



ADDENDUM NO. 4

April 1, 2020

Appoquinimink School District
Silver Lake Elementary School
Additions and Renovations – Bid Package 'B'
Page 1

The bid due date remains unchanged by this Addendum.

Bids will be received until 3:00 p.m. on Tuesday, 07 April 2020. No questions from bidders will be accepted after, Monday, 30 March 2020.

The location for receipt of bids remains Room 138 of the Appoquinimink School District, Marion Proffitt Training Center, 118 South Sixth Street, Odessa, Delaware 19730

In accordance with the active Public Health State of Emergency related to the novel coronavirus ("COVID-19"), and Social Distancing recommendations of the Delaware Department of Health and Social Services, the Appoquinimink School District will be proceeding with the following logistics plan for managing bid receipts and the subsequent public bid opening:

- 1) Physical copies of bids will be received at the Appoquinimink School District, Marion Proffitt Training Center, 118 South Sixth Street, Odessa, Delaware 19730. 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.
- 2) School district personnel will be available to receive the bids on Tuesday, April 7, 2020, from 8am until 3pm local time. Signs will be posted at the main entrance directing bidders to the appropriate drop off location.
- 3) A public bid opening will be held immediately following the 3pm submission deadline, in the Board Room of the Marion Proffitt Training Center. Although the Appoquinimink School District is not prohibiting public presence at the bid opening, for the safety of the general public the State of Delaware guidelines for social distancing and public gatherings will be enforced. In an effort to reinforce recommended social distancing, the Appoquinimink School District strongly encourages attendees attend the bid opening via YouTube live stream at the following link:
 - a. Full link:
https://www.youtube.com/channel/UC7nnAUtcNQgymmVQCCNiaSg/videos?view_as=public
 - b. Abbreviated Link:
bit.ly/appoyoutube
 - c. Alternative Conference Call Line:
Number: +1 (646) 558 8656
Access Code: 333 990 692
 - d. A recording of the bid opening will remain available for future access at the link above.





Note: Bid Documents obtained through the State of Delaware Government Support Services Website (bids.delaware.gov), are not for bidding purposes. Bid Documents may be viewed and downloaded at EDiS' FTP site on or after March 6, 2020. To obtain access to the FTP site, please submit your request via email to Cyndi Slothour at cslothour@ediscompany.com.

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 on 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 ~~strike through~~.

The contract documents for the above referenced project, dated February 21, 2020 are amended as follows:

GENERAL CLARIFICATIONS:

1. The deadline for questions was March 30, 2020. No further questions from bidders will be considered at this time.
2. As indicated in the Instructions to Bidders: No Bidder shall modify, withdraw or cancel his Bid or any part thereof for SIXTY (60) days after the receipt of Bids.

QUESTIONS AND ANSWERS:

1. See attached responses to RFI's 16, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, and 42.

MODIFICATIONS TO SPECIFICATIONS:

1. Section 004100 – Bid Forms
 - a. Contract B-13 Acoustical Ceilings
 - i. Bid form is being reissued to include Alternate #1.
 - b. Contract B-21 Electrical
 - i. Bid form is being reissued to delete Alternate #8
2. Section 011100 – Summary of Work
 - a. Contract B-06 – Carpentry & General Work
 - i. Delete Paragraph 43 in its entirety.
 - ii. Add the following paragraph 44 to read as follows:
 44. **Provide wood blocking behind all wall mounted equipment that overlaps drywall and ceramic tile.**





- b. Contract B-07 – Roofing
 - i. Revise paragraph 19 to read as follows:
 - 19. The Roofing Contractor will be responsible for demolition of existing roofing systems, including roof deck and insulation, where applicable. Refer to roof systems responsibilities matrix, paragraph 6.AO of this specification section. **The Roofing Contractor will be responsible for demolition associated with roof details on A21.1.**
 - ii. Revise paragraph 20 to read as follows:
 - 20. Provide ~~installation of~~ high-performance underlayment, and ice protection membrane where required.
 - iii. Revise paragraph 21 to read as follows:
 - 21. Provide high-performance vented metal fascia, **ridge vent, and dual vent.**

- c. Contract B-08 – Metal Studs & Drywall
 - i. Revise paragraph 8 to read as follows:
 - 8. Provide metal furring (**z-furring, hat track, or other**).
 - ii. Revise paragraph 25 to read as follows:
 - 25. Provide Exterior Cellular PVC Molding, **Fascia Boards, Soffit, and Trim.**

- d. Contract B-12 – Painting
 - i. Add paragraph 15 to read as follows:
 - 15. **Clean, prep, and finish all existing surfaces to remain (i.e. existing louvers).**

- e. Contract B-19 – Mechanical and Plumbing
 - i. Revise paragraph 16 to read as follows:
 - 16. Provide louvers, **grilles**, and vents related to HVAC operations.
 - ii. Add paragraph 37 to read as follows:
 - 37. **Provide connection of ductwork to existing louvers, as indicated in the documents.**

- a. Contract B-23 – Structured Cable
 - iii. Revise paragraph 2 to read as follows:
 - 2. Provide all network cabling including wiring (**CAT6, CAT6 shielded or 18/2 shielded**), devices, and terminations for devices provided by the Special Systems Contractor, specifically to devices identified in plans and referenced on “Communications Outlet Configuration” chart on Drawing E30.1. Two (2) terminations should be provided (1) at the source (MDF/IDF patch panel) and (1) at the communication port (jack) in all instances. Structured Cable Contractor will provide cable installation for the following Special Systems Contractor installed systems:
 - a. Telephone system and voicemail system.
 - b. Cafetorium sound reinforcement system. – Alternate #4d.
 - c. CCTV - Network Digital Video Management System.
 - d. **Classroom Amplification System**





- b. Section 013700 – BIM Coordination
 - a. This section is being reissued to accurately describe required model elements as it pertains to Alternate #11.
- c. Section 024119 – Selective Structure Demolition.
 - i. Delete Paragraph 3.3.B.4 in its entirety.
- d. Section 088000 – Glazing
 - i. Paragraph 3.10.A shall read as follows: “Glass Type (IG-1): Pyrolytic-coated, low-maintenance, low-E coated, clear insulating glass.”
- e. Section 097720 – Fiberglass Reinforced Wall Panels
 - ii. All trim referenced in this specification section shall be F560 Stainless Steel, with #4 brushed finish. This shall include inside corners, outside corners, divisions, and edges.

MODIFICATIONS TO DRAWINGS:

1. Drawing 0.4 – Description of Alternate #7 has been revised to align with the rest of the construction documents for reference. Refer to attached sketch A.SK-08.
2. Drawing A21.1 – Detail 13/A21.1 has been revised. Refer to attached sketch A.SK-04.
3. Drawing A21.2 – Detail 1/A21.2 has been revised. Refer to attached sketch A.SK-05.
4. Drawing A.SK-06 & A.SK-07 have been added to the drawing set and detail restoration work associated with Alternate #5.
5. A90.A – FINISH PLAN – AREA ‘A’
 - a. Stage finish plan added showing alternate 4E
6. A90.B – FINISH PLAN – AREA ‘B’
 - a. Removed wainscot tile from COMMONS ‘204’ and ‘213’
7. A90.C – FINISH PLAN – AREA ‘C’
 - a. Removed wainscot tile from COMMONS ‘309’ and ‘323’
 - b. Drawings 2 & 3/A90.C now show extent and termination of wainscot from corridor to commons areas.

End of Addendum No. 4



Contract: B-13: Acoustical Ceilings

BID FORM

For Bids Due: March 27 April 7, 2020 To: Appoquinimink School District
118 South Sixth Street
Odessa, DE 19730

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 Delaware Business License 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:

\$ _____ (\$ _____)

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. 1: Increase the Size of the Gymnasium

Add/Deduct _____ (\$ _____)

Alternate No. 2: Add Classrooms 305 & 327

Add/Deduct _____ (\$ _____)

Appoquinimink School District
Silver Lake Elementary School Additions & Renovations
Bid Package B

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Alternate No. 4e: Stage Expansion

Add/Deduct _____ (\$ _____)

Alternate No. 8: Octagonal Ceilings & Soffits

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.

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.

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: _____

(Authorized Signature)

(SEAL)

(Title)

Date: _____

ATTACHMENTS

- Sub-Contractor List
- Non-Collusion Statement
- Bid Bond
- Consent of Surety
- Affidavit of Employee Drug Testing Program
- Delaware Business License
- ~~Town of Middletown Contractor's License~~
- (Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b Delaware Code, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, **it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.**

<u>Subcontractor</u> <u>Category</u>	<u>Subcontractor</u>	<u>Address (City & State)</u>	<u>Subcontractors tax payer ID #</u> <u>or Delaware Business license #</u>
1. Acoustical Ceilings _____	_____	_____	_____
2. Acoustical Treatment _____	_____	_____	_____

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on March 12, 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. **(BPB ADDENDUM NO. 1)**

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 ~~March 27~~ **April 7, 2020.**

All the terms and conditions of **Contract: A-13: Acoustical Ceilings** have been thoroughly examined and are understood.

NAME OF BIDDER: _____

AUTHORIZED REPRESENTATIVE
(TYPED): _____

AUTHORIZED REPRESENTATIVE
(SIGNATURE): _____

TITLE: _____

ADDRESS OF BIDDER: _____

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.

BID BOND

TO ACCOMPANY PROPOSAL
(Not necessary if security is used)

KNOW ALL MEN BY THESE PRESENTS That: _____ of
_____ in the County of _____ and State of _____ as
Principal, and _____ of _____ in the County of _____
_____ and State of _____ as Surety, legally authorized to do business in the State of Delaware
("State"), are held and firmly unto the **Appoquinimink School District** in the sum of _____
Dollars (\$ _____), or percent not to exceed _____
_____ Dollars (\$ _____) of amount of bid on Contract No. _____ to be paid to the
Appoquinimink School District for the use and benefit of the **Appoquinimink School District** for which payment well
and truly to be made, we do bind ourselves, our and each of our heirs, executors, administrators, and successors, jointly
and severally for and in the whole firmly by these presents.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH That if the above bounden Principal who has submitted to the
Appoquinimink School District a certain proposal to enter into this contract for the furnishing of certain material and/or
services within the State, shall be awarded this Contract, and if said Principal shall well and truly enter into and execute
this Contract as may be required by the terms of this Contract and approved by the **Appoquinimink School District** this
Contract to be entered into within twenty days after the date of official notice of the award thereof in accordance with the
terms of said proposal, then this obligation shall be void or else to be and remain in full force and virtue.

Sealed with _____ seal and dated this ____ day of _____ in the year of our Lord two thousand
and _____ (20__).

SEALED, AND DELIVERED IN THE PRESENCE OF

Name of Bidder (Organization)

Corporate
Seal
Attest _____

By: _____
Authorized Signature

Title

Name of Surety

Witness _____

Title

CONSENT OF SURETY

DATE _____

To: **Appoquinimink School District**
118 South Sixth Street
Odessa, DE 19730

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.

Contract: B-21: Electrical

BID FORM

For Bids Due: March 27 April 7, 2020 To: Appoquinimink School District
118 South Sixth Street
Odessa, DE 19730

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 Delaware Business License 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:

\$ _____ (\$ _____)

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. 1: Increase the Size of the Gymnasium

Add/Deduct _____ (\$ _____)

Alternate No. 2: Add Classrooms 305 & 327

Add/Deduct _____ (\$ _____)

Alternate No. 3: Exterior Digital Signage

Add/Deduct _____ (\$ _____)

Alternate No. 4c: Stage Lighting System

Add/Deduct _____ (\$ _____)

Alternate No. 4d: Cafetorium Audio/Visual System

Add/Deduct _____ (\$ _____)

Alternate No. 4e: Stage Expansion

Add/Deduct _____ (\$ _____)

~~Alternate No. 8: Octagonal Ceilings & Soffits~~

~~Add/Deduct _____ (\$ _____)~~

Alternate No. 11: Building Information Modeling in lieu of Traditional Coordinated Shop Drawings

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.

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.

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
- Delaware Business License
- ~~Town of Middletown Contractor's License~~
- (Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b Delaware Code, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, **it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.**

<u>Subcontractor Category</u>	<u>Subcontractor</u>	<u>Address (City & State)</u>	<u>Subcontractors tax payer ID # or Delaware Business license #</u>
1. Electrical	_____	_____	_____
2. Caulking	_____	_____	_____

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on March 12, 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. **(BPB ADDENDUM NO. 1)**

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 ~~March 27~~ **April 7, 2020.**

All the terms and conditions of **Contract: A-21: Electrical** have been thoroughly examined and are understood.

NAME OF BIDDER: _____

AUTHORIZED REPRESENTATIVE
(TYPED): _____

AUTHORIZED REPRESENTATIVE
(SIGNATURE): _____

TITLE: _____

ADDRESS OF BIDDER: _____

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.

BID BOND

TO ACCOMPANY PROPOSAL
(Not necessary if security is used)

KNOW ALL MEN BY THESE PRESENTS That: _____ of
_____ in the County of _____ and State of _____ as
Principal, and _____ of _____ in the County of _____
_____ and State of _____ as Surety, legally authorized to do business in the State of Delaware
("State"), are held and firmly unto the **Appoquinimink School District** in the sum of _____
Dollars (\$ _____), or percent not to exceed _____
_____ Dollars (\$ _____) of amount of bid on Contract No. _____ to be paid to the
Appoquinimink School District for the use and benefit of the **Appoquinimink School District** for which payment well
and truly to be made, we do bind ourselves, our and each of our heirs, executors, administrators, and successors, jointly
and severally for and in the whole firmly by these presents.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH That if the above bounden Principal who has submitted to the
Appoquinimink School District a certain proposal to enter into this contract for the furnishing of certain material and/or
services within the State, shall be awarded this Contract, and if said Principal shall well and truly enter into and execute
this Contract as may be required by the terms of this Contract and approved by the **Appoquinimink School District** this
Contract to be entered into within twenty days after the date of official notice of the award thereof in accordance with the
terms of said proposal, then this obligation shall be void or else to be and remain in full force and virtue.

Sealed with _____ seal and dated this ____ day of _____ in the year of our Lord two thousand
and _____ (20__).

SEALED, AND DELIVERED IN THE PRESENCE OF

Name of Bidder (Organization)

Corporate
Seal
Attest _____

By: _____
Authorized Signature

Title

Name of Surety

Witness _____

Title

CONSENT OF SURETY

DATE _____

To: **Appoquinimink School District**
118 South Sixth Street
Odessa, DE 19730

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.

