

ADDENDUM NO. 4

October 20, 2023

New Castle County Vocational Technical School District
Hodgson Vo-Tech High School
Bid Package C – Foundations and Structure
Page 1

**The Bid Due Date and Bid Opening date has been changed to
Thursday, October 26, 2023 @ 3:00 PM.**

NOTICE: Attach this addendum to the project manual for this project. It modifies and becomes a part of the contract documents. Work or materials not specifically mentioned herein are to be described in the main body of the specifications and as shown in the drawings. Bidders shall acknowledge receipt of this addendum on the space provided on the Bid Form. Failure to do so may subject the bidder to disqualification.

Whenever this Addendum modifies a portion of the Project Manual added information is shown as **Bold** and deleted information is shown as ~~strikethrough~~.

The contract documents for the above referenced project, dated August 31, 2023, are amended as follows:

GENERAL CLARIFICATIONS:

1. Bid Documents may be viewed and downloaded at EDiS' FTP site. To obtain access to the FTP site, please submit your request via email to Jackie McKee at jmckee@ediscompany.com.
2. Physical copies of bids will be received at the office of New Castle County Vo-Tech School District, 1417 Newport Road, Wilmington, DE 19804 until **3:00 PM local time on Thursday, October 26, 2023**. The outer envelope should clearly indicate: "NEW CASTLE COUNTY VOCATIONAL TECHNICAL SCHOOL DISTRICT - HODGSON VO-TECH FOUNDATIONS AND STRUCTURE BP-C _____ SEALED BID – DO NOT OPEN." Bids may be hand delivered or mailed/shipped. Electronic bids will not be accepted. Bidder assumes full responsibility for timely delivery at location designated for receipt of bids. Any bids received after the stated time will be returned unopened.
3. Pre-bid RFI log is attached for your use.

MODIFICATIONS TO SPECIFICATIONS:

1. Section 004100 BID FORM AND ATTACHMENTS – C-01 Concrete and Reinforcing Bid Form, DELETE this bid form and INSERT revised bid form, annotated Addendum No 4 and dated October 20, 2023.
2. Section 012300 ALTERNATES – DELETE this section and INSERT revised section, annotated Addendum No 4 and dated October 20, 2023.
3. Section 013523 SAFETY PROGRAM - DELETE this section and INSERT revised section, annotated Addendum No 4 and dated October 20, 2023.
4. Section 053100 – STEEL DECK - DELETE this section and INSERT revised section, annotated Addendum No 4 and dated October 20, 2023.



**MODIFICATIONS TO DRAWINGS:**

1. Drawing G009 – Keyplans: DELETE and INSERT attached revised drawing annotated Addendum No. 4 dated October 20, 2023.
2. Structural Drawings S004, S111, S112, S117, S120, S133, S138, S151, S152, S155, and S401: DELETE and INSERT attached revised drawings annotated Addendum No. 4 dated October 20, 2023.
3. Drawing A532 Railing Details: ADD the attached drawing annotated Addendum No. 4 dated October 20, 2023.
4. Sketch ASK#01 – Monumental Stair #5 Concrete Base Detail (Alternate No. 7-BP-C)

LIST OF ATTACHMENTS:

Pre-bid RFI Log

004100 Bid Form C-01 Concrete and Reinforcing

012300 Alternates

013523 Safety Program

G009 - Keyplans

S004 - Project Schedules

S111 - Keyplan 1 – Foundation Plan

S112 - Keyplan 2 – Foundation Plan

S117 - Keyplan 7 – Foundation Plan

S120 - Keyplan 10 – Foundation Plan

S133 - Keyplan 3 – Second Floor Framing Plan

S138 - Keyplan 8 – Second Floor Framing Plan

S151 - Keyplan 1 – Roof Framing Plan

S152 - Keyplan 2 – Roof Framing Plan

S155 - Keyplan 5 – Roof Framing Plan

S40 -1 Enlarged Plans

A532 - Railing Details

Sketch ASK#01

End of Addendum No. 4





RFI No.	Date	Submitted By	Sheet No.	Detail/Section	Question	EDIS/NCCVT Response	Design Team Response	Addendum
001	10/5/23	First Choice Masonry			Typically there is a minimum of 8" of brick/groundface below finished floor. Is that to be part of the foundation pricing or part of another package?	Finish Brick and finish ground face below grade will be the responsibility of the BP-D Masonry contractor. This contractor owns back up materials. 12Oct23		4
006	10/5/23	First Choice Masonry		011100	Foundation Masonry Scope – Scope item #2 says “provide masonry stair towers and elevator tower complete. Just to confirm, this package includes masonry foundations to finished floor and the stair/elevator towers from foundation to top of wall (+/- 28ft above finished floor to roof. Please confirm this is correct.	Correct, BP-C Contract C-02 Foundation Masonry will own this work.		4
013	10/5/23	First Choice Masonry			Typically masons are not required to provide BIM 3D modeling drawings. Please confirm we are not required to provide 3D modeling drawings.	Yes, mason is required to provide BIM 3D modeling. The intent is to have a CMU model for the elevator shaft and stair towers to coordinate the openings, embeds, and support plate pockets where required.		4
014	10/5/23	Mumford & Miller			Will all the control joints, construction joints, and isolation joints at the columns and at the walls in the slab on grade require sealant or just the exposed joints?	The caulking and sealant work associated with the S.O.G will be part of the BP-D Sealant contract.		4
015	10/6/23	Mumford & Miller			There is no information provided about the concrete infill slab inside the walk-in freezer along with the grouting of the space between the freezer and refrigerator and surrounding concrete. a. Please provide the type of grout and concrete that is to be used. b. Please provide a complete specification for this work and a detail for the walk in floor.		The 6 sided cooler requires a depressed slab. Refer to structural Detail B/S501 for added information. Grout and leveling not part of this contract	4
020	10/7/23	Mumford and Miller	A505A		Please provide drawing A505A and all other A500 drawings. They are missing from the bid pack.		Remove reference to any A500 series drawings from structural drawings included in this addendum.	4
030	10/10/23	Mason Building Group		011100	Concrete scope item 34 contradicts with scope item 30; Will the concrete sub have to provide written documentation that all slabs are within tolerance even though FF/FL compliance numbers are being provided by the CM?	Scope Item #34 shall be amended as follows: The contractor shall insure that all concrete slabs are installed within the tolerances of the contract documents. The third-party inspection report for concrete flatness and level will be provided to this contractor within 72 hours as stated in item #30. This contractor shall take immediate action to resolve any issues related to the flatness and level of the slabs at no additional cost to the owner. Coordinate all work with the CM.		4



