sills	15	Nov.17.2021	Dec.07.2021																																
Metal Panels	20	Dec.08.2021	Jan.04.2022																																
Roofing Details	15	Jan.05.2022	Jan.25.2022																																
Sun Shades	10	Jan.05.2022	Jan.18.2022																																
Exterior Windows	10	Jan.26.2022	Feb.08.2022																																
Exterior Storefronts and Clerestory Windows	10	Mar.16.2022	Mar.29.2022																																
EIFS Soffits	5	Mar.21.2022	Mar.25.2022																																
Interior Buildout	115	Oct.20.2021	Mar.29.2022																																
Slab-on-Grade	10	Oct.20.2021	Nov.02.2021																																
In-Wall Plumbing Rough-ins	5	Nov.03.2021	Nov.09.2021																																
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Ductwork	15	Nov.03.2021	Nov.23.2021																																
Above Ceiling Piping	15	Nov.10.2021	Nov.30.2021																																
Above Ceiling Electrical & Technology	10	Nov.17.2021	Nov.30.2021																																
Mechanical Units	5	Nov.24.2021	Nov.30.2021																																
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Mechanical Trim	10	Jan.19.2022	Feb.01.2022																																

- Actual Work
- Remaining Work
- Critical Remaining Work
- Milestone
- Summary



[illegible]

Activity Name	Original Duration	Start	Finish	2021												2022												2023						
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Above Ceiling Piping	5	Aug.12.2021	Aug.18.2021																															
Metal Stud Framing	2	Aug.19.2021	Aug.20.2021																															
Electrical & Technology Rough-ins	5	Aug.19.2021	Aug.25.2021																															
Drywall & Tape	10	Aug.26.2021	Sep.08.2021																															
Painting	10	Sep.09.2021	Sep.22.2021																															
Ceilings	5	Sep.23.2021	Sep.29.2021																															
Light Fixtures	5	Sep.23.2021	Sep.29.2021																															
Mechanical Trim	5	Sep.23.2021	Sep.29.2021																															
Electrical Devices & Trim	3	Sep.30.2021	Oct.04.2021																															
Casework	7	Sep.30.2021	Oct.08.2021																															
Plumbing Fixtures	5	Oct.11.2021	Oct.15.2021																															
Markerboards	2	Oct.18.2021	Oct.19.2021																															
Flooring	7	Oct.20.2021	Oct.28.2021																															
Doors & Hardware	3	Oct.29.2021	Nov.02.2021																															
Punchlist Completion	5	Nov.03.2021	Nov.09.2021																															
Science Room B	104	Nov.17.2021	Apr.11.2022																															
Demolition	10	Nov.17.2021	Nov.30.2021																															
Masonry Infill	5	Dec.01.2021	Dec.07.2021																															
Underground Sanitary	15	Dec.01.2021	Dec.21.2021																															
Ductwork	15	Dec.22.2021	Jan.11.2022																															
Plumbing Rough-ins	10	Dec.22.2021	Jan.04.2022																															
Above Ceiling Piping	10	Jan.12.2022	Jan.25.2022																															
Metal Stud Framing	5	Jan.26.2022	Feb.01.2022																															
Electrical & Technology Rough-ins	5	Jan.26.2022	Feb.01.2022																															
Drywall & Tape	10	Feb.02.2022	Feb.15.2022																															
Painting	10	Feb.16.2022	Mar.01.2022																															
Ceilings	5	Mar.02.2022	Mar.08.2022																															