BIM EXECUTION PLAN

Silver Lake Elementary School
200 E. Cochran Street
Middletown, DE 19709

Appoquinimink School District



EDiS Company and EDiS BIM Services



**BIM PROCESS IS MANDATORY
(ALTERNATE #11)**

SECTION 013700 - BIM COORDINATION

1. CONTRACTOR 3D MODEL RESPONSIBILITY

The purpose of a three-dimensional model is to aid in project review development. Contractor and its sub-contractors, as part of the Silver Lake Elementary School Additions and Renovations project, shall hold all responsibility to adhere to AIA G202-2013 Project Building Information Modeling Protocol Form Matrix (see Exhibit 1 and referenced attachments) while creating their BIM model respectively. This BIM model shall reflect the two-dimensional contract drawings provided in bidding package, RFI, and ASI. The Contractor's referenced and shared three-dimensional model is only utilized as a visual aid to begin per matrix LOD required by Contractor.

1A. Architect and their consultants will Furnish Contractor one set of Revit 2019 Building Information Modeling files (BIM) of Drawing for use in preparing coordination digital data files.

- a. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to drawings.
- b. Digital data software program: Drawings are available in Revit 2019 digital data software working on the Windows operating system. Sheet views will be deleted to protect the architect and consultants. Full model will be available for coordination.
- c. Contractor shall execute a data licensing agreement in the form of the agreement included in the project manual.
- d. The Contractor and its prime contractors are responsible to execute all licensing for requested software to coordinate the project.

1B. BIM File Incorporation: Develop and incorporate coordination drawing information into Building Information Model established for Project.

- a. Each of the Prime Contractors shall model their respective systems in the BIM model that are part of their contract and provide updated files to the HVAC contractor.
- b. The HVAC contractor (Prime Coordinator) shall perform three-dimensional component conflict analysis as part of the preparation of coordination drawings. Resolve component conflicts with each Prime prior to submittal. Indicate where conflict resolution requires modification of design requirements by Architect and obtain approval of Architect.
- c. HVAC contractor shall revise the BIM model as necessary to reflect the coordination changes. HVAC contractor shall pay for the cost of revisions to the BIM model. HVAC contractor shall include all cost due to the revisions of project changes such as but not limited to RFI, ASI's and owner changes. All modifications, enhancements, additions, and changes to structural, mechanical, electrical, plumbing, fire protection, or HVAC components shall be made by the respective Prime Contractors responsible for that system as part of their contract.

2. DEFINITIONS

- 2.1. **Base Structural Model** – the structural steel mill order drawing file showing all structural elements. This model is not necessarily fully detailed with all connections.
 - 2.2. **Base Architectural Model** – a combination of the Base Structural Model and key architectural elements. This model is to be used by all coordination participants as the background file in which to develop their work. No information within this model will be changed through the coordination process. It is for reference only.
 - 2.3. **Base Composite Model** – this model includes all trade drawing files within the Base Architectural Model as a representation of the completed systems. This model is used to run the intermediate clash reports and is considered a work in progress.
 - 2.4. **Final Coordination Model** – this model shows all trades’ systems fully coordinated within the Base Architectural Model. All clashes have been resolved. No further coordination is required. The work shown within this model represents the upcoming installations of each system.
 - 2.5. **Completed Coordination Model** – this model is the close-out submittal to the Owner and includes the information within the Final Coordination Model as well as any project updates that have taken place during installations such as RFI responses, as-built conditions, etc.
 - 2.6. **Building Information Model** - A Building Information Model(s) is a digital representation of the physical and functional characteristics of the Project and is referred to in this document as the “Model(s),” which term may be used herein to describe a Model Element, a single Model or multiple Models used in the aggregate. “Building Information Modeling” means the process and technology used to create the Model.
 - 2.7. **Level of Development** - The Level(s) of Development (LOD) describes the level of completeness to which a Model Element is developed.
 - 2.8. **Model Element** - A Model Element is a portion of the Building Information Model representing a component, system or assembly within a building or building site. Model Elements are represented by the Construction Specifications Institute (CSI) UniFormat™ classification system in the Model Element Table in Exhibit 1 - Article 3.
 - 2.9. **Model Element Author** - The Model Element Author is the party responsible for developing the content of a specific Model Element to the LOD required for a particular phase of the Project. Model Element Authors are identified in the Model Element Table in Exhibit 1 - Article 3.
 - 2.10. **Model User** - The Model User refers to any individual or entity authorized to use the Model on the Project for analysis, estimating, or scheduling.
 - 2.11. **TCD** – Trade contract drawings developed by MEP contractor.
- ## 3. COORDINATION DRAWING PROCESS – GENERAL REQUIREMENTS.
- 3.1. The coordination model shall be derived from the design base composite model which shall be in a (Program File Format – Ex: Revit 2017) format and utilized by all coordination participants. The A/E is to provide this base composite model as needed at each plan deliverable for coordination efforts. This model will be utilized to establish field installation sequence, resolve trade coordination issues prior to installation, and to make the most efficient use of installation space without sacrificing system performance for mechanical, electrical, structural and architectural systems. (Program File Format –

Ex: NAVISWORKS or IFC) design review software will be used to document, identify and resolve interferences between all trades.

- 3.2. Communication is a critical element to the success of this coordination process. All project team members must be in constant communication to keep the process moving

Meeting Type	Project Stage	Frequency	Participants	Location
BIM Requirement Kick-off	Construction	Once	EDiS Team & Contracts #	Site Trailer
BIM Coordination	Construction	Weekly	EDiS Team & Contracts #	Site Trailer
BIM Clash Detection	Construction	Weekly	EDiS Team Issue to Contracts	Site Trailer
Field Installation Process	Construction	Weekly	EDiS Team & Contracts #	Site Trailer

forward according to the sign-off schedule (5.1). Constant collaboration is expected of all team participants and each participant should be proactive in identifying and resolving design, engineering, and model interferences. Contractors avoiding the coordination process shall receive liquidated damages for missing meetings and negatively impacting project completion.

- 3.3. All trade contractors own their respective modeling for their contract work. EDiS Company will facilitate and lead the 3D coordination modeling process. It is the responsibility of all coordination participants to resolve discrepancies pertaining to their own model. All trades shall be responsible for collisions/clashes/coordination issues involving their respective trade(s) and proposed work. Coordinated work takes precedence over field routed systems. Each Contractor to provide LOD 350 total coordination models for sign off.
- 3.4. Coordination meetings will occur weekly starting TBD. Selected coordination team members are required to generate a clash-free model inclusive of all systems. The following participants are required to attend the weekly coordination meetings:
- 3.5. A mandatory coordination kick-off meeting for all participants will review; team collaboration, the execution process, the coordination schedule, establishing zones per system, use of the coordinated elements during construction, project specific information and requirements, and model/document standards.
- 3.6. Coordination meetings will be held at Virtual Goto Meeting to review the model's progress per the schedule and process indicated.
- 3.7. Utility corridors and above ceiling space for each trade, will be established by the group at the beginning of the process. These zones will be adjusted through the coordination process to meet installation requirements and feasibility.
- 3.8. All participants are required to identify the submittals required for accurate detailing of the coordination model (such as equipment, light fixtures, etc.) and to obtain final approval so the information can be incorporated into the modeling process.
- 3.9. The 3D coordination modeling process does not replace the standard submittal process and will not be considered as a submittal. Exceptions: The submittals issued to reflect the 3D model content issued to A/E.
- 3.10. Meeting Procedures:

Coordination Meetings				
TCD Drawings	Construction	Weekly	Contracts Mechanical	Site Trailer
Sign off on TCD Drawings	Construction	At completion	All Parties w/Contract	Site Trailer

NOTES: all contracted parties involved with coordination are required to sign off on all coordinated models via sign off TCD drawings. All clash reports issued to subcontractors require completion by next BIM meeting.

3.11. The coordination meeting:

3.11.1. The purpose is to review and resolve items on the current clash report in conjunction with the project coordination schedule. The meetings will focus on clashes that cannot be resolved by internal collaboration. EDiS Company will facilitate the meeting and will make final decisions on clash resolution that are the least impact to the project as a whole. COORDINATION MEETINGS WILL NOT BE USED TO RESOLVE INDIVIDUAL MODELER'S/ENGINEER'S/ARCHITECTURE'S/CONTRACTOR'S WORK. If a Contractor does not post a clash-free system of its own work or that only contains a very limited number of clashes internally (Example: Fire Sprinkler Clashing with Fire Sprinkler), that Contractor will be considered unprepared for the meeting and will be responsible for any delays to the project schedule and any associated costs due to that delay which shall be determined by EDiS Company.

3.11.2. Each team participant will review the clash report prior to the subsequent coordination meeting in order to clean up any clashes that can be made without review by all participants.

3.11.3. All project participants are expected to be prepared for the meeting with new drawing work of the next area to be coordinated per the coordination schedule and any drawing changes based on the published clash report. Each participant will have available any shop model, submittals or other materials required to solve identified or potential conflicts.

3.11.4. The coordination schedule will be maintained and all identified conflicts addressed and resolved per the construction schedule. The coordination schedule may change as a result of design and/or model changes requested and made by the Owner, Architect or Engineer. In addition, the coordination schedule assumes selection of equipment is made within the time frame of the construction schedule as needed so it is incorporated into the coordination efforts without delay.

3.11.5. All agreed upon corrections to identified clashes determined by the team at the Coordination Meeting are to be updated and resolved prior to the next meeting.

3.12. When an area of the model is fully coordinated and clash-free, each participant agrees:

3.12.1. That each trades work is fully coordinated and will be installed per the signed off area as reflected in the coordination model. Sign off drawings from each

-
- trade are turned over in PDF form with projects title block. EDiS Company will include legend and title block for trade PDF file.
- 3.12.2. All trades to provide Total Coordination drawings at the time of sign off. TCD's are drawings which include all trades sign off models. Models are submitted for turn over to EDiS Company. The purpose for TCD's is to provide coordinated building models for jobsite coordination. Models from Contractors to include all but not limited to: item elevations, product type and all equipment tags.
 - 3.12.3. During the installation of each trade's work, EDiS Company will refer to the signed off report and the 3D model to resolve any conflicts. Each installation firm agrees to install all work per the signed off drawings/model, without deviation. If a deviation, during installation, takes place without prior approval from all detailing parties, it will be the responsibility of the installing contractor to tear out the work and install it as shown on the signed off drawings/coordination model. The cost of this work will be evaluated when the issues arise; however, the party responsible for the conflict will be responsible for the cost of the fix, including the additional detailing time of all parties involved.
 - 3.12.4. The model is not considered to be the final coordination model until the BIM Coordinator, EDiS Company's Project Manager, A/E, and Owner has approved all clash free systems and routings and documents are signed off by all parties (contractors).
- 3.13. Should a conflict arise during installation that was missed during the coordination process, and not a result of deviating from the signed off area, the coordination team will work together to find a solution that is optimal for all trades and the project.
 - 3.14. The final coordination model shall be kept up to date by all participants during construction to include as-built information and any other pertinent data that is essential to the project. The data will be submitted electronically in Revit, AutoCAD, NWC, PDF format. Items to be included are:
 - 3.14.1. RFI responses.
 - 3.14.2. Design change orders or designs that are in addition to the original contract documents.
 - 3.14.3. Equipment will be tagged with all (Owner required) identification information within the model (ex. Equipment schedule information and O&M Manuals). This identification information will be the same and correspond to all other close-out documentation. This close-out documentation including O&M manuals, maintenance information, etc. will be included in PDF form.
 - 3.14.4. EDiS will provide a location for the Contractor to submit the required documentation at a later time. EDiS will generate the completed coordination model based on these documents for turn-over to the owner.
 - 3.14.5. Tekla or Navisworks will be utilized to link PDF closeout documents, select RFI's, select Images, etc., to the closeout model. Contractors need to provide closeout documents in the format requested by EDiS for the closeout model as well as adding smart data to other model type files as determined necessary by EDiS within the time frame A/E dictates. For example, if Revit files are needed

-
- to produce the closeout model, EDiS may direct Contractor to set up certain Revit views for the exporting of files which make up the as-built models. A/E may also request that the Contractor create viewpoints for their equipment in as-built model.
- 3.15. Data for coordination will be available on the Box.com, to be referenced by the other participants. Models and drawing files will never be tampered with by non-owners of the file. If a mistake occurs and a drawing is inadvertently modified, the responsible party is required to alert the project team. (See attachment)
 - 3.16. The Owner's commissioning agent can attend the coordination meeting to review the detailing effort for commissioning related items.
 - 3.17. All trades will provide Level of Development (LOD) (350) models for weekly coordination meeting.
4. REQUIREMENTS OF THE LEAD COORDINATOR
- 4.1. The Lead Coordinator will be EDiS Company.
 - 4.2. Identification of a common insertion point for all drawing files. (Utilize Revit Models origin)
 - 4.3. A/E to provide Lead Coordinator model exports to 2D/3D CAD of each trade component as needed to coordination. Origins to be maintained in exports.
 - 4.4. Using the A/E's files, the Lead Coordinator will utilize & maintain the base architectural model.
 - 4.4.1. The base architectural model is a combination of the base structural model and other architectural elements. These architectural elements will include all elevated 3D architectural elements including, but not limited to, all walls that extend to the deck, fire and smoke walls, soffits and associated framing, ceiling planes, and finish floor planes.
 - 4.4.2. This model will consist of cleaned-up floor plans void of any excessive notations, leaders, bubbles, marks, grid lines, etc. that are not required for detailing development and that may potentially cause a conflict in the base composite model.
 - 4.4.3. In the event of changes to the A/E's contract documents, the A/E must revise the base architectural model/MEP/structural models and distributed to all coordination participants. This will require Contractor participation as need by A/E to complete the revised models for directive. Revision work will be directed by Owner through an executed change order.
 - 4.4.4. The base architectural models will be distributed and maintained by EDiS Company.
 - 4.5. Collation of all trades' detailing models as posted to the project's web-based posting site into a Base Composite Model thru the use of Navisworks 2017.
 - 4.5.1. Establish a standard two inch (2") soft tolerance within the clash detection software. This tolerance will result in a reported clash for any elements drawn closer than two inches (2") to one another.
 - 4.5.2. Assess and include most current clash files including the generation of a clash reports and distribution to all project participants per the coordination schedule.