RFI No.	Date	Submitted By	Sheet No.	Detail/Section	Question	EDIS/NCCVT Response	Design Team Response	Addendum
033	10/10/23	First Choice Masonry			Elevator 1 shows an 8" cmu backup with a 4" stack bond veneer. 1. Is the 4" cmu to be regular gray cmu or ground face cmu? 2. Is the 4" veneer to be included in the foundation package or just the 8" cmu backup? 3. If the 4" veneer is to be included and is ground face cmu, please provide manufacturer and color of ground face block.	Contract C-02 Foundation Masonry, does not provide the masonry veneer at Elevator #2. The veneer masonry identified on Elevator #1 will be provided by the BP-D Masonry package.		4
034	10/12/23	First Choice Masonry		011100	The scope indicates we are to include flashing at all locations. Typically we would not install any flashing in the cmu backup at any location due to the flashing getting damaged prior to the veneer installation. We normally install all flashing with a termination bar so the flashing is in perfect working condition, undamaged. Please confirm the through wall flashing should be picked up in the veneer masonry bid package forth coming.	Through wall flashing will be detailed and included in the future BP-D Masonry package. This contractor to coordinate with BP-D as necessary.		4
035	10/12/23	First Choice Masonry			Confirm the concrete sub will be furnishing and installing the dowel/rebar out of the footings/slabs and the masons furnish everything above. Usually when we furnish the rebar, it's the loose bars that need to be installed after slabs/footings.	Confirmed. Contract C-01 Concrete shall include any masonry dowel/rebar as required for future masonry support. Concrete contractor to protect these bars with rebar caps and maintain until masonry work has begun.		4
036	10/17/23	Kinsley Steel			Each page on the structural drawings displays a pricing note states that our bid must include pricing for steel, whether shown or not for conditions which may not be shown. That statement is very open ended. There needs to be a limit or qualification as to what conditions we are expected to cover. Can our bid include a list of qualifications that we prepare and submit?	Your bids cannot include additional qualifications of any kind. Bids are to be submitted as per the posted Bid Form documents.		4
037	10/17/23	Kinsley Steel			Do we have the option to bid selected connections using a more cost-effective design rather than the options shown, can we do so as long as structural calculations are provided.	Contractor should bid the project based on the design indicated on the contract documents.		4
038	10/18/23	Mason Building Group			Concrete spec mentions applying a penetrating liquid densifier to the slab, will this be required for all slabs on grade and upper deck slabs?		Required at exposed slab locations.	4
039	10/18/23	Joseph Rizzo & Sons			Typically (1) course of the exterior wall composition (brick, ground face, or split face) is carried to -8" below finish floor. Are we to carry this course in this bid package?	See RFI #1 answer.		4
040	10/18/23	Joseph Rizzo & Sons			In this package we are to carry all of the stair towers and elevator shafts even above finish floor?	Contract C-02 Foundation Masonry shall include Stair towers #1, #2, #3 and #4 as well as Elevator Tower #1 in their base bid. This contractor shall coordinate your work with the work of the other trades including but not limited to imbeds and Misc. steel attachments.		4



RFI No.	Date	Submitted By	Sheet No.	Detail/Section	Question	EDIS/NCCVT Response	Design Team Response	Addendum
041	10/12/23				Please clarify the definition of a DBE contractor for this project, and the ability to list themselves on the bid forms as a qualified DBE.	As stated in Section 001116 – INVITATION TO BID, and in ARTICLE 1, Section 1.0 of the bid specifications, companies that wish to be considered a DBE for this Pilot Program must go through the Office of Supplier Diversity (OSD) or the Delaware Department of Transportation (DelDOT) process to be determined if they are qualified as a DBE. If they have already been registered in one of the two programs, they would be considered qualified as a DBE for this Pilot Program. Additionally, any registered DBE contractor that is submitting a bid for this Pilot Program and is going to use its own DBE status as all or part of the 7% DBE participation, should list themselves on the DBE Subcontractor forms and provide all the required information on their own business as required for the Subcontractors.		4
042	10/19/23	EDiS	S134, S139, S154, S159		Please confirm that Joist Pockets and Base Plates are required in the identified mark up's as well as supply the appropriate detail.		Joists bearing on cmu walls require BP1 at all locations. WF beams within the stair structure that bear on the cmu wall require BP1. There are no beams from the main structure that bear on the stair cmu walls.	4
043	10/12/23	Thomas Building Group			Concrete scope item 33 mentions infilling around floor drains (2'x2'). Is the proposed depth correct at 5'-0" or should it be 5"?	The drain infill depth should be 5"		4

CONTRACT NO: C-01 CONCRETE AND REINFORCING

BID FORM

For Bids Due: _____

To: NCCVT School District
1417 Newport Road
Wilmington, DE 19804

Name of Bidder: _____

Bidder Address: _____

Contact Name: _____ E-Mail Address: _____

Delaware Business License No.: _____ Taxpayer ID No.: _____

(Other License Nos.): _____

(A copy of Bidder's Licenses must be attached to this form.)

Phone No.: (____) _____ - _____ Fax No.: (____) _____ - _____

The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below:

\$ _____ (\$ _____)

ALLOWANCES

We/I confirm that an Allowances in the amount of \$150,000.00 have been included in the Base Bid price listed above. This allowance is to be used at the Owner's discretion. All remaining allowance shall be returned to the Owner at completion.

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed-out part that does not apply.

Alternate No. 2: Add Future CTE Shop Expansion (approx. 12,340 SF)

Add/Deduct _____ (\$ _____)

Alternate No. 7-BP-C: Monumental Stair #5 – Concrete

Add/Deduct _____ (\$ _____)

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for sixty (60) days from the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

Should I/We be awarded this contract, I/We pledge to achieve substantial completion of all the work within _____ calendar days of the Notice to Proceed.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

I am/We are an Individual/a Partnership/a Corporation

By _____ Trading as _____
(Individual's / General Partner's / Corporate Name)

(State of Corporation)

Business Address: _____

Witness: _____ By: _____
(SEAL) (Authorized Signature)

(Title)

Date: _____

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Affidavit of Contractor Qualifications
DBE Subcontractor List
New Castle County Contractor License
(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 69, Section 6962(d)(10)b of the Delaware Code, the following subcontractor listing must accompany any bid submittal. The bidder must list **in each category** the full name and address (City & State) of the sub-contractor that the bidder will be using to perform the work and provide material for that subcontractor category. Should the bidder's listed subcontractor intend to provide any of their subcontractor category of work through a third-tier contractor, the bidder shall list that third-tier contractor's full name and address (City & State). **If the bidder intends to perform any category of work itself, it must list its full name and address.** For clarification, if the bidder intends to perform the work themselves, the bidder **may not** insert "not applicable", "N/A", "self" or anything other than its own full name and address (City & State). To do so shall cause the bid to be rejected. In addition, the failure to produce a completed subcontractor list with the bid submittal shall cause the bid to be rejected. If you have more than three (3) third-tier contractors to report in any subcontractor category, print out additional page(s) containing the appropriate category, complete the rest of your list of third-tier contractors for that category, notate the addition in parentheses as (CONTINUATION) next to the subcontractor category and an asterisk (*) next to any additional third-tier contractors, and submit it with your bid.

<u>Subcontractor Category</u>	<u>Subcontractor</u>	<u>Address (City & State)</u>	<u>Subcontractors tax-payer ID # or Delaware Business license #</u>
1. <u>Concrete</u>	_____	_____	_____
2. <u>Waterproofing</u>	_____	_____	_____
3. <u>Reinforcing Steel Rod Setters</u>	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. <u>NO ADDITIONAL ENTRIES REQUIRED</u>			

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date _____.

All the terms and conditions of Contract: _____ have been thoroughly examined and are understood.

NAME OF BIDDER: _____

AUTHORIZED REPRESENTATIVE
(TYPED): _____

AUTHORIZED REPRESENTATIVE
(SIGNATURE): _____

TITLE: _____

ADDRESS OF BIDDER: _____

E-MAIL: _____

PHONE NUMBER: _____

Sworn to and Subscribed before me this _____ day of _____ 20____.