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Activity Name	Original Duration	Start	Finish	2021												2022												2023						
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Light Fixtures	5	Mar.02.2022	Mar.08.2022																▲▼	Light Fixtures														
Mechanical Trim	5	Mar.02.2022	Mar.08.2022																▲▼	Mechanical Trim														
Electrical Devices & Trim	5	Mar.09.2022	Mar.15.2022																▲▼	Electrical Devices & Trim														
Casework	5	Mar.09.2022	Mar.15.2022																▲▼	Casework														
Plumbing Fixtures	4	Mar.16.2022	Mar.21.2022																▲▼	Plumbing Fixtures														
Markerboards	2	Mar.22.2022	Mar.23.2022																▲▼	Markerboards														
Flooring	5	Mar.24.2022	Mar.30.2022																▲▼	Flooring														
Doors & Hardware	3	Mar.31.2022	Apr.04.2022																▲▼	Doors & Hardware														
Punchlist Completion	5	Apr.05.2022	Apr.11.2022																▲▼	Punchlist Completion														
Mechanical Room	73	Nov.01.2021	Feb.09.2022																															
Demolition	15	Nov.01.2021	Nov.19.2021																▲▼	Demolition														
Equipment Pads	5	Nov.22.2021	Nov.26.2021																▲▼	Equipment Pads														
Set Mechanical Room Equipment	3	Nov.29.2021	Dec.01.2021																▲▼	Set Mechanical Room Equipment														
Piping Rough-ins	10	Dec.02.2021	Dec.15.2021																▲▼	Piping Rough-ins														
Electrical Rough-ins	10	Dec.02.2021	Dec.15.2021																▲▼	Electrical Rough-ins														
Set Rooftop Units and Chillers	5	Dec.16.2021	Dec.22.2021																▲▼	Set Rooftop Units and Chillers														
Insulation	10	Dec.16.2021	Dec.29.2021																▲▼	Insulation														
Final Connections & Start-up	10	Dec.23.2021	Jan.05.2022																▲▼	Final Connections & Start-up														
Temperature Controls	30	Dec.30.2021	Feb.09.2022																▲▼	Temperature Controls														
Punchlist Completion	5	Jan.06.2022	Jan.12.2022																▲▼	Punchlist Completion														
Shop Area	185	Apr.19.2022	Jan.02.2023																															
Demolition	20	Apr.19.2022	May.16.2022																	▲▼	Demolition													
Underground Sanitary	20	May.17.2022	Jun.13.2022																	▲▼	Underground Sanitary													
Interior CMU Walls	30	Jun.14.2022	Jul.25.2022																	▲▼	Interior CMU Walls													
Electrical & Technology Rough-ins	30	Jun.14.2022	Jul.25.2022																	▲▼	Electrical & Technology Rough-ins													
Plumbing Rough-ins	30	Jun.14.2022	Jul.25.2022																	▲▼	Plumbing Rough-ins													
Ductwork	30	Jun.14.2022	Jul.25.2022																	▲▼	Ductwork													

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Above Ceiling Piping	10	Jul.26.2022	Aug.08.2022																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						

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Metal Stud Framing	5	Jun.28.2022	Jul.04.2022																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									

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Markerboards & Tackboards	7	Sep.27.2021	Oct.05.2021																																
Flooring	7	Oct.07.2021	Oct.15.2021																																
Unit Ventilators	5	Oct.14.2021	Oct.20.2021																																
Window Replacement	6	Oct.14.2021	Oct.21.2021																																
Doors & Hardware	3	Oct.18.2021	Oct.20.2021																																
Punchlist Completion	5	Oct.21.2021	Oct.27.2021																																
Classroom B	81	Nov.04.2021	Feb.24.2022																																
Demolition	10	Nov.04.2021	Nov.17.2021																																
Masonry Infill	5	Nov.18.2021	Nov.24.2021																																
Electrical & Technology Rough-ins	5	Nov.18.2021	Nov.24.2021																																
Plumbing Rough-ins	5	Nov.18.2021	Nov.24.2021																																
Ductwork	5	Nov.18.2021	Nov.24.2021																																
Metal Stud Framing	10	Nov.18.2021	Dec.01.2021																																
Window Replacement	6	Nov.18.2021	Nov.25.2021																																
Above Ceiling Piping	5	Nov.25.2021	Dec.01.2021																																
Drywall & Tape	10	Dec.02.2021	Dec.15.2021																																
Painting	10	Dec.16.2021	Dec.29.2021																																
Unit Ventilators	3	Dec.30.2021	Jan.03.2022																																
Ceilings	10	Jan.04.2022	Jan.17.2022																																
Light Fixtures	10	Jan.04.2022	Jan.17.2022																																
Mechanical Trim	10	Jan.04.2022	Jan.17.2022																																
Electrical Devices & Trim	5	Jan.18.2022	Jan.24.2022																																
Casework	10	Jan.18.2022	Jan.31.2022																																
Markerboards & Tackboards	5	Jan.18.2022	Jan.24.2022																																
Flooring	10	Feb.01.2022	Feb.14.2022																																
Doors & Hardware	3	Feb.15.2022	Feb.17.2022																																
Punchlist Completion	5	Feb.18.2022	Feb.24.2022																																