-
- 4.5.3. Collect final as-built files from all trades and generate a Final Coordination Model to submit to CM as part of the close-out requirements.
 - 4.5.4. Coordination meeting minutes shall be kept by EDiS Company Lead Coordinator or EDiS' Project Manager showing issues and resolution dates.
5. REQUIREMENTS OF THE STRUCTURAL STEEL CONTRACTOR
- 5.1. Obtain from the A/E Structural Revit files to be used in the generation of the base structural model.
 - 5.2. The structural Contractor will develop and provide the base structural model within the time frame dictated by EDiS and provide structural model updates to ensure the coordination team is coordinating the MEP/FP to the most up-to-date structural model.
 - 5.3. All structural framing members in the final sizes and locations (typically referred to as a "mill order" or "procurement" model) will be shown in the model as 3D objects with surfaces. At the discretion of the lead coordinator, this model may be void of all hardware and secondary structural steel but should include the major components: primary steel, metal decking, slab on metal decking, and gusset plates.
 - 5.4. The structural insertion/datum point must match the architectural insertion/datum location. No detailing work shall take place until the insertion points of the architectural and structural models match.
 - 5.5. The steel Contractor is responsible for resolving their own modeling issues (i.e.: steel not to scale, missing key structural components, missing surface data, and model showing as wire frame data, model exported to proper file format, etc.). The steel Contractor is responsible to provide a steel design model in a usable format for all coordination participants to reference as the base structural model.
 - 5.6. A FINAL 3D steel model and 2D shop drawings shall be submitted to the structural engineer of record, and used for field erection. It must be completed and submitted in accordance to the BIM schedule. This model shall consist of:
 - 5.6.1. All primary and secondary steel including metal deck, slab on metal deck, actual gusset plate sizes, connection details, edge of slab details (pour stop), brick relief angles, embeds, anchor bolts, and other miscellaneous metals. Curtain Wall embeds modeled by others.
 - 5.6.2. Submit final approved files to Lead Coordinator for insertion into the coordinated model, and to the design team in the form of shop drawings and/or Navisworks compatible model.
6. DETAILING REQUIREMENTS OF ALL PARTICIPANTS
- 6.1. File sharing information:
 - 6.1.1. **Site Contractor (SIT-1)**
 - Attend BIM trade coordination meetings
 - Deliver three dimensional model to coordination team
 - Required to deliver items identified in G201 matrix such as
 - Develop appropriate tie-in locations of utilities with trades. Site contractor required to deliver main connections in model format

-
- Site underground items outside direct tie in locations not required in three dimensional models.
 - Sanitary piping tie-in
 - Storm water tie-in
 - Domestic water tie-in
- 6.1.2. The in-progress (Coordination Software – Ex: IFC/NWC/Cad) naming convention will be: project-trade-level. Example:
Project Designation -MechPipe-1
Project Designation -HVAC-1
Project Designation –Fire Protection-1
Project Designation -Elec-1
Project Designation -Plumbing-1
Project Designation -TeleCom-1 or AV-1
Project Designation –Pneumatic Tube-1, etc.
Additional designations may be added based on project specific scope and deliverable requirements and/or deemed as a critical component to the coordination process.
- 6.1.3. Each model posted by the contractor shall contain sub-layers for the purpose of system identification and isolation during the clash detection process. Example:
HVAC-1 shall contain sub-layers for:
- Supply
 - Return
 - Exhaust
 - Fire Smoke-Dampers
 - VAV clearance
 - AC Door Access
 - Fan Coil Units
 - FCU Access
 - Equipment
 - Equipment Pads
 - Equipment Clearances
 - Hangers (designated per system)
- MechPipe-1** shall contain sub-layers for:
- Hydronic Pipe Supply
 - Hydronic Pipe Return
 - Chilled Pipe Supply
 - Chilled Pipe Return
 - Shutoff Access
 - Equipment
 - Equipment Pads
 - Equipment Clearances
 - Hangers
- Plumbing-1** shall contain sub-layers for:
- Domestic Water Supply

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- Domestic Water Return (with additional layer designations for hot and cold)
 - Gas
 - Med-Gas
 - Shutoff Access (designated per system)
 - Sanitary
 - Vent
 - Roof Drain
 - Rain Conductors
 - Equipment
 - Equipment Pads
 - Equipment Clearances
 - Hangers (designated per system)

Elec-1 shall contain sub-layers for:

- Lights
- Light Clearance
- Conduit (with additional layer designation for power and data)
- Cable Tray
- Cable Tray Access Clearance
- Pull Boxes
- Pull Box Access Clearance
- J-Boxes
- Elec. Panels
- Elec. Panel Access Clearance
- Elec. Troughs
- Elec. Trough Access Clearance
- Equipment
- Equipment Clearances
- Equipment Pads
- Hangers

Fire Protection1 shall contain sub-layers for:

- Mains
- Branches
- Shutoff Access
- Hangers

Pneumatic Tube-1 shall contain sub-layers for:

- Equipment
- Equipment Access
- Hangers

Additional sub layers may be added based on project specific scope and deliverable requirements and/or deemed as a critical component to the coordination process.

- 6.1.4. Clash detection files will be posted to **BuildingBlok.com** before **12:00 PM**, on **Wednesday and Friday** by each of the trades. The lead coordinator will also post updated coordination models as needed. The lead coordinator will maintain the

master coordination files. The weekly coordination model will be name abbreviated Project Name-Floor-Coordination Model-Month-Day-Year.

All coordination participants will maintain a current control copy of their own drawing files outside of the project's web-based posting site. Control drawings are to include all previously posted files.

6.2. Trade Colors in the Coordination environment:

- Duct Supply – Dark Green
- Duct Return- Light Blue
- Duct Exhaust –Light Green
- Mech Pipe- Orange
- Pressure lines/Gas – Tan
- Sanitary/Vent – Brown
- Rain Conductors/Roof Drains – Maroon
- Domestic Water- Blue
- Fire – Red
- Pneumatic – Purple
- Electrical – Yellow
- All Base Architectural Elements (walls, soffits, ceiling & floor planes, etc.) will assume Arch model color scheme saved in the export or Lead Coordinator will modify select color scheme in the coordination model.
- Steel – Dark Grey
- Any hangers and equipment (that is fed per the designated system) will assume the same color of that system it is associated with. Additional color schemes may be added based on project specific scope and deliverable requirements and/or deemed as a critical component to the coordination process.

6.3. When posting drawing files for coordination:

- 6.3.1. Posted Contractor coordination files of each trades system should be clash-free with in their respective data. To clarify; trades should refrain from posting data that shows their systems clashing with itself.
- 6.3.2. When coordination of an area is completed there should not be any unresolved clashes remaining.
- 6.3.3. These files should be void of any text, dimensions or any other notations.

6.4. Each coordination participant is required to submit three (3) complete sets of installation drawings as well as electronic PDF's prior to any work being installed in the field. If A/E spec requires more or less than that will govern over this document. These complete drawings are to be fully dimensioned and notated. Items to be noted in the final, fully coordinated drawing paper and electronic files of each system include:

- 6.4.1. Bottom and top elevations of duct, pipe, conduit racks, cable trays etc. must be indicated (where applicable).
- 6.4.2. Dimensions shall be shown from the gridlines to the centerline of each element drawn (round duct, pipe, cable tray, etc.) and from finished floor.
- 6.4.3. Height to top of light housing assembly must be indicated.
- 6.4.4. Labeling of all equipment.

6.5. During the coordination drawing effort, priority will be given to those systems that have the least flexibility. The following list is a descending order of the system priority and

shall be used as a general guideline. Throughout the coordination drawing effort, adjustments and deviations to this list can be made with the approval of EDiS Company. (0'- 6") clear above the ceiling shall be maintained for access and construction of the ceiling, whenever possible. Required maintenance and/or code access spaces and set-backs take precedence over all systems.

- 6.5.1. Gravity Pipe
 - 6.5.2. Plumbing Vent
 - 6.5.3. Ductwork and appurtenances
 - 6.5.4. Cable tray
 - 6.5.5. Recessed light fixtures
 - 6.5.6. Fire protection piping and fixtures
 - 6.5.7. Electrical conduit over (3/4") in diameter
 - 6.5.8. Pneumatic tube and other record or material conveying systems
 - 6.5.9. HVAC piping
 - 6.5.10. Plumbing, supply and medical gas piping
 - 6.5.11. Electrical conduit smaller than 3/4" in diameter
 - 6.5.12. Above ceiling miscellaneous metal supports
 - 6.5.13. Provide all copper tube routes (racks) for mechanical systems, including valves, clearance zones and hangers.
- 6.6. Items to be included in the detailed drawing progress include:
- 6.6.1. All systems must be fully detailed and shown as individual elements including ductwork, all piping 3/4" and larger, pneumatic tubing, exterior wall connections, any piping that is smaller than 1/2" that is racked or banked, etc.
 - 6.6.2. Ductwork is to include size, layout and routing of all metal and flex ductwork, re-heat coils, terminal units, filters registers, grilles, diffusers, and similar features; provide notation for diffuser boot sizes and heights and any other special features
 - 6.6.3. All valves, dampers and VAV's or heat pumps will note any items requiring access for service and maintenance as well as access doors in inaccessible ceilings.
 - 6.6.4. All piping valves, boxes, supports, etc. are to be fully detailed
 - 6.6.5. Sprinkler head locations shall be shown on ceiling plans.
 - 6.6.6. All electrical conduits two inches (2") or more in diameter are to be modeled and shown in addition to smaller diameter conduit that is racked or banked.
 - 6.6.7. Electrical items such as hangers, supports, electrical fixtures, lights, speakers, detectors, sensors, cable trays, raceways, sleeves, pull boxes, and access space claims, etc. must be shown.
 - 6.6.8. If an element is not shown, under the lead coordinators approval, it will be assumed to be field routed and to not interfere with the other elements that are shown or within code clearances. Contractors who field route their elements are responsible to ensure their installation will be feasible and void of creating a clash in the field. Coordinated items take precedence over field routing.
 - 6.6.9. All major hangers and supports (including sway bracing, equipment bracing, hangers, etc.), penetrations, openings must be shown for all systems. Sharing of supports with other systems is discouraged, but can be accomplished with prior owner and/or field inspector approval.

- 6.6.10. All insulation must be shown with appropriate thicknesses. All insulation & clearance zones will be modeled or accounted for during the clash detection process.
- 6.6.11. Fire spray: If required by your building type, establish a safe thickness from all structural objects with which to run your clashes. Assume fire spray will be two inches (2") thick.
- 6.6.12. Engineered stud framing must be modeled for king studs and doors.
- 6.6.13. Code clearances and maintenance access clearances must be shown and maintained; these include, but are not limited to access to VAVs, air handling units, egresses around pumps and tanks, smoke FDs, electrical panels, pneumatic tube transfer units, cable tray access, pull boxes, valve access, etc.
- 6.6.14. All trades must coordinate and detail their systems with the intent of installing each system at the optimal elevation above ceiling, taking into consideration, access to equipment for maintenance, repairs, connections, filters and removal while eliminating or minimizing the impact to surrounding components.
- 6.7. Established Clash Files are to be incorporated to ensure proper coordination. List of those files to be provided by the Lead Coordinator.
- 6.8. Refer to Appendix B – Soft Clash Requirements for additional soft-clash requirements.

7. SCHEDULE OF DRAWING COMPLETION AND SIGN-OFF

- 7.1. The participants should plan on the coordination process taking three (3) months. The coordination schedule is as follows:
 This table will be populated at the BIM Coordination Kick-off Meeting. OR Schedule to be developed as part of the master construction schedule development (see Section 00230).

Zone	Floor	Coordination Meeting	Sign-Off Date

- 7.2. At the completion of each floor, the team will determine the specific "priority walls" that will be constructed full-height ahead of other interior partitions and MEP installations.
- 7.3. 3D MEP/FP Coordination Team
 - 7.3.1. The goal of the coordination team will be to integrate the architectural, structural, mechanical, electrical, fire protection, and project specific elements into a collaborative 3D model to identify and resolve issues pertaining to MEP/FP systems and to ensure succinct and expedited field installations of these systems following the release of each zone/floor after clash free conditions are met. (Filled out at BIM Coordination Kick-off Meeting)

7.3.2.

BIM Coordinator	EDiS Company
Main Contact	Chris Donahue
Phone Number	302-421-2963
Email Address	cdonahue@ediscompany.com
Project Manager	EDiS Company
Main Contact	J.D. Bartlett
Phone Number	302-421-2957
Email Address	jdbartlett@ediscompany.com
Project Engineer	EDiS Company
Main Contact	TBD
Phone Number	
Email Address	
Project Superintendent	EDiS Company
Main Contact	Dave Breakiron
Phone Number	-
Email Address	dbreakiron@ediscompany.com
Site Contractor	TBD
Main Contact	
Phone Number	
Email Address	
HVAC	TBD
Main Contact	
Phone Number	
Email Address	
Electrical	TBD
Main Contact	
Phone Number	
Email Address	
Concrete	TBD
Main Contact	
Phone Number	
Email Address	
Plumbing and Piping	TBD

Main Contact	
Phone Number	
Email Address	
Architectural	TBD
Main Contact	
Phone Number	
Email Address	
MEP/FP Engineers	TBD
Main Contact	
Phone Number	
Email Address	
Structural Steel	TBD
Main Contact	
Phone Number	
Email Address	
Miscellaneous Steel	TBD
Main Contact	
Phone Number	
Email Address	

EXHIBIT '1'

ARTICLE 1: GENERAL PROVISIONS

1.1 This document defines protocols, expected levels of development, and authorized uses of Building Information Models on this Project. It assigns specific responsibility for the development of each Model Element to a defined Level of Development at each Project phase. Where a provision in this Exhibit conflicts with a provision in the Agreement into which this Exhibit is incorporated, the provision in this Exhibit will prevail.

1.1.1 The parties agree to incorporate this Exhibit by reference into any other agreement for services or construction for the Project.

ARTICLE 2: LEVEL OF DEVELOPMENT (LOD)

2.1 The following LOD descriptions identify the specific content requirements and associated authorized uses for each Model Element at five progressively detailed levels of completeness. Each subsequent LOD builds on the previous level and includes all the characteristics of previous levels.

2.2 **LOD 350**

2.2.1 **Model Content Requirements.** Overall building massing indicative of area, height, volume, location, and orientation may be modeled in three dimensions or represented by other data.

2.2.2 **Authorized Uses**

2.2.2.1 **Analysis.** The Model may be analyzed based on volume, area and orientation by application of generalized performance criteria assigned to the representative Model Elements.