My Commission expires _____. NOTARY PUBLIC _____.

THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.

CONSENT OF SURETY

DATE _____

To: NCC Vocational Technical School District
1417 Newport Road
Wilmington, DE 19804

Gentlemen:

We, the _____

(Surety Company's Address)

a Surety Company authorized to do business in the State of Delaware hereby agrees that if

(Contractor)

(Address)

is awarded the Contract No. _____

We will write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to Bidders.

(Surety Company)

By _____
(Attorney-in-Fact)

AFFIDAVIT
OF
EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors, that complies with this regulation:

Contractor/Subcontractor Name: _____

Contractor/Subcontractor Address: _____

Authorized Representative (typed or printed): _____

Authorized Representative (signature): _____

Title: _____

Sworn to and Subscribed before me this _____ day of _____ 20_____.

My Commission expires _____. NOTARY PUBLIC _____.

THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.

**AFFIDAVIT
OF
CONTRACTOR QUALIFICATIONS**

We hereby certify that we will abide by the contractor's qualifications outlined in the construction bid specifications for the duration of the contract term.

In accordance with Title 29, Chapter 69, Section 6962(d)(10)b.3 of the Delaware Code, after a contract has been awarded the successful bidder shall not substitute another subcontractor whose name was submitted on the Subcontractor Form except for the reasons in the statute and not without written consent from the awarding agency. Failure to utilize the subcontractors on the list will subject the successful bidder to penalties as outlined in the General Requirements Section 5.2 of the contract.

Contractor Name: _____

Contractor Address: _____

Authorized Representative (typed or printed): _____

Authorized Representative (signature): _____

Title: _____

Sworn to and Subscribed before me this _____ day of _____ 20____.

My Commission expires _____. NOTARY PUBLIC _____.

THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.

DBE SUBCONTRACTOR LIST

DBE Name	DBE Address	DBE Phone Number	DBE Email address	DelDOT OSD Registration Number or	DBE Percentage of Contract	Description of Work

Total DBEs on project: _____

END OF SECTION

SECTION 013523 - SAFETY PROGRAM

1. GENERAL

- A. The Contractor shall be responsible for initiating, maintaining, and supervising all safety activities and programs in connection with their Work.
- B. Contractor shall be responsible for the safety of their personnel as well as their subcontractors.
- C. Hard hats and safety glasses must be worn by all personnel on the jobsite, except in contractor's administrative office/trailer. All equipment must comply with OSHA standards. All job site personnel shall wear long pants, shirts (no tank tops), high visibility garments worn on the outer layer of clothing, and work boots.

2. SAFETY PROGRAM

- A. Prior to commencing the work, the Contractor shall submit to the Construction Manager (1) electronic copy and (1) bound copy of its safety program and one (1) copy of SDS information in a 2" ringed notebook. One paper copy of the safety program and SDS will be retained by the Construction Manager in the field office.
- B. The safety program shall outline those hazards peculiar to the Contractor's Work, and the steps to be taken to eliminate or reduce the risk of injury or loss due to those hazards. The program shall be project and site specific. Every Contractor shall implement and enforce its safety program, in accordance with all OSHA, Federal, State, and local laws.
- C. Crystalline Silica Exposure Control Plan - Affected Contractors must provide a Written Exposure Control Plan for Respirable Crystalline Silica, meeting Subpart Z of the OSHA Construction Industry Regulations, that ensures each employee covered by this section of the Regulations can demonstrate knowledge and understanding meeting the requirements of the regulation, identify the competent person designated by the employer in accordance with the section, and otherwise comply with the requirements of this section of the Regulations.
- D. Every Contractor shall designate a qualified Safety Supervisor and Alternate to implement the safety program. If during the progress of the work the Safety Supervisor is not performing their duties in a manner satisfactory to the Construction Manager the Contractor will designate a new qualified Safety Supervisor.
- E. Every Contractor shall furnish the names and qualifications of the Primary and Alternate competent persons and qualified persons who may be required for their scope of work by the Contractor's safety procedures, and by federal, state and/or local regulations. Examples include competent persons and/or qualified persons for steel erection, excavation, scaffold erection, confined space entry, crane and rigging operations, annual crane inspections, fall protection including horizontal lifeline systems, etc.
- F. The employer shall verify compliance by preparing a written certification record. The written certification record shall contain the name or other identity of the employee trained, the date(s) of the training and the signature of the person who conducted the training or the signature of the employer. If the employer relies on training conducted by another employer or completed prior

to the effective date of this section, the certification record shall include the date the employer determined the prior training was adequate rather than the date of actual training.

- G. Copies of any and all documents, including information stored electronically, such as safety and health program handbooks and training certification records shall be provided when necessary.
 - 1. The employer shall instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to his work environment to control or eliminate any hazards or other exposure to illness or injury. Please forward certification (document) of training for each employee on an EDiS project. The latest training certificate shall be maintained.
- H. Contractor Daily Reports with Safety Inspection Checklist will be submitted daily to the Superintendent, verifying inspection of work area, machinery, equipment, and tools.
- I. Prior to starting work on-site, the Contractor shall arrange with the on-site Superintendent to have their employees complete the EDiS Company Zero Accidents Safety Orientation program.
- J. Every Contractor shall hold, at a minimum, weekly safety toolbox talks with all its employees every Monday at 12:30 PM. Every Contractor shall designate a responsible, qualified, and capable person to conduct these meetings. Contractor's safety supervisor or superintendent must submit to the Construction Manager weekly toolbox talks attendance sheets and the topics discussed.

3. SUBSTANCE ABUSE POLICY STATEMENT

- A. The Construction Manager is committed to providing a safe work site environment for its employees and Contractors' employees. The Construction Manager does not condone or permit employees and Contractors' employees to use or be under the influence of drugs or alcohol while they are on any of the Construction Manager work sites. The Policy is as follows:
 - 1. It is a violation of the Construction Manager's policy for employees and Contractors' employees to use, possess, sell, trade, or otherwise engage in the use of illegal drugs and alcohol.
 - 2. It is a violation for employees and Contractors' employees to report to work while influenced by illegal drugs or alcohol.
 - 3. It is a violation for employees and Contractors' employees to use prescription drugs illegally (i.e., to use prescription drugs that have not been legally obtained) and to use prescription drugs in a manner other than the prescribed intentions.
 - 4. Employees and Contractors' employees who are taking medication, which is prescribed by their physician, are expected to discuss potential side effects with their prescribing physician, as it relates to the work requirements.
- B. Violations of this policy will require disciplinary action. If any employees or Contractors' employees are observed or suspected of being influenced by drugs or alcohol, they will be instructed to stop work and may be required to leave the work site.