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				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul					
Classroom C	75	Mar.04.2022	Jun.16.2022	<div>Classroom C</div>																																			
Demolition	10	Mar.04.2022	Mar.17.2022	<div>Demolition</div>																																			
Electrical & Technology Rough-ins	5	Mar.18.2022	Mar.24.2022	<div>Electrical & Technology Rough-ins</div>																																			
Plumbing Rough-ins	5	Mar.18.2022	Mar.24.2022	<div>Plumbing Rough-ins</div>																																			
Ductwork	10	Mar.18.2022	Mar.31.2022	<div>Ductwork</div>																																			
Metal Stud Framing	3	Mar.18.2022	Mar.22.2022	<div>Metal Stud Framing</div>																																			
Window Replacement	6	Mar.18.2022	Mar.25.2022	<div>Window Replacement</div>																																			
Above Ceiling Piping	5	Apr.01.2022	Apr.07.2022	<div>Above Ceiling Piping</div>																																			
Drywall & Tape	5	Apr.08.2022	Apr.14.2022	<div>Drywall & Tape</div>																																			
Painting	10	Apr.15.2022	Apr.28.2022	<div>Painting</div>																																			
Unit Ventilators	3	Apr.29.2022	May.03.2022	<div>Unit Ventilators</div>																																			
Ceilings	5	May.04.2022	May.10.2022	<div>Ceilings</div>																																			
Light Fixtures	2	May.04.2022	May.05.2022	<div>Light Fixtures</div>																																			
Mechanical Trim	2	May.04.2022	May.05.2022	<div>Mechanical Trim</div>																																			
Electrical Devices & Trim	5	May.06.2022	May.12.2022	<div>Electrical Devices & Trim</div>																																			
Casework	7	May.11.2022	May.19.2022	<div>Casework</div>																																			
Markerboards & Tackboards	5	May.11.2022	May.17.2022	<div>Markerboards & Tackboards</div>																																			
Flooring	10	May.20.2022	Jun.02.2022	<div>Flooring</div>																																			
Doors & Hardware	5	Jun.03.2022	Jun.09.2022	<div>Doors & Hardware</div>																																			
Punchlist Completion	5	Jun.10.2022	Jun.16.2022	<div>Punchlist Completion</div>																																			
Classroom D	97	Jun.24.2022	Nov.07.2022	<div>Classroom D</div>																																			
Demolition	10	Jun.24.2022	Jul.07.2022	<div>Demolition</div>																																			
Electrical & Technology Rough-ins	5	Jul.08.2022	Jul.14.2022	<div>Electrical & Technology Rough-ins</div>																																			
Plumbing Rough-ins	5	Jul.08.2022	Jul.14.2022	<div>Plumbing Rough-ins</div>																																			
Ductwork	5	Jul.08.2022	Jul.14.2022	<div>Ductwork</div>																																			
Window Replacement	5	Jul.08.2022	Jul.14.2022	<div>Window Replacement</div>																																			
Floor In-fill	5	Jul.08.2022	Jul.14.2022	<div>Floor In-fill</div>																																			

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Activity Name	Original Duration	Start	Finish	2021												2022												2023																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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Masonry Infill	5	Jul.15.2022	Jul.21.2022																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		</

SECTION 09 67 22

RESINOUS FLOORING

1 General

1.1 Summary

- A. This Section includes slip-resistant epoxy-resin flooring.

1.2 References

- A. ASTM D4258 Standard Practice for Surface Cleaning Concrete for Coating.
- B. ASTM D4263 Standard Test Method of Indicating Moisture in Concrete by the Plastic Sheet Method.
- C. ASTM D4541 Standard Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers.
- D. ASTM F1869: Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.
- E. SSPC-SP7 Brush Off Blast Cleaning.