2.2.2.2 **Cost Estimating.** The Model may be used to develop a cost estimate based on current area, volume or similar conceptual estimating techniques (e.g., square feet of floor area, condominium unit, hospital bed, etc.).

2.2.2.3 **Schedule.** The Model may be used for project phasing and overall duration.

2.3 **LOD 300 and 350**

2.4.1 **Model Content Requirements.** Model Elements are modeled as specific assemblies accurate in terms of quantity, size, shape, location, and orientation. Existing building elements are modeled as shown on building record drawings. Non-geometric information such as object description and object tags (door number, equipment number, etc) and quantities should be included with each object. Examples of the details required for systems modeled to LOD 300 include, but are not limited to:

- Show all, but not limited to, unground utilities, plumbing and mechanical, concrete modeled as contract documents.
- Site Utilities (see matrix and 6.1 front end)
- Masonry
- Steel decking
- Correct slopes for gravity piping for sanitary, storm or wet fire suppression systems.

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- Piping materials specifically called out on documents included with model element attributes (generic manufacturer for system components are acceptable).
 - Insulation around Pipe and Ducting.
 - Duct dampers included with the duct system.
 - Doors/Frames (hollow metal and storefront)
 - Owner Furnished Fixtures, Equipment, etc. generically modeled as space claims by the Model Element Author (MEA).
 - Concrete
 - Anchor bolts
 - Structural steel
 - Steel stairs, handrails
 - Floor/roof penetration steel
 - Significantly sized support hangers and sleeves for all systems
 - Uni-Strut associated with system components if it is located in a tight overhead space (case by case basis)
 - Architectural millwork/casework
 - Metal panels and support steel
 - Curtainwall system
 - Steel stud framing including kickers and trusses at floor penetrations.
 - Valve locations (clearance)
 - Access panels (these should be modeled with the system they provide access to).
 - Conduit racks or other substantially wide / bundled electrical routing. (these can be generically modeled, i.e. extruded boxes, space claims)
 - Single conduit runs associated with any system (lighting, power, controls, etc) if needed to coordinate concrete coring.
 - Kitchen equipment
 - MEP/FP & Low Voltage Equipment
 - MEP/FP & Low Voltage Systems
 - Pull box locations and any extra space claims for their access.
 - Telecom & Data

2.4.2 Authorized Uses

2.4.2.1 **Construction.** Suitable for the generation of traditional construction documents. Contractors may utilize this model for coordination purposes and creation of shop drawings.

2.4.2.2 **Analysis.** The Model may be analyzed for performance of selected systems by application of specific performance criteria assigned to the representative Model Elements.

2.4.2.3 **Schedule.** The Model may be used to show ordered, time-scaled appearance of detailed elements and systems.

ARTICLE 3: MODEL ELEMENTS

3.1 Reliance on EDiS Company's Model Element Matrix

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- 3.1.1 The EDiS Company Model Element Matrix at the end of this section identifies (1) the LOD required for each Model Element at the end of each Project phase, and (2) the Model Element Author responsible for developing the Model Element to the LOD identified. Each Model Element Author's content is intended to be shared with subsequent Model Element Authors and Model Users throughout the course of the Project.
- 3.1.2 It is understood that while the content of a specific Model Element may include data that exceeds the required LOD identified in the Model Element Table for a particular phase, Model Users and subsequent Model Element Authors may rely on the accuracy and completeness of a Model Element consistent only with the content required for a LOD identified in the Model Element Table.
- 3.1.3 Any use of, or reliance on, a Model Element inconsistent with the LOD indicated in the Model Element Table by subsequent Model Element Authors or Model Users shall be at their sole risk and without liability to the Model Element Author. To the fullest extent permitted by law, subsequent Model Element Authors and Model Users shall indemnify and defend the Model Element Author from and against all claims arising from or related to the subsequent Model Element Author's or Model User's modification to, or unauthorized use of, the Model Element Author's content.
- 3.2 Table Instructions**
- 3.2.1 The Model Element Table at the end of this section indicates the LOD to which each Model Element Author (MEA) is required to develop the content of the Model Element at the conclusion of each phase of the Project. EDiS Company holds the rights of this table and all ownership right for edits are performed via EDiS Company.
- 3.3 EDiS Company's Model Element Matrix AIA Document G202-2013 (attached).
- 3.4 Insertion Point (attached).

AIA[®] Document E203[™] – 2013

Building Information Modeling and Digital Data Exhibit

This Exhibit dated the 3rd day of January in the year 2020 is incorporated into the agreement (the "Agreement") between the Parties for the following Project:
(Name and location or address of the Project)

Silver Lake Elementary School
200 E. Cochran Street
Middletown, DE 19709

TABLE OF ARTICLES

- 1 GENERAL PROVISIONS**
- 2 TRANSMISSION AND OWNERSHIP OF DIGITAL DATA**
- 3 DIGITAL DATA PROTOCOLS**
- 4 BUILDING INFORMATION MODELING PROTOCOLS**
- 5 OTHER TERMS AND CONDITIONS**

ARTICLE 1 GENERAL PROVISIONS

§ 1.1 This Exhibit provides for the establishment of protocols for the development, use, transmission, and exchange of Digital Data for the Project. If Building Information Modeling will be utilized, this Exhibit also provides for the establishment of the protocols necessary to implement the use of Building Information Modeling on the Project, including protocols that establish the expected Level of Development for Model Elements at various milestones of the Project, and the associated Authorized Uses of the Building Information Models.

§ 1.2 The Parties agree to incorporate this Exhibit into their agreements with any other Project Participants that may develop or make use of Digital Data on the Project. Prior to transmitting or allowing access to Digital Data, a Party may require any Project Participant to provide reasonable evidence that it has incorporated this Exhibit into its agreement for the Project, and agreed to the most recent Project specific versions of AIA Document G201[™]-2013, Project Digital Data Protocol Form and AIA Document G202[™]-2013, Project Building Information Modeling Protocol Form.

§ 1.2.1 The Parties agree that each of the Project Participants utilizing Digital Data on the Project is an intended third party beneficiary of the Section 1.2 obligation to incorporate this Exhibit into agreements with other Project Participants, and any rights and defenses associated with the enforcement of that obligation. This Exhibit does not create any third-party beneficiary rights other than those expressly identified in this Section 1.2.1.

§ 1.3 Adjustments to the Agreement

§ 1.3.1 If a Party believes that protocols established pursuant to Sections 3.2 or 4.5, and memorialized in AIA Documents G201-2013 and G202-2013, will result in a change in the Party's scope of work or services warranting an adjustment in compensation, contract sum, schedule or contract time, the Party shall notify the other Party. Failure to provide notice as required in this Section 1.3 shall result in a Party's waiver of any claims for

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

This document is intended to be incorporated into an agreement between the parties and used in conjunction with AIA Documents G201[™]-2013, Project Digital Data Protocol Form, and G202[™]-2013, Building Information Modeling Protocol Form. It is anticipated that other Project Participants will incorporate a project specific E203-2013 into their agreements, and that the Parties and other Project Participants will set forth the agreed-upon protocols in AIA Documents G201-2013 and G202-2013.

adjustments in compensation, contract sum, schedule or contract time as a result of the established protocols.

§ 1.3.2 Upon such notice, the Parties shall discuss and negotiate revisions to the protocols or discuss and negotiate any adjustments in compensation, contract sum, schedule or contract time in accordance with the terms of the Agreement.

§ 1.3.3 Notice required under this Section 1.3 shall be provided within thirty days of receipt of the protocols, unless otherwise indicated below:

(If the Parties require a notice period other than thirty days from receipt of the protocols, indicate the notice period below.)

§ 1.4 Definitions

§ 1.4.1 **Building Information Model.** A Building Information Model is a digital representation of the Project, or a portion of the Project, and is referred to in this Exhibit as the "Model," which term may be used herein to describe a Model Element, a single model or multiple models used in the aggregate, as well as other data sets identified in AIA Document G202–2013, Project Building Information Modeling Protocol Form.

§ 1.4.2 **Building Information Modeling.** Building Information Modeling or Modeling means the process used to create the Model.

§ 1.4.3 **Model Element.** A Model Element is a portion of the Model representing a component, system or assembly within a building or building site.

§ 1.4.4 **Level of Development.** The Level of Development (LOD) describes the minimum dimensional, spatial, quantitative, qualitative, and other data included in a Model Element to support the Authorized Uses associated with such LOD.

§ 1.4.5 **Authorized Uses.** The term "Authorized Uses" refers to the permitted uses of Digital Data authorized in the Digital Data and/or Building Information Modeling protocols established pursuant to the terms of this Exhibit.

§ 1.4.6 **Model Element Author.** The Model Element Author is the entity (or individual) responsible for managing and coordinating the development of a specific Model Element to the LOD required for an identified Project milestone, regardless of who is responsible for providing the content in the Model Element. Model Element Authors are to be identified in Section 3.3, Model Element Table, of AIA Document G202–2013.

§ 1.4.7 **Digital Data.** Digital Data is information, including communications, drawings, specifications and designs, created or stored for the Project in digital form. Unless otherwise stated, the term Digital Data includes the Model.

§ 1.4.8 **Confidential Digital Data.** Confidential Digital Data is Digital Data containing confidential or business proprietary information that the transmitting party designates and clearly marks as "confidential."

§ 1.4.9 **Written or In Writing.** In addition to any definition in the Agreement to which this Exhibit is attached, for purposes of this Exhibit and the Agreement, "written" or "in writing" shall mean any communication prepared and sent using a transmission method set forth in this Exhibit, or the protocols developed pursuant to this Exhibit, that permits the recipient to print the communication.

§ 1.4.10 **Written Notice.** In addition to any terms in the Agreement to which this Exhibit is attached, for purposes of this Exhibit and the Agreement, "written notice" shall be deemed to have been duly served if transmitted electronically to an address provided in this Exhibit or the Agreement using a transmission method set forth in this Exhibit that permits the recipient to print the communication.

§ 1.4.11 **Party and Parties.** The terms "Party" and "Parties" refer to the signing parties to the Agreement.

§ 1.4.12 **Project Participant.** A Project Participant is an entity (or individual) providing services, work, equipment or materials on the Project and includes the Parties.

ARTICLE 2 TRANSMISSION AND OWNERSHIP OF DIGITAL DATA

§ 2.1 The transmission of Digital Data constitutes a warranty by the Party transmitting Digital Data to the Party receiving Digital Data that the transmitting Party is the copyright owner of the Digital Data, or otherwise has permission to transmit the Digital Data for its use on the Project in accordance with the Authorized Uses of Digital Data established pursuant to the terms of this Exhibit.

§ 2.2 If a Party transmits Confidential Digital Data, the transmission of such Confidential Digital Data constitutes a warranty to the Party receiving such Confidential Digital Data that the transmitting Party is authorized to transmit the Confidential Digital Data. If a Party receives Confidential Digital Data, the receiving Party shall keep the Confidential Digital Data strictly confidential and shall not disclose it to any other person or entity except as set forth in Section 2.2.1.

§ 2.2.1 The receiving Party may disclose Confidential Digital Data as required by law or court order, including a subpoena or other form of compulsory legal process issued by a court or governmental entity. The receiving Party may also disclose the Confidential Digital Data to its employees, consultants or contractors in order to perform services or work solely and exclusively for the Project, provided those employees, consultants and contractors are subject to the restrictions on the disclosure and use of Confidential Digital Data as set forth in this Exhibit.

§ 2.3 By transmitting Digital Data, the transmitting Party does not convey any ownership right in the Digital Data or in the software used to generate the Digital Data. Unless otherwise granted in a separate license, the receiving Party’s right to use, modify, or further transmit Digital Data is specifically limited to designing, constructing, using, maintaining, altering and adding to the Project consistent with the terms of this Exhibit, and nothing contained in this Exhibit conveys any other right to use the Digital Data.

§ 2.4 Where a provision in this Article 2 conflicts with a provision in the Agreement into which this Exhibit is incorporated, the provision in this Article 2 shall prevail.

ARTICLE 3 DIGITAL DATA PROTOCOLS

§ 3.1 **Anticipated Types of Digital Data.** The anticipated types of Digital Data to be used on the Project are as follows: *(Indicate below the information on the Project that shall be created and shared in a digital format. If the Parties indicate that Building Information Modeling will be utilized on the Project, the Parties shall also complete Article 4.)*

Anticipated Digital Data	Applicability to the Project <i>(Indicate Applicable or Not Applicable)</i>	Location of Detailed Description <i>(Section 3.1.1 below or in an attachment to this exhibit and identified below)</i>
Project Agreements and Modifications	Applicable	
Project communications	Via Email & BuildingBlok/Revizto	
Architect’s pre-construction submittals	Not Applicable	Via Email & BuildingBlok
Contract Documents	Applicable	
Contractor’s submittals	Applicable	
Subcontractor’s submittals	Applicable	
Modifications	Applicable	
Project payment documents	Applicable	
Notices and claims	Applicable	
Building Information Modeling	Applicable	

(Row deleted)

§ 3.1.1 Insert a detailed description of the anticipated Digital Data identified in Section 3.1, if not further described in an attachment to this Exhibit.

See attached Exhibit

§ 3.2 As soon as practical following execution of the Agreement, the Parties shall further describe the uses of Digital Data, and establish necessary protocols governing the transmission and Authorized Uses of Digital Data, in consultation with the other Project Participants that are expected to utilize Digital Data on the Project.

Init.

§ 3.2.1 Unless another Project Participant is identified below, the Architect shall prepare and distribute to the other Project Participants Digital Data protocols for review, revision and approval.
(If a Project Participant other than the Architect shall be responsible for preparing draft and final Digital Data protocols, identify that Project Participant.)

EDiS Company

§ 3.2.2 The agreed upon Digital Data protocols shall be set forth in AIA Document G201–2013 and each Project Participant shall memorialize their agreement in writing to such Digital Data protocols.

§ 3.2.3 The Parties, together with the other Project Participants, shall review and, if necessary, revise the Digital Data protocols at appropriate intervals as required by the conditions of the Project.

§ 3.3 The Parties shall transmit, use, store and archive Digital Data in accordance with the Digital Data protocols set forth in the latest version of AIA Document G201–2013 agreed to by the Project Participants.

§ 3.4 Unauthorized Use

§ 3.4.1 Prior to Establishment of Digital Data Protocols

If a Party receives Digital Data prior to the agreement to, and documentation of, the Digital Data protocols in AIA Document G201–2013, that Party is not authorized to use or rely on the Digital Data. Any use of, or reliance on, such Digital Data is at that Party's sole risk and without liability to the other Party and its contractors, consultants, agents and employees.