4. EXECUTION

- A. Every Contractor shall comply with all applicable federal, state and local laws, regulations and orders relating to occupational safety and health, and related procedures, and shall, to the extent permitted by law, indemnify and hold Construction Manager, Owner and Architect, and their respective directors, officers, or agents and employees, harmless from any and all liability, public or private, penalties, contractual or otherwise, losses, damages, costs, attorney's fees, expenses, causes of action, claims or judgments resulting from a claim filed by anyone in connection with the aforementioned acts, or any rule, regulation or order promulgated thereunder, arising out of the Contractor's Work, this Agreement or any subcontract executed in prosecution of the Work. Every Contractor further agrees in the event of a claim of violation of any such laws, regulations, orders, or procedures arising out of or in any way connected with the performance of this agreement, Construction Manager may immediately take whatever action is deemed necessary by Owner and/or Construction Manager to remedy the claim or violation. Any and all costs or expenses paid or incurred by Owner and/or Construction Manager in taking such action shall be borne by the Contractor and may be deducted from any payments due Contractor.
- B. The Contractor agrees to (1) take all necessary steps to promote safety and health on the job site; (2) cooperate with Owner and/or Construction Manager and other Contractors in preventing and eliminating safety and health hazards; (3) train, instruct and provide adequate supervision to ensure that its employees are aware of, and comply with, applicable Federal and State safety and health laws, standards, regulations and rules, safe healthful work practices and all applicable safety rules, regulations and work practices and procedures (4) not create any hazards or expose any of its employees, employees of the Owner and/or Construction Manager or employees of Contractors to any hazards; and (5) where the Contractor is aware of the existence of a hazard not within its control, notify the Construction Manager of the hazard as well as warn exposed persons to avoid the hazard.
- C. **The Contractor / Sub-contractor shall prepare a written Job Hazard Analysis (JHA) common to the construction industry for any work of a high-risk nature. This JHA will be prepared and signed by each work crew each day prior to starting work on a specific area of work and any time a crew is re-assigned to a new work task. The JHA form is generally in table form and simply describes tasks to be performed, potential hazards and mitigating measures. The form is used to identify, analyze, understand and mitigate potential hazards associated with repetitive or potentially hazardous work operations. Each employee associated with the work to be performed shall be instructed by their companies designated Competent Person of the safety measures listed on the form and shall sign the document prior to the commencement of work. (examples of "high risk": pre-cast concrete, scaffold activities, steel erection, work at heights, work at depths, road work, etc.) If the contractor prepares a similar assessment form it must be reviewed to meet the criteria of a Job Hazard Analysis (JHA) as described by the U.S. Department of Labor (OSHA 3071 2002 Revised).**
- €D.The Contractor's Superintendent or Safety Supervisor shall immediately, verbally report, and promptly thereafter confirm in writing to the Construction Manager any unsafe conditions or practices that are observed, or violations of job safety which are not within the Contractor's control.
- Đ.E.Contractors shall immediately, verbally report, and promptly thereafter confirm in writing, to the Construction Manager any unsafe practices or conditions that are observed which are not under

the Contractor's control.

E.F. The Contractor's Superintendent or Safety Supervisor shall ensure that adequate first aid supplies are available, and that personnel are qualified to administer first aid/CPR, as required by State and/or Federal regulations.

F.G. Every Contractor shall promptly notify Construction Manager of any personal injury requiring medical treatment of any of the Contractor's employees at the Project site; or of significant damage to property arising in connection with Contractor's performance, as promptly as possible after the occurrence of such injury or damage. Within twenty-four hours of such occurrence, Contractor shall furnish to Construction Manager a complete written report of such injury or damage.

G.H. Contractor certifies that the forgoing terms shall be made applicable to all Contractors' subcontractors, suppliers, materialmen, or anyone furnishing labor and/or materials to the site.

H.I. Every Contractor shall continue to educate their job Safety Supervisor or Superintendent of their responsibilities, which shall include:

1. Instructing workers and subcontractors under its supervision in safe work practices and work methods at the time they are given work assignments.
2. Ensuring that its workers and subcontractors have and use the proper protective equipment and suitable tools for the job.
3. Continuously checking to see that no unsafe practices or conditions are allowed to exist on any part of his job.
4. Acquainting its workers and subcontractors with all applicable safety requirements and ensuring that they are enforced.
5. Setting a good example for their workers.
6. Making a complete investigation of incidents to determine facts necessary to take corrective action.
7. Promptly completing an "Incident Investigation Form" with his Supervisor's assistance and distributing as required.
8. Holding weekly "tool box" safety meetings with their employees to:
 - a. Discuss observed unsafe work practices or conditions including a review of current foreman meeting and progress meeting reports.
 - b. Review each incident with their employees and discuss correction of incident root causes.
 - c. Encourage safety suggestions from his men.
9. Seeing that prompt medical treatment is administered to an injured employee.

10. Correcting or reporting immediately to project superintendent any observed unsafe conditions, practices or violations of job safety or security.

11. Making all reports required by these Contract Documents to the Construction Manager in a full and timely fashion.

5. SAFETY MEETINGS

A. The Contractor's Project Manager or Superintendent shall attend weekly or biweekly supervisory job meetings. The first topic of these meetings will be job site safety. The weekly safety reports will be reviewed, and violations must be corrected immediately. Contractors will be encouraged to participate in the on-going jobsite safety.

6. TOOL BOX SAFETY MEETINGS

A. The Contractor shall schedule weekly "tool box" safety sessions to be held by their project safety supervisor or competent person / superintendent for all their employees.

B. A member of the Contractor's management staff shall periodically attend "tool box" safety sessions to evaluate their effectiveness and offer any appropriate suggestions for improvement.

7. REPORTS

A. Contractors shall report all accidents or injuries on a timely basis in accordance with all applicable regulations.

B. Contractors shall promptly complete an incident investigation report of all incidents.

C. A record of all "tool box" safety sessions shall be made and submitted to the Construction Manager.

8. SAFETY REPRESENTATIVE

A. The Construction Manager (CM) may employ the services of a Safety Representative on the project.

B. The CM Safety Representative will visit the job site on a weekly basis, or as necessary, to determine if the work is being performed in a safe manner and in accordance with OSHA, State and Local safety regulations. The CM Safety Representative is not responsible for observing and documenting all possible safety violations. The Contractors' Safety Representatives, Safety Supervisors, or Superintendents shall attend job site safety inspections with the CM Safety Representative.

C. The CM Safety Representative will prepare a written report at the end of each inspection listing the safety violations observed during the inspection. This report will be distributed to all Contractors. Contractors will immediately correct all safety violations and provide written documentation to the CM verifying that all hazards have been corrected.

9. RIGHT TO STOP THE WORK DUE TO SAFETY VIOLATIONS

- A. The Construction Manager, in its sole discretion, may order the Contractor to stop the work due to safety violations under the following circumstances:
 - 1. If the Construction Manager observes the Contractor is violating safety regulations and the Contractor takes no immediate action to correct the violation.
 - 2. If the Contractor has been notified by the Construction Manager in writing that he is in violation of safety regulations and fails to take action to correct the violation within 24 hours of the notice.
- B. If the Construction Manager directs the Contractor to stop the work due to safety violation, it will be done in accordance with the General Conditions of the Contract. Contractor shall not be permitted an adjustment of the Contract Time or Sum for the days lost to any suspension of work.
- C. If the Construction Manager or Safety Representative observes Contractor's employee violating this safety program or OSHA Standards in a habitual manner, or creating a serious life safety violation, the Construction Manager or Safety Representative may instruct the Contractor's superintendent or foreman to remove the violator from the work site for failure to comply with the safety program and the contract.