1.3 Submittals

- A. Product Data: For each type of product specified. Include manufacturer's technical data, installation instructions, and recommendations for each resinous flooring component required.
- B. Samples for Verification: Of each resinous flooring system required, 6 inches square, applied by Installer for this Project to a rigid backing, in color, texture, and finish indicated. Where finishes involve normal color and texture variations, include Sample sets showing full range of variations expected.
- C. Installer Certificates: Signed by manufacturer certifying that installers have been trained and are approved by the manufacturer.
- D. Material Certificates: Signed by manufacturers certifying that materials furnished comply with requirements.
- E. Maintenance Data: For resinous flooring to include in maintenance manuals.

1.4 Quality Assurance

- A. Installer Qualifications: An installer with minimum 10 years experience who has specialized in installing resinous flooring similar in material, design, and extent to that indicated for this Project and who is acceptable to resinous flooring manufacturer.

1. Engage an installer who employs only persons trained and approved by resinous flooring manufacturer for installing resinous flooring systems specified.
- B. Source Limitations: Obtain primary resinous flooring materials, including primers, resins, hardening agents, and sealing or finish coats, through one source from a single manufacturer. Provide secondary materials including patching and fill material, joint sealant, and repair materials of type and from source recommended by manufacturer of primary materials.
- C. Pre-Installation Conference: Conducted at project site and attended by all personnel including Architect, Contractor/Subcontractor, and Flooring Manufacturer Representative.

1.5 Delivery and Storage

- A. Deliver coating materials to jobsite in their original, unopened containers with the proper, fully legible labels attached. Damaged containers shall not be used.
- B. Whenever possible, the work area and mixing area shall be covered from exposure to direct sunlight.
- C. Materials shall be stored in tightly sealed original containers in a dry place at temperatures between 65 and 80 degrees F.
- D. Flooring materials shall only be applied at temperatures between 45 and 85 degrees F.

1.6 Safety

- A. All the preparation and application steps shall be in accordance with manufacturer's MSDS instructions as well as site conditions and applicable Federal, state and local rules, and regulations.
- B. Precautions shall be taken when working with these materials.
 1. Use materials only in adequately ventilated areas, keep away from open flames, and store in dry, covered areas.
 2. Urethane products may cause skin irritation in certain individuals.
 3. Workers shall always wear protective clothing, gloves, and eyewear when working with these products.

1.7 Project Conditions

- A. Environmental Limitations: comply with resinous flooring manufacturer's written instructions for substrate temperature, ambient temperature, moisture, ventilation, and other conditions affecting resinous flooring installation.
- B. Lighting: Provide permanent lighting or, if permanent lighting is not in place, simulate permanent lighting conditions during resinous flooring installation.

- C. Close spaces to traffic during resinous flooring application and for not less than 24 hours after application, unless manufacturer recommends a longer period.

1.8 Warranty

- A. Provide a written warranty covering materials and workmanship for a period of ten years from date of Substantial Completion.
- B. Warranty: Jointly signed by manufacturer and installer, without monetary limitation, in which manufacturer and installer agrees to repair or replace resinous flooring that fails in materials or workmanship within specified warranty period.

2 Products

2.1 Manufacturers

- A. Basis of Design Product: Materials manufactured by Sherwin Williams, Cincinnati, OH) as indicated below:
 - 1. Sherwin Williams, General Polymers Ceramic Carpet #400, Cincinnati, Ohio.
- B. Other Approved Manufacturers:
 - 1. Robbins, Strata Quartz, Cincinnati, OH.
 - 2. Stonhard, Stoneshield SLT, Maple Shade, New Jersey.

2.2 Materials

- A. Resinous Flooring: Penetrating 100 percent solids epoxy primer, 100 percent solids mortar consisting of epoxy resin, curing agent and colored quartz silica aggregate and seal coats.
 - 1. System: 1/8" decorative broadcast quartz aggregate
 - 2. Broadcast Coats: GP3561 + 5900F
 - 3. Epoxy Grout/Seal Coat: GP3746 clear.
 - 4. Crack Filler: GP3552 flexible epoxy or other flexible epoxy approved by SW.
 - 5. Sealant: Stampede sealant or other polyurethane sealant approved by SW.
 - 6. Fillers: Fumed silica and blended aggregates.
 - 7. Aggregate: Colored Quartz Aggregate.
 - 8. Aggregate: Colored Quartz Aggregate.