§ 3.4.2 Following Establishment of Digital Data Protocols

Following agreement to, and documentation of, the Digital Data protocols in AIA Document G201–2013, if a Party uses Digital Data inconsistent with the Authorized Uses identified in the Digital Data protocols, that use shall be at the sole risk of the Party using the Digital Data.

§ 3.5 Digital Data Management

§ 3.5.1 Centralized electronic document management system use on the Project shall be:

(Check the appropriate box. If the Parties do not check one of the boxes below, the default selection shall be that the Parties will not utilize a centralized electronic document management system on the Project.)

The Parties intend to use a centralized electronic document management system on the Project.

The Parties do not intend to use a centralized electronic document management system on the Project.

§ 3.5.2 If the Project Participants intend to utilize a centralized electronic document management system on the Project, the Project Participants identified in Section 3.5.3 shall be responsible for managing and maintaining such system. The Project Participants responsible for managing and maintaining the centralized electronic document management system shall facilitate the establishment of protocols for transmission, use, storage and archiving of the centralized Digital Data and assist the Project Participants identified in Section 3.2.1 above in preparing Digital Data protocols. Upon agreement to, and documentation of, the Digital Data protocols in AIA Document G201–2013, the Project Participants identified in Section 3.5.3 shall manage and maintain the centralized electronic document management system consistent with the management protocols set forth in the latest version of G201–2013 approved by the Project Participants.

§ 3.5.3 Unless responsibility is assigned to another Project Participant, the Architect shall be responsible for managing and maintaining the centralized electronic document management system. If the responsibility for management and maintenance will be assigned to another Project Participant at an identified Project milestone, indicate below the Project Participant who shall assume that responsibility, and the Project milestone.

(Identify the Project Participant responsible for management and maintenance only if the Parties intend to utilize a centralized electronic document management system on the Project.)

Responsible Project Participant

Project Milestone

EDiS Company

Init.

ARTICLE 4 BUILDING INFORMATION MODELING PROTOCOLS

§ 4.1 If the Parties indicate in Section 3.1 that Building Information Modeling will be used on the Project, specify below the extent to which the Parties intend to utilize Building Information Modeling and identify the provisions of this Article 4 governing such use:

- [] The Parties shall utilize Building Information Modeling on the Project for the sole purpose of fulfilling the obligations set forth in the Agreement without an expectation that the Model will be relied upon by the other Project Participants. Unless otherwise agreed in writing, any use of, transmission of, or reliance on the Model is at the receiving Party’s sole risk. The remaining sections of this Article 4 shall have no force or effect.
- [] The Parties shall develop, share, use and rely upon the Model in accordance with Sections 4.2 through 4.10 of this Exhibit.

§ 4.2 **Anticipated Building Information Modeling Scope.** Indicate below the portions of the Project for which Modeling will be used and the anticipated Project Participant responsible for that Modeling.

Project Portion for Modeling	Responsible Project Participant
See AIA G202 Building Information Modeling Protocol Form Matrix	Christopher D. Donahue

§ 4.3 **Anticipated Model Authorized Uses.** Indicate below the anticipated Authorized Uses of the Model for the Project, which Authorized Uses will be agreed upon by the Project Participants and further described for each LOD in AIA Document G202–2013.

§ 4.4 **Ancillary Modeling Activities.** Indicate additional Modeling activities agreed upon by the Parties, but not to be included in AIA Document G202–2013, if any.

(Describe any Modeling activities, such as renderings, animations, performance simulations, or other similar use, including the anticipated amount and scope of any such Modeling activities.)

All parties identified in contract scopes and AIA E203 4.2 are required to provide 3D modeled electronic document in Autocad, Navisworks and /or Revit to participate in Building Information Modeling construction coordination process.

§ 4.5 **Modeling Protocols.** As soon as practical following execution of the Agreement, the Parties shall, in consultation with the other Project Participants that are expected to utilize Building Information Modeling on the Project, further describe the Authorized Uses of the Model and establish necessary protocols governing the development of the Model utilizing AIA Document G202–2013.

§ 4.5.1 The Modeling protocols shall address the following:

- .1 Identification of the Model Element Authors;
- .2 Definition of the various LOD for the Model Elements and the associated Authorized Uses for each defined LOD;
- .3 Identification of the required LOD of each Model Element at each identified Project milestone;
- .4 Identification of the construction classification systems to be used on the Project;
- .5 The process by which Project Participants will exchange and share the Model at intervals not reflected in Section 3.3, Model Element Table, of AIA Document G202–2013;
- .6 The process by which the Project Participants will identify, coordinate and resolve changes to the Model;
- .7 Details regarding any anticipated as-designed or as-constructed Authorized Uses for the Model, if required on the Project;
- .8 Anticipated Authorized Uses for facilities management or otherwise, following completion of the Project; and
- .9 Other topics to be addressed by the Modeling protocols: *(Identify additional topics to be addressed by the Modeling Protocols.)*

§ 4.5.2 Unless responsibility is assigned to another Project Participant identified below, the Architect shall prepare and distribute Modeling protocols to the other Project Participants for review, revision and approval.
(If a Project Participant other than the Architect shall be responsible for preparing draft and final Modeling protocols, identify that Project Participant.)

§ 4.5.3 The agreed upon Modeling protocols shall be set forth in AIA Document G202–2013 and each Project Participant shall memorialize their agreement in writing to such Modeling protocols.

§ 4.5.4 The Parties, together with the other Project Participants, shall review, and if necessary, revise the Modeling protocols at appropriate intervals as required by the conditions of the Project.

§ 4.6 The Parties shall develop, use and rely on the Model in accordance with the Modeling protocols set forth in the latest version of AIA Document G202–2013, which document shall be included in or attached to the Model in a manner clearly accessible to the Project Participants.

§ 4.7 Unauthorized Use

§ 4.7.1 Prior to Establishment of Modeling Protocols

If a Party receives any Model prior to the agreement to, and documentation of, the Modeling protocols in AIA Document G202–2013, that Party is not authorized to use, transmit, or rely on the Model. Any use, transmission or reliance is at that Party's sole risk and without liability to the other Party and its contractors, consultants, agents and employees.

§ 4.7.2 Following Establishment of Modeling Protocols

Following agreement to, and documentation of, the Modeling protocols in AIA Document G202–2013, if a Party uses or relies on the Model inconsistent with the Authorized Uses identified in the Modeling protocols, such use or reliance shall be at the sole risk of the Party using or relying on the Model. A Party may rely on the Model Element only to the extent consistent with the minimum data required for the identified LOD, even if the content of a specific Model Element includes data that exceeds the minimum data required for the identified LOD.

§ 4.8 Model Management

§ 4.8.1 The requirements for managing the Model include the duties set forth in this Section 4.8. Unless assigned to another Project Participant, the Architect shall manage the Model from the inception of the Project. If the responsibility for Model management will be assigned to another Project Participant, or change at an identified Project milestone, indicate below the identity of the Project Participant who will assume that responsibility, and the Project milestone.

Responsible Project Participant	Project Milestone
Christopher D. Donahue, Project Coordinator	

§ 4.8.2 Model Management Protocol Establishment. The Project Participant responsible for managing the Model, in consultation with the other Project Participants that are expected to utilize Building Information Modeling on the Project, shall facilitate the establishment and revision of Model management protocols, including the following:

- .1 Model origin point, coordinate system, precision, file formats and units
- .2 Model file storage location(s)
- .3 Processes for transferring and accessing Model files
- .4 Naming conventions
- .5 Processes for aggregating Model files from varying software platforms
- .6 Model access rights
- .7 Identification of design coordination and clash detection procedures.
- .8 Model security requirements
- .9 Other: *(Identify additional Model management protocols to be addressed.)*

Init.

§ 4.8.3 Ongoing Responsibilities. The Project Participant responsible for managing the Model shall do so consistent with the Model management protocols, which shall also include the following ongoing responsibilities:

- .1 Collect incoming Models:
 - .1 Coordinate submission and exchange of Models
 - .2 Create and maintain a log of Models received
 - .3 Review Model files for consistency with Sections 4.8.2.1 through 4.8.2.5
 - .4 Maintain a record copy of each Model file received
- .2 Aggregate Model files and make them available for Authorized Uses
- .3 Maintain Model Archives and backups consistent with the requirements of Section 4.8.4 below
- .4 Manage Model access rights
- .5 Other: *(Identify additional responsibilities.)*
- .6 Attend and participate in BIM coordination meetings is mandatory, liquidated damages apply for avoiding BIM process.

§ 4.8.4 Model Archives. The individual or entity responsible for Model management as set forth in this Section 4.8 shall compile a Model Archive at the end of each Project milestone and shall preserve it without alteration as a record of Model completion as of that Project milestone.

§ 4.8.4.1 Additional Model Archive requirements, if any, are as follows:

§ 4.8.4.2 The procedures for storing and preserving the Model(s) upon final completion of the Project are as follows:

§ 4.9 Post-Construction Model. The services associated with providing a Model for post-construction use shall only be required if specifically designated in the table below as a Party's responsibility.

(Designate below any anticipated post-construction Model and related requirements, the Project Participant responsible for creating or adapting the Model to achieve such uses, and the location of a detailed description of the anticipated scope of services to create or adapt the Model as necessary to achieve such uses.)

Post-Construction Model	Applicability to Project <i>(Applicable or Not Applicable)</i>	Responsible Project Participant	Location of Detailed Description of Requirements and Services <i>(Section 4.10 below or in an attachment to this exhibit and identified below)</i>
§ 4.9.1 Remodeling	Not Applicable		
§ 4.9.2 Wayfinding and Mapping	Not Applicable		
§ 4.9.3 Asset/FF & E Management	Not Applicable		
§ 4.9.4 Energy Management	Not Applicable		
§ 4.9.5 Space Management	Not Applicable		
§ 4.9.6 Maintenance Management	Not Applicable		

(Row deleted)

§ 4.10 Insert a detailed description of the requirements for each Post-Construction Model identified in Section 4.9 and the anticipated services necessary to create each Post-Construction Model, if not further described in an attachment to this Exhibit.

ARTICLE 5 OTHER TERMS AND CONDITIONS

Other terms and conditions related to the transmission and use of Digital Data are as follows:

Init.



AIA[®]

Document G201[™] – 2013

Project Digital Data Protocol Form

PROJECT: *(Name and address)*

Silver Lake Elementary School
200 E. Cochran Street
Middletown, DE 19709

PROTOCOL VERSION NUMBER:

DATE: January 3, 2020

PREPARED BY: Christopher Donahue/Jackie McKee

DISTRIBUTION TO: *(List each individual to whom this protocol is distributed. Include individuals listed in Section 1.2, or reference Section 1.2, along with any additional recipients.)*

TABLE OF ARTICLES

- 1 **GENERAL PROVISIONS REGARDING USE OF DIGITAL DATA**
- 2 **DIGITAL DATA MANAGEMENT PROTOCOLS**
- 3 **TRANSMISSION AND USE OF DIGITAL DATA**

ARTICLE 1 GENERAL PROVISIONS REGARDING USE OF DIGITAL DATA

§ 1.1 List each Project Participant that has incorporated AIA Document E203[™]–2013, Building Information Modeling and Digital Data Exhibit, dated , into its agreement for the Project:

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

This document is intended to be used in conjunction with a project specific AIA Document E203[™]–2013, Building Information Modeling and Digital Data Exhibit, which the Parties will incorporate into their Agreement for the Project.

Project Participant	Discipline

§ 1.2 **Project Participants.** For each Project Participant listed in Section 1.1, identify and provide contact information for the individuals responsible for implementation of the Digital Data protocols.

Project Participant	Individual Responsible	Contact Information

§ 1.3 Terms in this document shall have the same meaning as those in AIA Document E203–2013.

ARTICLE 2 DIGITAL DATA MANAGEMENT PROTOCOLS

§ 2.1.1 **Electronic Document Management System.** If, pursuant to Section 3.5.1 of the Project specific version of AIA Document E203–2013, the Project Participants indicated an intent to use a centralized electronic document management system on the Project, the requirements for the centralized electronic document management system are as follows:

(The requirements for the system shall address, among other things, access to and security of Digital Data.)

§ 2.1.2 **System Startup Requirements.** Initial training and other startup requirements to be implemented with respect to the use or management of Digital Data, if any, are as follows:

(Describe in detail any initial training or other startup requirements.)

§ 2.1.3 **Ongoing System Requirements.** Ongoing training or support programs to be implemented with respect to the use or management of Digital Data, if any, are as follows:

(Describe in detail any ongoing training or support programs to be implemented.)

§ 2.2 **Digital Data Storage Requirements.** The procedures and requirements for storing Digital Data during the course of the Project, if any, are as follows:

(Describe in detail the procedures and requirements for storing Digital Data during the course of the Project.)

§ 2.3 **Digital Data Archiving Requirements.** The procedures and requirements for archiving and preserving Digital Data during the course of the Project and following final completion of the Project, if any, are as follows:

(Describe in detail the procedures and requirements for archiving and preserving Digital Data during the course of the Project and following final completion.)

§ 2.4 Other Digital Data Management protocol requirements, if any, are as follows:

(Describe in detail any other requirements.)

Revizto is implemented on this Silver Lake project. Revizto is a management software for BIM coordination. All BIM mandatory subcontractors are required to use and complete the coordination through Revizto. License is contractor’s responsibility at \$500.00.

ARTICLE 3 TRANSMISSION AND USE OF DIGITAL DATA

§ 3.1 **Digital Data Protocol Table.** The Project Participants shall comply with the data formats, transmission methods and Authorized Uses set forth in the Digital Data Protocol Table below when transmitting or using Digital Data on the Project.

Init.

(Complete the Digital Data Protocol Table by entering information in the spaces below. Adapt the table to the needs of the Project by adding, deleting or modifying the listed Digital Data as necessary. Use Section 3.2 Digital Data Protocol Table Definitions and Notes to define abbreviations placed, and to record notes indicated, in the Digital Data Protocol Table.)