10. EMERGENCY PROCEDURES

- A. The Construction Manager shall establish a central meeting location for the assembly of all Contractors' employees in the event of a job site emergency.
- B. Contractors shall assemble all their personnel and account for all employees. Contractors must immediately report to the Project Superintendent with the status of their employees.

11. FALL PROTECTION PROCEDURES

- A. Contractors are responsible, in accordance with federal, state, local laws and regulations including OSHA, to provide and enforce their own site specific fall protection program and equipment. The following fall protection procedures shall be enforced by all Contractors as a minimum standard.
 - 1. All workers on walking/working surfaces with unprotected sides or edges six feet (6') or higher above the next lower level must be protected from falls by the use of guardrail systems, net systems, fall arrest systems or control access zone programs. It is intended that when fall protection is required, it is required 100% of the time. All contractors are reminded that relevant industry regulations require that contractors comply with the following standards.
 - a. Workers constructing or working near leading edges must be protected.
 - b. Workers on the face of formwork or reinforcing steel must be protected at a height of 6 feet (6') or greater.
 - c. Employees working from scaffolds shall be guarded / protected from falling 6 feet (6') above next lower level.

- d. Brick layers performing overhand bricklaying and related work six feet (6') or higher above lower levels must be protected from falls.
 - e. Roofers must comply with OSHA regulations for roof work.
 - f. The Contractor's controlled access zone plan shall be included in their site-specific safety program and shall be submitted prior to the start of work. Contractors are responsible for assuring programs are OSHA compliant.
 - g. Guidelines for Residential Construction or any interpretations will not be accepted in lieu of 1926 Standards.
 - h. Contractors must provide certification per OSHA CFR29 § 1926.503(b) of employee training and retraining on fall protection upon request.
- B. Contractor shall provide their own fall protection. Fall protection may be provided by guardrail systems, net systems, or personal fall arrest systems. All fall protection systems must comply with OSHA regulations.
- C. Stepladders, exposed to shafts or edges of the building, greater than six feet (6') above the next lower level, must be tied off or otherwise secured. Employee must wear fall protection, i.e., harness/lanyard.
- D. The Safety Cable System shall not be altered or removed without a written request submitted to the Project Manager with a copy to the Superintendent. It shall be the responsibility of each Contractor that is removing or altering the Safety Cable System to maintain the fall protection safety provided by the safety cable and not leave the area unprotected. Each Contractor shall be responsible to re-install the Safety Cable System immediately after work is completed. Each Contractor shall be responsible to re-install the Safety Cable System in accordance with OSHA regulations.
- E. Fall protection will be enforced for Structural Steel Erectors.
- 1. Contractors engaged in structural steel erection are specifically advised that structural steel erectors shall comply with all protection requirements for all work at a height of six feet (6') or greater above the next lower level, 100 percent of the time, by any of the following means.
 - a. Standard guardrail system.
 - b. Personal Fall Arrest System (PFAS) – full body harness with shock absorbing lanyard. PFAS must meet the requirements of CFR 1926 subpart M.
 - c. Access to work area shall be provided by ladders or other safe methods. There shall be sufficient number of ladders, or other safe methods, available to reduce the amount of "beam walking." When it is absolutely necessary to traverse a beam, 100% fall protection must be utilized.
 - d. Steel erection Contractors must, at all times, be able to certify in writing that each of their

employees have been properly trained in both OSHA fall protection standards and the Contractor's site specific project fall protection procedures.

- e. Prior to the erection of the steel, the Contractor shall meet with the Project Manager and Safety Representatives to review and document site specific procedures.

12. AIRBORNE CONTAMINENTS PROCEDURES

- A. Contractors must provide and use equipment furnished with Exhaust Purifiers / Scrubbers when any equipment produces airborne containments and will be used in an enclosed building.
- B. The Contractor shall verify air quality by the use of air monitoring equipment and document such verified air quality on the daily report. The monitoring equipment shall, at a minimum, be designed with an auditory alarm and shall provide continuous monitoring of these four gases: Oxygen, Hydrogen Sulfide, Carbon Monoxide and Combustible gases.
- C. The Contractor must provide administrative or engineering controls to protect its workers from exposure to occupational health, environmental or other hazards to be implemented whenever feasible. When such controls are not feasible to achieve full compliance, protective equipment or other protective measures shall be used to keep the exposure of employees to air contaminants within the limits prescribed by local, state, and federal regulations. Any equipment and technical measures used for this purpose must first be approved for each particular use by a competent industrial hygienist or other technically qualified person. Whenever respirators are used, their use shall comply with 1926.103.

13. CELL PHONE AND RADIO USE POLICY

- A. Use of cell phones on EDiS Company projects should be limited to non-construction type activity areas and away from active construction areas (i.e., project office). This includes both cell phone use and the review of data, information, texts, and the internet. Except in an emergency circumstance, phones should only be used in the designated areas. Anyone observed using a cell phone outside of these designated areas without regard to maintaining a safe focus on their surroundings can be subject to discipline, up to and including removal from the project. Use of ear buds, ear phones, and portable radios are absolutely prohibited on EDiS Company project sites. Anyone using ear buds, ear phones, or any other device that would prevent the wearer from receiving auditory cues about the surrounding environment will be subject to discipline, up to and including removal from the project.

14. EXCAVATION PROCEDURES

- A. Before ANY excavation work is to commence, the Contractor/Excavator shall contact the utility companies or utility owners and advise them of the proposed work and ask them to mark the location of the underground utility installations. This notification shall be done within established or customary local response times. If the work is on private property and the utility company will not mark out the utilities, the Contractor/Excavator will hire a private locating service to mark the utilities. Once the utilities are located and marked, the Contractor/Excavator will excavate by hand or use a vacuum truck to expose the utilities and record the exact location and elevation of the utilities.

- B. The Contractor/Excavator must submit the Excavation Permit to EDiS Company verifying their assurance of communication with the utility companies or utility owners. The Contractor/Excavator must follow State, Local, and Federal Guidelines prior to proceeding with excavations. The Contractor/Excavator will have these marks restored as long as there is work to perform.
 - C. Once the Contractor has installed new utilities, they will provide to EDiS Company an as-built drawing, within 7 days, showing the exact location and elevation of the utilities. The installing Contractor will be responsible for locating and marking these utilities for other contractors that may have work in the same area.
 - D. Definition: "Excavator" shall mean any person, including those acting either as an employer or employee, intending to perform or performing excavation or demolition work.
 - E. Definition: "Excavate" or "Excavation" shall mean any operation in which earth, rock or other material in the ground is moved, removed, or otherwise displaced or disturbed by means of any tools, equipment or explosives and includes, without limitation, grading, trenching, digging, dredging, ditching, drilling, auguring, tunneling, boring, backfilling, post pounding, driving objects into the ground, installation of form pins, hammering, scraping, cable or pipe plowing or driving.
15. **TRAFFIC CONTROL PROCEDURES: Manual on Uniform Traffic Control Devices (MUTCD)**
- A. Traffic control plan(s) for the work may be required by the Authorities Having Jurisdiction (AHJ). Traffic control plans, if required, shall be prepared per AHJ standards, at the Contractor's expense, for review and approval by the AHJ. (Note: anything on a public right of way controlled by the state will require an engineer's stamp.) The implementation of the traffic control plan and any associated maintenance shall be performed at the Contractor's expense in accordance with the requirements of the AHJ. All warning signs and safety devices used by the Contractor to perform the work shall conform to the requirements contained in the State where the work is being performed, and the Department of Transportation's current edition of "Manual on Uniform Traffic Control Devices". The Contractor shall also be responsible for all traffic control required by the AHJ over the Project on the intersecting streets.
 - B. Contractors must submit a traffic control plan to the AHJ over the project for approval within fourteen (14) calendar days of Contract award. The approved traffic plan must be submitted prior to the commencement of work in a public street. The Contractor's representative on the site responsible for traffic control shall produce evidence that he/she has completed training acceptable to the Department of Transportation for safety through construction zones. All of the streets in which the work will occur shall remain open to traffic and one lane of traffic maintained at all times unless otherwise directed by the AHJ. Businesses and residences adjacent to the work shall be notified forty- eight (48) hours in advance of closing of streets, roadways, driveways, etc. The Contractor shall make every effort to minimize the amount of public parking temporarily eliminated due to construction in areas fronting businesses. No stockpiles of pipe or other material will be allowed in traveled right-of- ways unless otherwise approved. These requirements shall not authorize any extension of time for performance of this Contract.