3 Execution

3.1 Examination

- A. General: Do not apply resinous flooring for at least 28 days following installation of concrete floor slab to permit complete curing.
- B. Moisture Testing: Place a pre-weighted amount of anhydrous calcium chloride on a clean area of concrete slab and cover with a square of 6 mil plastic film, edges taped to the concrete surface. Leave plastic in place for 60 hours, or in accordance with printed instructions. Remove the plastic and measure the amount of moisture absorbed by the calcium chloride, converting it to pounds of moisture/ 1000 sf/ 24 hrs. Allowable moisture content shall not exceed 3 lbs/ 1000 sf/24 hrs. Test at the following rate:
 - 1. For areas of 2000 sf or less, a minimum of 3 tests; for each additional 1000 sf, provide one additional test.
 - 2. Conduct tests simultaneously one at center of room, and the others at perimeter, within five feet of walls. Submit written results to Architect and Owner's Representative for approval.

3.2 Preparation

- A. General: Prepare and clean substrate according to resinous flooring manufacturer's written instructions. Provide clean, dry, and neutral substrate for resinous flooring application.
- B. Concrete Substrates: Provide sound concrete surfaces free of laitance, glaze, efflorescence, curing compounds, form-release agents, dust, dirt, grease, oil, and other contaminants incompatible with resinous flooring.
 - 1. Shot-blast surfaces with an apparatus that abrades the concrete surface, contains the dispensed shot within the apparatus, and recirculates the shot by vacuum pickup.
 - 2. Repair damaged and deteriorated concrete according to resinous flooring manufacturer's written recommendations.
- C. Resinous Materials: Mix components and prepare materials according to resinous flooring manufacturer's written instructions.
- D. Use patching and fill material to fill holes and depressions in substrates according to manufacturer's written instructions.
- E. Treat control joints and other nonmoving substrate cracks to prevent cracks from reflecting through resinous flooring according to manufacturer's written recommendations.

3.3 Application

- A. Primer: Install General Polymers 3579 clear two-component epoxy primer.

- B. First Base Coat: Mix 3561 at a ratio of 4:1 for three minutes. Apply at a rate of 130 square feet per gallon to prepared substrate with a notched squeegee or notched trowel. Back roll with a short-napped phenolic roller to assure even coverage.
- C. First Aggregate: Broadcast blended color quartz aggregate into wet epoxy base coat until refusal at a rate of approximately 40 pounds per 100 square feet. Maintain a one to two foot wet edge without any aggregate to allow for a smooth transition to the next pass of neat epoxy. Allow system to cure 8 to 12 hours @ 70°F. Remove excess aggregate and sand with circular floor sander to remove any rough spots.
- D. Second Base Coat: Mix 3561 at a ratio of 4:1 by volume for three minutes. Apply at a rate of 130 square feet per gallon to prepared substrate with a notched squeegee or notched trowel. Back roll with a short napped phenolic roller to assure even coverage.
- E. Second Aggregate: Broadcast blended color quartz aggregate into wet epoxy base coat until refusal at a rate of approximately 40 pounds per 100 square feet. Maintain a one to two foot wet edge without any aggregate to allow for a smooth transition to the next pass of neat epoxy. Allow system to cure 8 to 12 hours @ 70°F. Remove excess aggregate and sand with a circular floor sander to remove any rough spots.
- F. First Seal Coat: Mix 3746 at a ratio of 2:1 for three minutes. Apply first seal coat of 3746 at a rate of 160 square feet per gallon and allow to cure 8 to 12 hours @ 70°F or until tack free.
- G. Second Seal Coat: Mix 3746 at a ratio of 2:1 for three minutes. Apply second seal coat of 3746 at a rate of 200 square feet per gallon and allow to cure 24 hours @ 70°F before allowing foot traffic.

3.4 Schedule

- B. Product EP1: One Seal Coat Only

3.5 Demonstration

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel in maintenance and cleaning of finish floor surface.

END OF SECTION