Digital Data	Digital Data Format	Transmission Method	Authorized Uses	Note Number (See Sec. 3.2)
§ 3.1.1 Project Agreements and Modifications	PDF	Email		
§ 3.1.2 Project communications	GOTO Meeting	Email & BB		
General communications		Email & BB		
Meeting notices	PDF	Email & BB		
Agendas	PDF	Email & BB		
Minutes	PDF	Email & BB		
Requests for information	BuildingBlok	Email & BB		
Architect's Supplemental Instructions	AIA G201 & Contract	Email & BB		
§ 3.1.3 Architect's pre-construction submittals	PDF & BB	Email & BB		
Schematic Design Documents		Email & BB		
Design Development Documents		Email & BB		
Construction Documents	PDF	Email & BB		
§ 3.1.4 Contract Documents	PDF	Email & BB		
Architect's Drawings	PDF	Email & BB		
Architect's Specifications	PDF	Email & BB		
§ 3.1.5 Contractor's submittals	PDF	Email & BB		
Product data	PDF	Email & BB		
Submitted by Contractor	PDF	Email & BB		
Returned by Architect	PDF	Email & BB		
Shop drawings	PDF	Email & BB		
Submitted by Contractor	PDF	Email & BB		
Returned by Architect	PDF	Email & BB		
§ 3.1.6 Subcontractor's submittals	Physical & PDF BB	Email & BB		
Product data	PDF & BB	Email & BB		
Submitted by Subcontractor	PDF & BB	Email & BB		
Returned by Contractor	BuildingBlok	Email & BB		
Shop drawings	PDF	Email & BB		
Submitted by Subcontractor	PDF	Email & BB		
Returned by Contractor	PDF	Email & BB		
§ 3.1.7 Modifications				

(Rows deleted)

Architect's order for a minor change in the Work	PDF	Email & BB		
		Email & BB		
Construction Change Directives	PDF	Email & BB		
Change Orders	PDF	Email & BB		
§ 3.1.8 Project payment documents				
§ 3.1.9 Notices and Claims				
§ 3.1.10 Closeout documents	Electronic Navisworks			
Record documents	PDF			
Operations and Maintenance Manual				

(Row deleted)

§ 3.2 Digital Data Protocol Table Definitions and Notes

Init.

Digital Data Format:

(Provide required data format, including software version, if applicable.)

Digital Data Format	Definition
Revit/Navisworks/Revizto	

Transmission Method:

(Below are suggested abbreviations and definitions. Delete, modify or supplement, as necessary.)

Abbreviation	Definition
CD	Delivered via Compact Disk
EM	Via e-mail
DMS	Centralized Electronic Document Management System

Authorized Uses of Digital Data:

(Below are suggested abbreviations and definitions. Delete, modify or supplement, as necessary.)

Abbreviation	Definition
I	Integrate (incorporate additional digital data without modifying data received)
M	Modify as required to fulfill obligations for the Project
R	Reproduce and distribute
S	Store and view only

Notes:

(List by number shown on table.)

AIA[®] Document G202[™] – 2013

Project Building Information Modeling Protocol Form

PROJECT: *(Name and address)*

Silver Lake Elementary School
200 E. Cochran Street
Middletown, DE 19709

PROTOCOL VERSION NUMBER:

DATE: January 3, 2020

PREPARED BY: Chris Donahue/Jackie McKee

DISTRIBUTION TO: *(List each individual to whom this protocol is distributed. Include individuals listed in Section 1.1, or reference Section 1.1, along with any additional recipients.)*

TABLE OF ARTICLES

- 1 **GENERAL PROVISIONS**
- 2 **LEVEL OF DEVELOPMENT**
- 3 **MODEL ELEMENTS**

ARTICLE 1 GENERAL PROVISIONS

§ 1.1 For each Project Participant that has incorporated the Project specific AIA Document E203[™]–2013, Building Information Modeling and Digital Data Protocol Exhibit, dated January 3, 2020, into its agreement for the Project, identify and provide the contact information for individuals responsible for implementation of the Modeling protocols. If, for any Project Participant, more than one individual will be responsible for implementation of the Modeling protocols, list each individual separately and describe the unique Modeling Role assigned to each individual.

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

This document is intended to be used in conjunction with a Project specific AIA Document E203[™]–2013, Building Information Modeling and Digital Data Exhibit, which the Parties will incorporate into their agreement for the Project, and a Project specific AIA Document G201[™]–2013, Project Digital Data Protocol Form.

Modeling Role	Project Participant	Individual Responsible	Contact Information
Project Coordinator	EDiS BIM Services	Christopher Donahue	EDiS Company 110 S Poplar Street Wilmington, De 19801 302-421-2963 cdonahue@ediscompany.com

§ 1.2 This document establishes the Modeling protocols for the Project. For purposes of these protocols, the Model is comprised of the following information and other data sets:
(Indicate disciplines, separate models, and other data that will be included within the Model and governed by the Modeling protocols.)

§ 1.3 **Collaboration Protocols.** The Project Participants' protocols for the collaborative utilization of the Model, if any, including communications protocols, a collaboration meeting schedule and colocation requirements, are as follows:

§ 1.4 **Technical Requirements.** The technical requirements relating to the utilization of Building Information Modeling, including specific software and hardware requirements are as follows:

§ 1.5 **Training and Support.-NOT USED**

§ 1.6 **Model Standard.** The Model shall be developed in accordance with the following Model Standard, if any:

§ 1.7 **Model Management Protocols and Processes**

The following Model Management Protocols and Processes shall apply to the Project only if specifically designated in the table below as being applicable.

(Designate the Model Management Protocols and Processes applicable to the Project in the second column of the table below. In the third column, indicate whether the detailed description of the Model Management Protocol or Process is located in Section 1.8 or in an attached exhibit. If in an exhibit, identify the exhibit.)

Model Management Protocols and Processes	Applicability to Project (Applicable or Not Applicable)	Location of Detailed Description (Section 1.8 below or in an attachment to this exhibit identified below)
§ 1.7.1 Model origin point, coordinate system, precision, file formats and units	Applicable	0, 0, 0
§ 1.7.2 Model file storage location(s)	Applicable	EDiS BIM Services
§ 1.7.3 Processes for transferring and accessing Model files	Applicable	Drop Box & BuildingBlok
§ 1.7.4 Naming conventions	Applicable	EDiS Standard
§ 1.7.5 Processes for aggregating Model files from varying software platforms		Autodesk CAD MEP & Navisworks& Revizto
§ 1.7.6 Model access rights	N/A	
§ 1.7.7 Design coordination and clash detection procedures.	Applicable	EDiS
§ 1.7.8 Model security requirements	Applicable	Confidential

§ 1.8 Insert a description of each Model Management Protocol and Process identified in Section 1.7, if not further described in an exhibit attached to this document:

See attached documents

§ 1.9 Terms in this document shall have the same meaning as those in AIA Document E203–2013.

ARTICLE 2 LEVEL OF DEVELOPMENT

§ 2.1 The Level of Development (LOD) descriptions, included in Section 2.2 through Section 2.6 below, identify the specific minimum content requirements and associated Authorized Uses for each Model Element at five progressively detailed levels of completeness. The Parties shall utilize the five LOD descriptions in completing the Model Element Table at Section 3.3.

§ 2.2 LOD 100

§ 2.2.1 **Model Element Content Requirements.** The Model Element may be graphically represented in the Model with a symbol or other generic representation, but does not satisfy the requirements for LOD 200. Information related to the Model Element (i.e., cost per square foot, tonnage of HVAC, etc.) can be derived from other Model Elements.

§ 2.2.2 Authorized Uses

§ 2.2.2.1 **Analysis.** The Model Element may be analyzed based on volume, area and orientation by application of generalized performance criteria assigned to other Model Elements.

§ 2.2.2.2 **Cost Estimating.** The Model Element may be used to develop a cost estimate based on current area, volume or similar conceptual estimating techniques (e.g., square feet of floor area, condominium unit, hospital bed, etc.).

§ 2.2.2.3 **Schedule.** The Model Element may be used for Project phasing and determination of overall Project duration.

§ 2.2.2.4 **Other Authorized Uses.** Additional Authorized Uses of the Model Element developed to LOD 100, if any, are as follows:

§ 2.3 LOD 200

§ 2.3.1 **Model Element Content Requirements.** The Model Element is graphically represented within the Model as a generic system, object, or assembly with approximate quantities, size, shape, location, and orientation. Non-graphic information may also be attached to the Model Element.

§ 2.3.2 Authorized Uses

§ 2.3.2.1 **Analysis.** The Model Element may be analyzed for performance of selected systems by application of generalized performance criteria assigned to the representative Model Elements.

§ 2.3.2.2 **Cost Estimating.** The Model Element may be used to develop cost estimates based on the approximate data provided and quantitative estimating techniques (e.g., volume and quantity of elements or type of system selected).

§ 2.3.2.3 **Schedule.** The Model Element may be used to show ordered, time-scaled appearance of major elements and systems.

§ 2.3.2.4 **Coordination.** The Model Element may be used for general coordination with other Model Elements in terms of its size, location and clearance to other Model Elements.

§ 2.3.2.5 **Other Authorized Uses.** Additional Authorized Uses of the Model Element developed to LOD 200, if any, are as follows:

§ 2.4 LOD 300

§ 2.4.1 Model Element Content Requirements. The Model Element is graphically represented within the Model as a specific system, object or assembly in terms of quantity, size, shape, location, and orientation. Non-graphic information may also be attached to the Model Element.

§ 2.4.2 Authorized Uses

§ 2.4.2.1 Analysis. The Model Element may be analyzed for performance of selected systems by application of specific performance criteria assigned to the representative Model Element.

§ 2.4.2.2 Cost Estimating. The Model Element may be used to develop cost estimates suitable for procurement based on the specific data provided.

§ 2.4.2.3 Schedule. The Model Element may be used to show ordered, time-scaled appearance of detailed elements and systems.

§ 2.4.2.4 Coordination. The Model Element may be used for specific coordination with other Model Elements in terms of its size, location and clearance to other Model Elements including general operation issues.

§ 2.4.2.5 Other Authorized Uses. Additional Authorized Uses of the Model Element developed to LOD 300, if any, are as follows:

§ 2.5 LOD 400

§ 2.5.1 Model Element Content Requirements. The Model Element is graphically represented within the Model as a specific system, object or assembly in terms of size, shape, location, quantity, and orientation with detailing, fabrication, assembly, and installation information. Non-graphic information may also be attached to the Model Element.

§ 2.5.2 Authorized Uses

§ 2.5.2.1 Analysis. The Model Element may be analyzed for performance of systems by application of actual performance criteria assigned to the Model Element.

§ 2.5.2.2 Cost Estimating. Costs are based on the actual cost of the Model Element at buyout.

§ 2.5.2.3 Schedule. The Model may be used to show ordered, time-scaled appearance of detailed specific elements and systems including construction means and methods.

§ 2.5.2.4 Coordination. The Model Element may be used for coordination with other Model Elements in terms of its size, location and clearance to other Model Elements, including fabrication, installation and detailed operation issues.

§ 2.5.2.5 Other Authorized Uses. Additional Authorized Uses of the Model Element developed to LOD 400, if any, are as follows:

§ 2.6 LOD 500

§ 2.6.1 Model Element Content Requirements. The Model Element is a field verified representation in terms of size, shape, location, quantity, and orientation. Non-graphic information may also be attached to the Model Elements.

§ 2.6.2 Authorized Uses. Specific Authorized Uses of the Model Element developed to LOD 500, if any, are as follows:

ARTICLE 3 MODEL ELEMENTS

§ 3.1 Reliance on Model Elements

§ 3.1.1 At any particular Project milestone, a Project Participant may rely on the accuracy and completeness of a Model Element only to the extent consistent with the minimum data required for the Model Element's LOD for that Project

milestone as identified below in the Model Element Table, even if the content of a specific Model Element includes data that exceeds the minimum data required for the identified LOD.

§ 3.1.2 Coordination and Model Refinement

Where conflicts are found in the Model, regardless of the phase of the Project or LOD, the Project Participant that identifies the conflict shall promptly notify the Model Element Authors and the Project Participant identified in AIA Document E203–2013 Section 4.8 as being responsible for Model management. Upon such notification, the Model Element Author(s) shall act promptly to evaluate, mitigate and resolve the conflict in accordance with the processes established in Section 1.7.7, if applicable.

Model Elements Utilizing CSI UniFormat™	Construction Management			Notes												
	LOD	MEA	Notes													
§ 3.3 Model Element Table Identify (1) the LOD required for each Model Element at each Project milestone, (2) the Model Element Author, and (3) references to any applicable notes found in Section 3.4. Insert abbreviations for each MEA identified in the table below, such as "A – Architect," or "C – Contractor." NOTE: LODs must be adapted for the unique characteristics of each Project.																(See Sec 3.4)
A1020.20 Caissons																
A1020.30 Special Foundation Walls																
A1020.40 Foundation Anchors																
A1020.50 Underpinning (if required)																
A1020.60 Raft Foundations																
A1020.70 Pile Caps																
A1020.80 Grade Beams																
A20 SUBGRADE ENCLOSURES																
A2010 Walls for Subgrade Enclosures																
A2010.10 Subgrade Enclosure Wall Construction																
A2010.20 Subgrade Enclosure Wall Interior Skin																
A2010.90 Subgrade Enclosure Wall Supplementary Components																
A40 SLABS-ON-GRADE																
A4010 Standard Slabs-on-Grade																
A4020 Structural Slabs-on-Grade																
A4030 Slab Trenches																
A4040 Pits and Bases																
A4090 Slab-On-Grade Supplementary Components																
A4090.10 Perimeter Insulation																
A4090.20 Vapor Retarder																
A4090.30 Waterproofing																
A4090.50 Mud Slab																
A4090.60 Subbase Layer																
A60 WATER AND GAS MITIGATION																
A6010 Building Subdrainage																
A6010.10 Foundation Drainage																
A6010.20 Underslab Drainage																
A6020 Off-Gassing Mitigation																
A6020.10 Radon Mitigation																
A6020.50 Methane Mitigation																
A90 SUBSTRUCTURE RELATED ACTIVITIES																

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User Notes: (1769100367)

§ 3.3 Model Element Table

Identify (1) the LOD required for each Model Element at each Project milestone, (2) the Model Element Author, and (3) references to any applicable notes found in Section 3.4.

Insert abbreviations for each MEA identified in the table below, such as "A – Architect," or "C – Contractor."

NOTE: LODs must be adapted for the unique characteristics of each Project.