16. SCAFFOLDING PROCEDURES

- A. A written project specific scaffold inspection checklist must be completed by the Contractor's competent person responsible for inspecting the scaffolding before each work shift, and after any occurrence which could affect a scaffold's structural integrity. A copy of the documented scaffold inspection checklist must be maintained by each company performing work on a scaffold and a second copy provided for record to the EDiS project office.
- B. Contractors are required to ensure that all employees working on or around scaffolding are properly trained. Contractors shall provide documented verification of scaffold training upon request.
- C. Scaffold erectors and dismantlers are required to wear fall protection during the erecting, modifying and dismantling scaffolds. In cases where fall protection is infeasible or creates a greater hazard, the competent person shall document their decision at each specific location of scaffold assembly. At minimum, the scaffold erectors and dismantlers shall wear a fall protection harness during the erection, modification and dismantling of scaffolds.
- D. Contractors shall utilize a scaffold tag system. The scaffold tag system shall be color coded and visible. The competent person shall sign and date the scaffold tag.
 - 1. Green tags are reserved for complete systems.
 - 2. Red tags are reserved for erection/dismantling activities and for scaffolds with deficiencies in the system.
 - 3. Yellow tags are reserved for systems that require the use of both PFAS and guardrail systems for incomplete scaffold systems or platforms.

END OF SECTION

CONTRACTOR

COMPETENT / QUALIFIED PERSON DESIGNATION LOG

Project:

Field Manager:

Contract: Contractor:	Applicable to Subcontractor (yes / no)		Foreman	Competent Person (if not foreman)
Subpart C-General Provisions				
1926-20 General Safety				
Subpart D - Health and Environmental Controls				
1926-53 Ionizing Radiation				
1926-55 Gases, Vapors, Fumes, Dusts, Mists				
1926-57 Ventilation				
1926.59 Hazard Communication				
1926.62 Lead				
Subpart E - Personal Protective Equipment				
1926.101 Hearing				
1926.103 Respirator Protection				
Subpart H - Materials Handling, Storage				
1926.251 Rigging Equipment for Material Handling				
Subpart J - Welding and Cutting				
1926.354 Welding, Cutting and Heating				
Subpart K - Electrical				
1926.404 Wiring Design and Protection				
Subpart L - Scaffolding				
1926.451 Scaffolding				
Subpart M - Fall Protection				
1926.502 Fall Protection Criteria and Practices				
1926.503 Training				
Subpart N - Cranes, Derrick -Redesignated 1926.1501				
Subpart O - Motor Vehicles and Equipment				
1926.601 Motor Vehicles				
Subpart P - Excavations				
1926.651 Specific Excavation Requirements				
1926.652 Requirements to Protective Systems				
Subpart S - Tunnels, Shafts, Caissons				
1926.800 Tunnels, Shafts, Caissons				
1926.803 Compressed Air				
Subpart T - Demolition				
1926.850 Preparatory Operations				
1926.852 Chutes				
1926.859 Mechanical Demolition				
Subpart V - Power Transmission and Distribution				
1926.955 Overhead Lines				

Contract: Contractor:	Applicable to Subcontractor (yes / no)		Foreman	Competent Person (if not foreman)
Subpart X - Stairways and Ladders				
1926.1053 Ladders				
1926.1060 Training Requirements				
Subpart Z - Toxic and Hazardous Substances				
1926.1101 Asbestos				
1926.1101 thru 1926.1148 Toxic and Hazardous Substances				

I certify that the listed employees are competent persons, as defined and required by specific OSHA standards. They are capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Name (print)

Contractor Signature

Date

PU19, Revised 07/2021

Certification of Training Documents to be Submitted with Safety Policy/Program

Provide a certification of training for employees on your safety program.

Certification of training must include: Employee's name, date of training, person conducting the training, topics covered, and a statement that the student has successfully completed the course.

In addition, Contractor shall provide certification of training on the following programs, as they pertain to your contract and project tasks. This list is not meant to be all inclusive: please refer to OSHA regulations for applicable safety requirements.

- a. ☐ Scaffold: 1926.454
- b. ☐ Fall Protection 1926.503
- c. ☐ Crane Operator: 1926.1427
- d. ☐ Signal person (this is for any persons connecting material or equipment for lifting): 1926.1428
- e. ☐ Crane maintenance: 1926.1429
- f. ☐ Steel erection fall protection: 1926.761
- g. ☐ Respiratory protection (medical clearance and training records complying with 1910.134
- h. ☐ Powder-actuated tools: 1926.302
- i. ☐ Motor Vehicles (are those vehicles that operate within an off-highway jobsite, not open to public traffic): 1926.21

Work Area:		JOB HAZARD/RISK ANALYSIS
	Site:	
	Company:	

Describe Activity:		Date:	
Completed By:			

Work Process and Tasks <i>Describe the tasks / steps involved</i>	Hazards Identified for each Task / Step	Risk Level <i>High – Medium</i>	Control / Safe Work Procedures for each Task <i>Controls to be implemented (consider the hierarchy of hazard controls)</i>

Checklist for Guidance			
• Does Task effect other trades?	• Any overhead and / or underground utilities?	• What type of PPE will be used?	
• Any Fall Conditions greater than 6 feet?	• What are the potential “hazards”?	• How can the “hazard” be eliminated?	
• Have employees been trained in the assignment? (e.g. fall protection, scaffold, excavation, etc..)	• What “hazards” are present?	• Excavation Safety System to be used?	

Competent Person / Supervisors Comments			Date:	
Employee Name:			Competent Person Signature:	

SECTION 05 31 00

STEEL DECK

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. This Section includes the following:
 - 1. Roof deck.
 - 2. Acoustical cellular roof deck.
 - 3. Composite floor deck.
- B. Related Sections include the following:
 - 1. Division 03 Section "Cast-in-Place Concrete" for concrete fill.
 - 2. Division 05 Section "Structural Steel" for shop- and field-welded shear connectors.
 - 3. Division 05 Section "Metal Fabrications" for framing deck openings with miscellaneous steel shapes.
 - 4. Division 09 painting Sections for repair painting of primed deck.
 - 5. Division 16 Section "Underfloor Raceways" for preset inserts, activation kits, after set inserts, service fittings, header ducts, and trench header ducts used with cellular floor-deck systems.

1.3 SUBMITTALS

- A. Product Data: For each type of deck, accessory, and product indicated.
- B. Shop Drawings: Show layout and types of deck panels, anchorage details, reinforcing channels, pans, cut deck openings, special jointing, accessories, and attachments to other construction.
- C. Product Certificates: For each type of steel deck, signed by product manufacturer.
- D. Welding certificates.
- E. Field quality-control test and inspection reports.
- F. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, indicating that each of the following complies with requirements:
 - 1. Power-actuated mechanical fasteners.
 - 2. Acoustical roof deck.

3. Acoustical floor deck.

G. Research/Evaluation Reports: For steel deck.

1.4 QUALITY ASSURANCE

- A. Testing Agency Qualifications: An independent agency qualified according to ASTM E 329 for testing indicated.
- B. Welding: Qualify procedures and personnel according to AWS D1.3, "Structural Welding Code - Sheet Steel."
- C. Fire-Test-Response Characteristics: Where indicated, provide steel deck units identical to those tested for fire resistance per ASTM E 119 by a testing and inspecting agency acceptable to authorities having jurisdiction.
 - 1. Fire-Resistance Ratings: Indicated by design designations of applicable testing and inspecting agency.
 - 2. Steel deck units shall be identified with appropriate markings of applicable testing and inspecting agency.
- D. AISI Specifications: Comply with calculated structural characteristics of steel deck according to AISI's "North American Specification for the Design of Cold-Formed Steel Structural Members."
- E. Electrical Raceway Units: Provide UL-labeled cellular floor-deck units complying with UL 209 and listed in UL's "Electrical Construction Equipment Directory" for use with standard header ducts and outlets for electrical distribution systems.
- F. FMG Listing: Provide steel roof deck evaluated by FMG and listed in its "Approval Guide, Building Materials" for Class 1 fire rating and Class 1-90 windstorm ratings.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Protect steel deck from corrosion, deformation, and other damage during delivery, storage, and handling.
- B. Stack steel deck on platforms or pallets and slope to provide drainage. Protect with a waterproof covering and ventilate to avoid condensation.
 - 1. Protect and ventilate acoustical cellular roof deck with factory-installed insulation to maintain insulation free of moisture.

1.6 COORDINATION

- A. Coordinate installation of sound-absorbing insulation strips in topside ribs of acoustical deck with roofing installation specified in Division 07 to ensure protection of insulation strips against damage from effects of weather and other causes.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Steel Deck:
 - a. ASC Profiles, Inc.
 - b. Canam Steel Corp.;The Canam Manac Group.
 - c. Consolidated Systems, Inc.
 - d. DACS, Inc.
 - e. D-Mac Industries Inc.
 - f. Epic Metals Corporation.
 - g. Marlyn Steel Decks, Inc.
 - h. New Millennium Building Systems, LLC.
 - i. Nucor Corp.; Vulcraft Division.
 - j. Roof Deck, Inc.
 - k. United Steel Deck, Inc.
 - l. Valley Joist; Division of EBSCO Industries, Inc.
 - m. Verco Manufacturing Co.
 - n. Wheeling Corrugating Company; Div. of Wheeling-Pittsburgh Steel Corporation.

2.2 ROOF DECK

- A. Steel Roof Deck: Fabricate panels, without top-flange stiffening grooves, to comply with "SDI Specifications and Commentary for Steel Roof Deck," in SDI Publication No. 30, and with the following:
 - 1. Prime-Painted Steel Sheet: ASTM A 1008/A 1008M, Structural Steel (SS), Grade 33 minimum, shop primed with manufacturer's standard baked-on, rust-inhibitive primer.
 - a. Color: Manufacturer's standard
 - 2. Galvanized Steel Sheet: ASTM A 653/A 653M, Structural Steel (SS), Grade 33 zinc coating.
 - 3. Deck Profile: As indicated.
 - 4. Profile Depth: As indicated.

5. Design Uncoated-Steel Thickness: As indicated.
6. Span Condition: Triple span or more.
7. Side Laps: Overlapped.

2.3 ACOUSTICAL ROOF DECK

- A. Acoustical Steel Roof Deck: Fabricate panels, without top-flange stiffening grooves, to comply with "SDI Specifications and Commentary for Steel Roof Deck," in SDI Publication No. 30, and with the following:
1. Prime-Painted Steel Sheet: ASTM A 1008/A 1008M, Structural Steel (SS), Grade 33 minimum, shop primed with manufacturer's standard baked-on, rust-inhibitive primer.
 - a. Color: Manufacturer's standard
 2. Galvanized and Shop-Primed Steel Sheet: ASTM A 653/A 653M, Structural Steel (SS), Grade 33 zinc coating; cleaned, pretreated, and primed with manufacturer's standard baked-on, rust-inhibitive primer.
 - a. Color: Manufacturer's standard
 3. Deck Profile: As indicated
 4. Cellular Deck Profile: As indicated
 5. Profile Depth: As indicated
 6. Design Uncoated-Steel Thickness: As indicated
 7. Design Uncoated-Steel Thicknesses; Deck Unit/Bottom Plate: As indicated
 8. Span Condition: Triple span or more
 9. Side Laps: Overlapped
 10. Acoustical Perforations: Cellular deck units with manufacturer's standard perforated flat-bottom plate welded to ribbed deck.
 11. Sound-Absorbing Insulation: Manufacturer's standard pre-molded roll or strip of glass or mineral fiber.
 12. Acoustical Performance: NRC 0.95 for 3" roof deck depth, tested according to ASTM C 423 or as indicated on drawings.

2.4 COMPOSITE FLOOR DECK

- A. Composite Steel Floor Deck: Fabricate panels, with integrally embossed or raised pattern ribs and interlocking side laps, to comply with "SDI Specifications and Commentary for Composite Steel Floor Deck," in SDI Publication No. 30, with the minimum section properties indicated, and with the following:
1. Galvanized Steel Sheet: ASTM A 653/A 653M, Structural Steel (SS), Grade 33 G60 zinc coating.
 2. Profile Depth: As indicated.
 3. Design Uncoated-Steel Thickness: As indicated.
 4. Span Condition: Triple span or more.