Model Elements Utilizing CSI Uniformat™	Construction Management			Notes									
	LOD	MEA	Notes										
A9010 Substructure Excavation													
A9010.10 Backfill and Compaction													
A9020 Construction Dewatering													
A9030 Excavation Support													
A9030.10 Anchor Tiebacks													
A9030.20 Cofferdams													
A9030.40 Cribbing and Walers													
A9030.60 Ground Freezing													
A9030.70 Slurry Walls													
A9040 Soil Treatment													
B SHELL													
B10 SUPERSTRUCTURE													
B1010 Floor Construction													
B1010.10 Floor Structural Frame (& K-Joist)	350	05											
B1010.20 Floor Decks, Slabs, and Toppings													
B1010.30 Balcony Floor Construction	350	05											
B1010.40 Mezzanine Floor Construction	350	05											
B1010.50 Ramps, Steel & Construction	350	05											
B1010.90 Floor Construction Supplementary Components	350	05											
B1020 Roof Construction													
B1020.10 Roof Structural Frame (& K-Joist)	350	05											
B1020.20 Roof Decks, Slabs, and Sheathing	350	05											
B1020.30 Canopy Construction	350	05											
B1020.90 Roof Construction Supplementary Components	350	05											
B1080 Stairs													
B1080.10 Stair Construction	350	05											
B1080.30 Stair Soffits													
B1080.50 Stair Railings													
B1080.60 Fire Escapes													
B1080.70 Metal Walkways													

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User Notes: (1769100367)

Model Elements Utilizing CSI Uniformat™	Construction Management Bid Package A			Construction Management Bid Package B			Construction Management Bid Package C			Construction Management Bid Package D			Notes (See Sec 3.4)
	LOD	MEA	Notes										
B2080.70 Exterior Fabrications													
B2080.80 Bird Control Devices													
B2090 Exterior Wall Specialties													
B30 EXTERIOR HORIZONTAL ENCLOSURES													
B3010 Roofing													
B3010.10 Steep Slope Roofing													
B3010.50 Low-Slope Roofing													
B3010.70 Canopy Roofing													
B3010.90 Roofing Supplementary Components													
B320 Roof Appurtenances													
B3020.10 Roof Accessories													
B3020.30 Roof Specialties (Limit Lines), Roof Hatches & Smoke													
B3020.70 Rainwater Management													
B3040 Traffic Bearing Horizontal Enclosures													
B3040.10 Traffic Bearing Coatings													
B3040.30 Horizontal Waterproofing Membrane													
B3040.50 Wear Surfaces													
B3040.90 Horizontal Enclosure Supplementary Components													
B3060 Horizontal Openings													
B3060.10 Roof Windows and Skylights													
B3060.50 Vents and Hatches													
B3060.90 Horizontal Opening Supplementary Components													
B3080 Overhead Exterior Enclosures													
B3080.10 Exterior Ceilings													
B3080.20 Exterior Soffits													
B3080.30 Exterior Bulkheads													
C INTERIORS													
C10 INTERIOR CONSTRUCTION													
C1010 Interior Partitions													
C1010.10 Interior Fixed Partitions													
C1010.20 Interior Glazed Partitions													

§ 3.3 Model Element Table
Identify: (1) the LOD required for each Model Element at each Project milestone, (2) the Model Element Author, and (3) references to any applicable notes found in Section 3.4.

Insert abbreviations for each MEA identified in the table below, such as "A - Architect," or "C - Contractor."

NOTE: LODs must be adapted for the unique characteristics of each Project.

Model Elements Utilizing CSI UniFormat™	Construction Management Bid Package A			Construction Management Bid Package B			Construction Management Bid Package C			Construction Management Bid Package D			Notes (See Sec 3.4)
	LOD	MEA	Notes										
§ 3.3 Model Element Table Identify (1) the LOD required for each Model Element at each Project milestone, (2) the Model Element Author, and (3) references to any applicable notes found in Section 3.4. Insert abbreviations for each MEA identified in the table below, such as "A - Architect," or "C - Contractor." NOTE: LODs must be adapted for the unique characteristics of each Project.													
C1010.40 Interior Demountable Partitions													
C1010.50 Interior Operable Partitions													
C1010.70 Interior Screens													
C1010.90 Interior Partition Supplementary Components													
C1020 Interior Windows													
C1020.10 Interior Operating Windows													
C1020.20 Interior Fixed Windows													
C1020.50 Interior Special Function Windows													
C1020.90 Interior Window Supplementary Components													
C1030 Interior Doors													
C1030.10 Interior Swinging Doors (All Door Types)													
C1030.20 Interior Entrance Doors (All Door Types)													
C1030.25 Interior Sliding Doors (All Door Types)													
C1030.30 Interior Folding Doors (All Door Types)													
C1030.40 Interior Coiling Doors (All Door Types)													
C1030.50 Interior Panel Doors (All Door Types)													
C1030.70 Interior Special Function Doors													
C1030.80 Interior Access Doors and Panels													
C1030.90 Interior Door Supplementary Components													
C1040 Interior Grilles and Gates													
C1040.10 Interior Grilles													
C1040.50 Interior Gates													
C1060 Raised Floor Construction													
C1060.10 Access Flooring													
C1060.30 Platform/Stage Floors													
C1070 Suspended Ceiling Construction													
C1070.10 Acoustical Suspended Ceilings													
C1070.20 Suspended Plaster and Gypsum Board Ceilings													
C1070.50 Specialty Suspended Ceilings													
C1070.70 Special Function Suspended Ceilings													
C1070.90 Ceiling Suspension Components													

Model Elements Utilizing CSI UniFormat™	Construction Management Bid Package A			Construction Management Bid Package B			Construction Management Bid Package C			Construction Management Bid Package D			Notes (See Sec 3.4)
	LOD	MEA	Notes										
C1090 Interior Specialties													
C1090.10 Interior Railings and Handrails													
C1090.15 Interior Louvers													
C1090.20 Information Specialties													
C1090.25 Compartments and Cubicles (Toilet Partitions)													
C1090.30 Service Walls													
C1090.35 Wall and Door Protection													
C1090.40 Toilet, Bath, and Laundry Accessories													
C1090.45 Interior Gas Lighting													
C1090.50 Fireplaces and Stoves													
C1090.60 Safety Specialties													
C1090.70 Storage Specialties													
C1090.90 Other Interior Specialties													
C20 INTERIOR FINISHES													
C2010 Wall Finishes													
C2010.10 Tile Wall Finish													
C2010.20 Wall Paneling													
C2010.30 Wall Coverings													
C2010.35 Wall Carpeting													
C2010.50 Stone Facing													
C2010.60 Special Wall Surfacing													
C2010.70 Wall Painting and Coating													
C2010.80 Acoustical Wall Treatment													
C2010.90 Wall Finish Supplementary Components													
C2020 Interior Fabrications													
C2030 Flooring													
C2030.10 Flooring Treatment													
C2030.20 Tile Flooring													
C2030.30 Specialty Flooring													
C2030.40 Masonry Flooring													
C2030.45 Wood Flooring													
C2030.50 Resilient Flooring													

§ 3.3 Model Element Table

Identify (1) the LOD required for each Model Element at each Project milestone, (2) the Model Element Author, and (3) references to any applicable notes found in Section 3.4.

Insert abbreviations for each MEA identified in the table below, such as "A - Architect," or "C - Contractor."

NOTE: LODs must be adapted for the unique characteristics of each Project.

Model Elements Utilizing CSI UniFormat™	Construction Management Bid Package A			Construction Management Bid Package B			Construction Management Bid Package C			Construction Management Bid Package D			Notes (See Sec 3.4)
	LOD	MEA	Notes										
C2030.60 Terrazzo Flooring													
C2030.70 Fluid-Applied Flooring													
C2030.75 Carpeting													
C2030.80 Athletic Flooring													
C2030.85 Entrance Flooring													
C2030.90 Flooring Supplementary Components													
C2040 Stair Finishes													
C2040.20 Tile Stair Finish													
C2040.40 Masonry Stair Finish													
C2040.45 Wood Stair Finish													
C2040.50 Resilient Stair Finish													
C2040.60 Terrazzo Stair Finish													
C2040.75 Carpeted Stair Finish													
C2050 Ceiling Finishes													
C2050.10 Plaster and Gypsum Board Finish													
C2050.20 Ceiling Paneling													
C2050.70 Ceiling Painting and Coating													
C2050.80 Acoustical Ceiling Treatment													
C2050.90 Ceiling Finish Supplementary Components													
C2090 Interior Finish Schedules													
D SERVICES													
D10 CONVEYING													
D1010 Vertical Conveying Systems													
D1010.10 Elevators													
D1010.20 Lifts													
D1010.30 Escalators													
D1010.50 Dumbwaiters													
D1010.60 Moving Ramps													
D1030 Horizontal Conveying													
D1030.10 Moving Walks													
D1030.30 Turntables													
D1030.50 Passenger Loading Bridges													

§ 3.3 Model Element Table

Identify (1) the LOD required for each Model Element at each Project milestone, (2) the Model Element Author, and (3) references to any applicable notes found in Section 3.4.

Insert abbreviations for each MEA identified in the table below, such as "A – Architect," or "C – Contractor."

NOTE: LODs must be adapted for the unique characteristics of each Project.

Model Elements Utilizing CSI UniFormat™

Model Elements Utilizing CSI Uniformat™	Construction Management			Notes (See Sec 3.4)												
	LOD	MEA	Notes													
D1030.70 People Movers																
D1050 Material Handling																
D1050.10 Cranes																
D1050.20 Hoists																
D1050.30 Derricks																
D1050.40 Conveyors																
D1050.50 Baggage Handling Equipment																
D1050.60 Chutes																
D1050.70 Pneumatic Tube Systems																
D1080 Operable Access Systems																
D1080.10 Suspended Scaffolding																
D1080.20 Rope Climbers																
D1080.30 Elevating Platforms (Pit Lift)																
D1080.40 Powered Scaffolding																
D1080.50 Building Envelope Access																
D20 PLUMBING																
D2010 Domestic Water Distribution																
D2010.10 Facility Potable-Water Storage Tanks	350		19													
D2010.20 Domestic Water Equipment	350		19													
D2010.40 Domestic Water Piping	350		19													
D2010.60 Plumbing Fixtures	350		19													
D2010.90 Domestic Water Distribution Supplementary	350		19													
D2020 Sanitary Drainage																
D2020.10 Sanitary Sewerage Equipment	350		19													
D2020.30 Sanitary Sewerage Piping	350		19													
D2020.90 Sanitary Drainage Supplementary Components	350		19													
D2030 Building Support Plumbing Systems																
D2030.10 Stormwater Drainage Equipment	350		19													
D2030.20 Stormwater Drainage Piping	350		19													

§ 3.3 Model Element Table
Identify (1) the LOD required for each Model Element at each Project milestone, (2) the Model Element Author, and (3) references to any applicable notes found in Section 3.4.

Insert abbreviations for each MEA identified in the table below, such as "A - Architect," or "C - Contractor."

NOTE: LODs must be adapted for the unique characteristics of each Project.

Model Elements Utilizing CSI UniFormat™	Construction Management			Notes (See Sec 3.4)												
	LOD	MEA	Notes													
D2030.30 Facility Stormwater Drains	350	19														
D2030.60 Gray Water Systems	350	19														
D2030.90 Building Support Plumbing System Supplementary	350	19														
D2050 General Service Compressed-Air																
D2060 Process Support Plumbing Systems																
D2060.10 Compressed-Air Systems																
D2060.20 Vacuum Systems																
D2060.30 Gas Systems	350	19														
D2060.40 Chemical-Waste Systems																
D2060.50 Processed Water Systems																
D2060.90 Process Support Plumbing System Supplementary Components																
D30 HEATING, VENTILATION, AND AIR CONDITIONING (HVAC)																
D3010 Facility Fuel Systems																
D3010.10 Fuel Piping																
D3010.30 Fuel Pumps																
D3010.50 Fuel Storage Tanks																
D3020 Heating Systems																
D3020.10 Heat Generation	350	19														
D3020.30 Thermal Heat Storage	350	19														
D3020.70 Decentralized Heating Equipment	350	19														
D3020.90 Heating System Supplementary Components	350	19														
D3030 Cooling Systems																
D3030.10 Central Cooling	350	19														
D3030.30 Evaporative Air-Cooling	350	19														
D3030.50 Thermal Cooling Storage	350	19														
D3030.70 Decentralized Cooling	350	19														
D3030.90 Cooling System Supplementary Components	350	19														
D3050 Facility HVAC Distribution Systems																

§ 3.3 Model Element Table
Identify (1) the LOD required for each Model Element at each Project milestone, (2) the Model Element Author, and (3) references to any applicable notes found in Section 3.4.

Insert abbreviations for each MEA identified in the table below, such as "A – Architect," or "C – Contractor."

NOTE: LODs must be adapted for the unique characteristics of each Project.

Model Elements Utilizing CSI Uniformat™	Construction Management			Notes (See Sec 3.4)												
	LOD	MEA	Notes													
D3050.10 Facility Hydronic Distribution	350	19														
D3050.30 Facility Steam Distribution	350	19														
D3050.50 HVAC Air Distribution	350	19														
D3050.90 Facility Distribution Systems Supplementary Components	350	19														
D3060 Ventilation																
D3060.10 Supply Air	350	19														
D3060.20 Return Air	350	19														
D3060.30 Exhaust Air	350	19														
D3060.40 Outside Air	350	19														
D3060.60 Air-to-Air Energy Recovery	350	19														
D3060.70 HVAC Air Cleaning	350	19														
D3060.90 Ventilation Supplementary Components	350	19														
D3070 Special Purpose HVAC Systems																
D3070.10 Snow Melting																
D40 FIRE PROTECTION																
D4010 Fire Suppression																
D4010.10 Water-Based Fire-Suppression (MANDATORY)	350	18														
D4010.50 Fire-Extinguishing (MANDATORY)	350	18														
D4010.90 Fire Suppression Supplementary Components	350	18														
D4011 Spray Fireproofing	350	18														
D4030 Fire Protection Specialties																
D4030.10 Fire Protection Cabinets	350	18														
D4030.30 Fire Extinguishers	350	18														
D4030.50 Breathing Air Replenishment Systems	350	18														
D4030.70 Fire Extinguisher Accessories	350	18														
D50 ELECTRICAL																
D5010 Facility Power Generation																

§ 3.3 Model Element Table

Identify (1) the LOD required for each Model Element at each Project milestone, (2) the Model Element Author, and (3) references to any applicable notes found in Section 3.4.

Insert abbreviations for each MEA identified in the table below, such as "A – Architect," or "C – Contractor."

NOTE: LODs must be adapted for the unique characteristics of each Project.