2.5 ACCESSORIES

- A. General: Provide manufacturer's standard accessory materials for deck that comply with requirements indicated.
- B. Mechanical Fasteners: Corrosion-resistant, low-velocity, power-actuated or pneumatically driven carbon-steel fasteners; or self-drilling, self-threading screws.
- C. Side-Lap Fasteners: Corrosion-resistant, hexagonal washer head; self-drilling, carbon-steel screws, No. 12 (4.8-mm) minimum diameter.
- D. Flexible Closure Strips: Vulcanized, closed-cell, synthetic rubber.
- E. Miscellaneous Sheet Metal Deck Accessories: Steel sheet, minimum yield strength of 33,000 psi (230 MPa), not less than 0.0359-inch (0.91-mm) design uncoated thickness, of same material and finish as deck; of profile indicated or required for application.
- F. Pour Stops and Girder Fillers: Steel sheet, minimum yield strength of 33,000 psi (230 MPa), of same material and finish as deck, and of thickness and profile As indicated.
- G. Column Closures, End Closures, Z-Closures, and Cover Plates: Steel sheet, of same material, finish, and thickness as deck, unless otherwise indicated.
- H. Piercing Hanger Tabs: Piercing steel sheet hanger attachment devices for use with floor deck.
- I. Weld Washers: Uncoated steel sheet, shaped to fit deck rib, 0.0598 inch (1.52 mm) thick, with factory-punched hole of 3/8-inch (9.5-mm) minimum diameter.
- J. Recessed Sump Pans: Single-piece steel sheet, 0.0747 inch (1.90 mm) thick, of same material and finish as deck, with 3-inch- (76-mm-) wide flanges and sloped recessed pans of 1-1/2-inch (38-mm) minimum depth. For drains, cut holes in the field.
- K. Flat Sump Plate: Single-piece steel sheet, 0.0747 inch (1.90 mm) thick, of same material and finish as deck. For drains, cut holes in the field.
- L. Galvanizing Repair Paint: SSPC-Paint 20 or DOD-P-21035, with dry film containing a minimum of 94 percent zinc dust by weight.
- M. Repair Paint: Manufacturer's standard rust-inhibitive primer of same color as primer.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine supporting frame and field conditions for compliance with requirements for installation tolerances and other conditions affecting performance.

3.2 INSTALLATION, GENERAL

- A. Install deck panels and accessories according to applicable specifications and commentary in SDI Publication No. 30, manufacturer's written instructions, and requirements in this Section.
- B. Install temporary shoring before placing deck panels, if required to meet deflection limitations.
- C. Locate deck bundles to prevent overloading of supporting members.
- D. Place deck panels on supporting frame and adjust to final position with ends accurately aligned and bearing on supporting frame before being permanently fastened. Do not stretch or contract side-lap interlocks.
 - 1. Align cellular deck panels over full length of cell runs and align cells at ends of abutting panels.
- E. Place deck panels flat and square and fasten to supporting frame without warp or deflection.
- F. Cut and neatly fit deck panels and accessories around openings and other work projecting through or adjacent to deck.
- G. Provide additional reinforcement and closure pieces at openings as required for strength, continuity of deck, and support of other work.
- H. Comply with AWS requirements and procedures for manual shielded metal arc welding, appearance and quality of welds, and methods used for correcting welding work.
- I. Mechanical fasteners may be used in lieu of welding to fasten deck. Locate mechanical fasteners and install according to deck manufacturer's written instructions.

3.3 ROOF-DECK INSTALLATION

- A. Fasten roof-deck panels to steel supporting members by arc spot (puddle) welds of the surface diameter indicated or arc seam welds with an equal perimeter that is not less than 1-1/2 inches (38 mm) long, and as follows:
 - 1. Weld Diameter: 5/8 inch (16 mm) nominal.
 - 2. Weld Spacing: Weld edge and interior ribs of deck units with a minimum of two welds per deck unit at each support. Space welds 18 inches (450 mm) apart, maximum or as indicated.
 - 3. Weld Washers: Install weld washers at each weld location.
- B. Side-Lap and Perimeter Edge Fastening: Fasten side laps and perimeter edges of panels between supports, at intervals not exceeding the lesser of 1/2 of the span or 36 inches (910 mm)], and as follows:
 - 1. Mechanically fasten with self-drilling, No. 12 (4.8-mm-) diameter or larger, carbon-steel screws.
 - 2. Mechanically clinch or button punch.

3. Fasten with a minimum of 1-1/2-inch- (38-mm-) long welds.
- C. End Bearing: Install deck ends over supporting frame with a minimum end bearing of 1-1/2 inches (38 mm), with end joints as follows:
 1. End Joints: Lapped 2 inches (51 mm) minimum.
- D. Roof Sump Pans and Sump Plates: Install over openings provided in roof deck and weld or mechanically fasten flanges to top of deck. Space welds or mechanical fasteners not more than 12 inches (305 mm) apart with at least one weld or fastener at each corner.
 1. Install reinforcing channels or zees in ribs to span between supports and weld or mechanically fasten.
- E. Miscellaneous Roof-Deck Accessories: Install ridge and valley plates, finish strips, end closures, and reinforcing channels according to deck manufacturer's written instructions. Weld or mechanically fasten to substrate to provide a complete deck installation.
 1. Weld cover plates at changes in direction of roof-deck panels, unless otherwise indicated.
- F. Flexible Closure Strips: Install flexible closure strips over partitions, walls, and where indicated. Install with adhesive according to manufacturer's written instructions to ensure complete closure.
- G. Sound-Absorbing Insulation: Installation into topside ribs of deck as specified in Division 07

3.4 FLOOR-DECK INSTALLATION

- A. Fasten floor-deck panels to steel supporting members by arc spot (puddle) welds of the surface diameter indicated and as follows:
 1. Weld Diameter: 5/8 inch (16 mm) nominal.
 2. Weld Spacing: Weld edge ribs of panels at each support. Space additional welds an average of 12 inches (305 mm) apart, but not more than 18 inches (457 mm) apart.
 3. Weld Spacing: Space and locate welds as indicated.
 4. Weld Washers: Install weld washers at each weld location.
- B. Side-Lap and Perimeter Edge Fastening: Fasten side laps and perimeter edges of panels between supports, at intervals not exceeding the lesser of half of the span or 36 inches (910 mm), and as follows:
 1. Mechanically fasten with self-drilling, No. 12 (4.8-mm-) diameter or larger, carbon-steel screws.
 2. Mechanically clinch or button punch.
 3. Fasten with a minimum of 1-1/2-inch- (38-mm-) long welds.
- C. End Bearing: Install deck ends over supporting frame with a minimum end bearing of 1-1/2 inches (38 mm) with end joints as follows:
 1. End Joints: Lapped

- D. Pour Stops and Girder Fillers: Weld steel sheet pour stops and girder fillers to supporting structure according to SDI recommendations, unless otherwise indicated.
- E. Floor-Deck Closures: Weld steel sheet column closures, cell closures, and Z-closures to deck, according to SDI recommendations, to provide tight-fitting closures at open ends of ribs and sides of deck.
- F. Install piercing hanger tabs at 14 inches (355 mm) apart in both directions, within 9 inches (228 mm) of walls at ends, and not more than 12 inches (305 mm) from walls at sides, unless otherwise indicated.

3.5 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports.
- B. Field welds will be subject to inspection.
- C. Testing agency will report inspection results promptly and in writing to Contractor and Architect.
- D. Remove and replace work that does not comply with specified requirements.
- E. Additional inspecting, at Contractor's expense, will be performed to determine compliance of corrected work with specified requirements.

3.6 REPAIRS AND PROTECTION

- A. Galvanizing Repairs: Prepare and repair damaged galvanized coatings on both surfaces of deck with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.
- B. Repair Painting: Wire brush and clean rust spots, welds, and abraded areas on **both surfaces** of prime-painted deck immediately after installation and apply repair paint.
 - 1. Apply repair paint, of same color as adjacent shop-primed deck, to bottom surfaces of deck exposed to view.
 - 2. Wire brushing, cleaning, and repair painting of bottom deck surfaces are included in Division 09 Section.
- C. Provide final protection and maintain conditions to ensure that steel deck is without damage or deterioration at time of Substantial Completion.

END OF SECTION