Model Elements Utilizing CSI UniForma™	Construction Management			Notes												
	LOD	MEA	Notes													
§ 3.3 Model Element Table Identify (1) the LOD required for each Model Element at each Project milestone, (2) the Model Element Author, and (3) references to any applicable notes found in Section 3.4. Insert abbreviations for each MEA identified in the table below, such as "A – Architect," or "C – Contractor." NOTE: LODs must be adapted for the unique characteristics of each Project.																(See Sec 3.4)
D5010.10 Packaged Generator Assemblies	350	21														
D5010.20 Battery Equipment																
D5010.30 Photovoltaic Collectors																
D5010.40 Fuel Cells																
D5010.60 Power Filtering and Conditioning																
D5010.70 Transfer Switches	350	21														
D5010.90 Facility Power Generation Supplementary Components	350	21														
D5020 Electrical Service and Distribution																
D5020.10 Electrical Service	350	21														
D5020.30 Power Distribution	350	21														
D5020.70 Facility Grounding	350	21														
D5020.90 Electrical Service and Distribution Supplementary Components	350	21														
D5030 General Purpose Electrical Power																
D5030.10 Branch Wiring System	350	21														
D5030.50 Wiring Devices	350	21														
D5030.90 General Purpose Electrical Power Supplementary Components	350	21														
D5040 Lighting																
D5040.10 Lighting Control (Main Panels)	350	21														
D5040.20 Branch Wiring for Lighting	350	21														
D5040.50 Lighting Fixtures	350	21														
D5040.90 Lighting Supplementary Components	350	21														
D5080 Miscellaneous Electrical Systems																
D5080.10 Lightning Protection																
D5080.40 Cathodic Protection																
D5080.70 Transient Voltage Suppression																
D5080.90 Miscellaneous Electrical Systems Supplementary Components	350	21														
D60 COMMUNICATIONS																

§ 3.3 Model Element Table

Identify (1) the LOD required for each Model Element at each Project milestone, (2) the Model Element Author, and (3) references to any applicable notes found in Section 3.4.

Insert abbreviations for each MEA identified in the table below, such as "A – Architect," or "C – Contractor."

NOTE: LODs must be adapted for the unique characteristics of each Project.

Model Elements Utilizing CSI Uniformat™	Construction Management			Notes (See Sec 3.4)												
	LOD	MEA	Notes													
D6010 Data Communications																
D6010.10 Data Communications Network Equipment (Wire Rack)	350		21													
D6020.20 Data Communications Hardware	350		21													
D6010.30 Data Communications Peripheral Data Equipment	350		21													
D6010.50 Data Communications Software	350		21													
D6010.60 Data Communication Program and Integration Services	350		21													
D6020 Voice Communications																
D6020.10 Voice Communications Switching and Routing Equipment	350		21													
D6020.20 Voice Communications Terminal Equipment																
D6020.30 Voice Communications Messaging																
D6020.40 Call Accounting																
D6020.50 Call Management																
D6030 Audio-Video Communication																
D6030.10 Audio-Video Systems	350		21													
D6030.50 Electronic Digital Systems	350		21													
D6060 Distributed Communications and Monitoring																
D6060.10 Distributed Audio-Video Communications Systems																
D6060.30 Healthcare Communications and Monitoring																
D6060.50 Distributed Systems																
D6090 Communications Supplementary Components																
D6090.10 Supplementary Components																
D70 ELECTRONIC SAFETY AND SECURITY																
D7010 Access Control and Intrusion Detection																
D7010.10 Access Control																
D7010.50 Intrusion Detection																
D7030 Electronic Surveillance																
D7030.10 Video Surveillance																
D7030.50 Electronic Personal Protection																
D7050 Detection and Alarm																

Model Elements Utilizing CSI UniFormat™	Construction Management Bid Package A			Construction Management Bid Package B			Construction Management Bid Package C			Construction Management Bid Package D			Notes (See Sec 3.4)		
	LOD	MEA	Notes	LOD	MEA	Notes									
§ 3.3 Model Element Table Identify (1) the LOD required for each Model Element at each Project milestone, (2) the Model Element Author, and (3) references to any applicable notes found in Section 3.4. Insert abbreviations for each MEA identified in the table below, such as "A – Architect," or "C – Contractor." NOTE: LODs must be adapted for the unique characteristics of each Project.															
D7050.10 Fire Detection and Alarm															
D7050.20 Radiation Detection and Alarm															
D7050.30 Fuel-Gas Detection and Alarm															
D7050.40 Fuel-Oil Detection and Alarm															
D7050.50 Refrigeration Detection and Alarm															
D7050.60 Water Intrusion Detection and Alarm															
D7070 Electronic Monitoring and Control															
D7070.10 Electronic Detection Monitoring and Control															
D7090 Electronic Safety and Security Supplementary Components															
D7090.10 Supplementary Components															
D80 INTEGRATED AUTOMATION															
D8010 Integrated Automation Facility Controls															
D8010.10 Integrated Automation Control of Equipment															
D8010.20 Integrated Automation Control of Conveying Equipment															
D8010.30 Integrated Automation Control of Fire-Suppression Systems															
D8010.40 Integrated Automation Control of Plumbing Systems															
D8010.50 Integrated Automation Control of HVAC Systems															
D8010.60 Integrated Automation Control of Electrical Systems															
D8010.70 Integrated Automation Control of Communication Systems															
D8010.80 Integrated Automation Control of Electronic Safety and Security Systems															
D8010.90 Integrated Automation Supplementary Components															
E EQUIPMENT AND FURNISHINGS															
E10 EQUIPMENT															
E1010 Vehicle and Pedestrian Equipment															
E1010.10 Vehicle Servicing Equipment															
E1010.10 Interior Parking Control Equipment															
E1010.10 Loading Dock Equipment															

§ 3.3 Model Element Table

Identify (1) the LOD required for each Model Element at each Project milestone, (2) the Model Element Author, and (3) references to any applicable notes found in Section 3.4.

Insert abbreviations for each MEA identified in the table below, such as "A – Architect," or "C – Contractor."

NOTE: LODs must be adapted for the unique characteristics of each Project.

Model Elements Utilizing CSI Uniformat™	Construction Management Bid Package A			Construction Management Bid Package B			Construction Management Bid Package C			Construction Management Bid Package D			Notes (See Sec 3.4)
	LOD	MEA	Notes										
E1010.10 Interior Pedestrian Control Equipment													
E1030 Commercial Equipment													
E1030.10 Mercantile and Service Equipment													
E1030.20 Vault Equipment													
E1030.25 Teller and Service Equipment													
E1030.30 Refrigerated Display Equipment													
E1030.35 Commercial Laundry and Dry Cleaning Equipment													
E1030.40 Maintenance Equipment													
E1030.50 Hospitality Equipment													
E1030.55 Unit Kitchens													
E1030.60 Photographic Processing Equipment													
E1030.70 Postal, Packaging, and Shipping Equipment													
E1030.75 Office Equipment													
E1030.80 Foodservice Equipment (Grease Interceptor)	350		19										
E1040 Institutional Equipment													
E1040.10 Educational and Scientific Equipment													
E1040.20 Healthcare Equipment													
E1040.40 Religious Equipment													
E1040.60 Security Equipment													
E1040.70 Detention Equipment													
E1060 Residential Equipment													
E1060.10 Residential Appliances													
E1060.50 Retractable Stairs													
E1060.70 Residential Ceiling Fans													
E1070 Entertainment and Recreational Equipment													
E1070.10 Theater and Stage Equipment													
E1070.20 Musical Equipment													
E1070.50 Athletic Equipment													
E1070.60 Recreational Equipment													
E1090 Other Equipment													
E1090.10 Solid Waste Handling Equipment													
E1090.30 Agricultural Equipment													

Model Elements Utilizing CSI UniFormat™	Construction Management			Notes											
	LOD	MEA	Notes	LOD	MEA	Notes									
E1090.40 Horticultural Equipment															
E1090.60 Decontamination Equipment															
E20 FURNISHINGS															
E2010 Fixed Furnishings															
E2010.10 Fixed Art															
E2010.20 Window Treatments															
E2010.30 Casework															
E2010.70 Fixed Multiple Seating															
E2010.90 Other Fixed Furnishings															
E2050 Movable Furnishings															
E2050.10 Movable Art															
E2050.30 Furniture															
E2050.40 Accessories															
E2050.60 Movable Multiple Seating															
E2050.90 Other Movable Furnishings															
F SPECIAL CONSTRUCTION AND DEMOLITION															
F10 SPECIAL CONSTRUCTION															
F1010 Integrated Construction															
F1010.10 Building Modules															
F1010.50 Manufactured/Fabricated Rooms															
F1010.70 Modular Mezzanines															
F1020 Special Structures															
F1020.10 Fabric Structures															
F1020.20 Space Frames															
F1020.30 Geodesic Structures															
F1020.40 Manufacturer-Engineered Structures Trusses	350	08													
F1020.60 Manufactured Canopies															
F1020.65 Rammed Earth Construction															
F1020.70 Towers															
F1030 Special Function Construction															
F1030.10 Sound and Vibration Control															
F1030.30 Seismic Control															

§ 3.3 Model Element Table
Identify (1) the LOD required for each Model Element at each Project milestone, (2) the Model Element Author, and (3) references to any applicable notes found in Section 3.4.

Insert abbreviations for each MEA identified in the table below, such as "A – Architect," or "C – Contractor."

NOTE: LODs must be adapted for the unique characteristics of each Project.

Model Elements Utilizing CSI UniFormat™	Construction Management			Notes												
	LOD	MEA	Notes													
F1030.50 Radiation Protection																
F1050 Special Facility Components																
F1050.10 Pools																
F1050.20 Interior Fountains																
F1050.30 Interior Water Features																
F1050.40 Aquariums																
F1050.50 Amusement Park Structures and Equipment																
F1050.60 Ice Rinks																
F1050.70 Animal Containment																
F1060 Athletic and Recreational Special Construction																
F1060.10 Indoor Soccer Boards																
F1060.20 Safety Netting																
F1060.30 Arena Football Boards																
F1060.40 Floor Sockets																
F1060.50 Athletic and Recreational Court Walls																
F1060.60 Demountable Athletic Surfaces																
F1080 Special Instrumentation																
F1080.10 Stress Instrumentation																
F1080.20 Seismic Instrumentation																
F1080.40 Meteorological Instrumentation																
F1080.80 Earth Movement Monitoring																
F20 FACILITY REMEDIATION																
F2010 Hazardous Materials Remediation																
F2010.10 Transportation and Disposal of Hazardous Materials																
F2010.20 Asbestos Remediation																
F2010.30 Lead Remediation																
F2010.40 Polychlorinated Biphenyl Remediation																
F2010.50 Mold Remediation																
F30 DEMOLITION																
F3010 Structure Demolition																
F3010.10 Building Demolition																

§ 3.3 Model Element Table

Identify (1) the LOD required for each Model Element at each Project milestone, (2) the Model Element Author, and (3) references to any applicable notes found in Section 3.4.

Insert abbreviations for each MEA identified in the table below, such as "A - Architect," or "C - Contractor."

NOTE: LODs must be adapted for the unique characteristics of each Project.

Model Elements Utilizing CSI UniFormat™	Construction Management			Notes												
	LOD	MEA	Notes													
																(See Sec 3.4)

Model Elements Utilizing CSI UniForma™	Construction Management Bid Package A			Construction Management Bid Package B			Construction Management Bid Package C			Construction Management Bid Package D			Notes (See Sec 3.4)
	LOD	MEA	Notes										
F3010.30 Tower Demolition													
F3010.50 Bridge Demolition													
F3010.70 Dam Demolition													
F3030 Selective Demolition													
F3030.10 Selective Building Demolition													
F3030.30 Selective Interior Demolition													
F3030.50 Selective Bridge Demolition													
F3030.70 Selective Historic Demolition													
F3030 Structure Moving													
F3030.10 Structure Relocation													
F3030.30 Structure Raising													
G SITEWORK													
G10 SITE PREPARATION													
G1010 Site Clearing													
G1010.10 Clearing and Grubbing													
G1010.30 Tree and Shrub Removal and Trimming													
G1010.50 Earth Stripping and Stockpiling													
G1020 Site Elements Demolition													
G1020.10 Utility Demolition													
G1020.30 Infrastructure Demolition													
G1020.50 Selective Site Demolition													
G1030 Site Element Relocations													
G1030.10 Utility Relocation													
G1050 Site Remediation													
G1050.10 Physical Decontamination													
G1050.15 Chemical Decontamination													
G1050.20 Thermal Decontamination													
G1050.25 Biological Decontamination													
G1050.30 Remediation Soil Stabilization													
G1050.40 Site Containment													
G1050.45 Sinkhole Remediation													

§ 3.3 Model Element Table
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NOTE: LODs must be adapted for the unique characteristics of each Project.

Model Elements Utilizing CSI UniForma™

Model Elements Utilizing CSI Uniformat™	Construction Management Bid Package A			Construction Management Bid Package B			Construction Management Bid Package C			Construction Management Bid Package D			Notes (See Sec 3.4)
	LOD	MEA	Notes										
G1050.50 Hazardous Waste Drum Handling													
G1050.60 Contaminated Site Material Removal													
G1050.80 Water Remediation													
G1070 Site Earthwork													
G1070.10 Grading													
G1070.20 Excavation and Fill													
G1070.30 Embankments													
G1070.35 Erosion and Sedimentation Controls													
G1070.40 Soil Stabilization													
G1070.45 Rock Stabilization													
G1070.50 Soil Reinforcement													
G1070.55 Slope Protection													
G1070.60 Gabions													
G1070.65 Riprap													
G1070.70 Wetlands													
G1070.80 Earth Dams													
G1070.90 Site Soil Treatment													
G20 SITE IMPROVEMENTS													
G2010 Roadways													
G2010.10 Roadway Pavement													
G2010.20 Roadway Curbs and Gutters													
G2010.40 Roadway Appurtenances													
G2010.70 Roadway Lighting													
G2010.80 Vehicle Fare Collection													
G2020 Parking Lots													
G2020.10 Parking Lot Pavement													
G2020.20 Parking Lot Curbs and Gutters													
G2020.40 Parking Lot Appurtenances													
G2020.70 Parking Lot Lighting													
G2020.80 Exterior Parking Control Equipment													
G2030 Pedestrian Plazas and Walkways													
G2030.10 Pedestrian Pavement													

§ 3.3 Model Element Table

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NOTE: LODs must be adapted for the unique characteristics of each Project.

Model Elements Utilizing CSI UniFormat™	Construction Management			Notes (See Sec 3.4)									
	LOD	MEA	Notes										
§ 3.3 Model Element Table Identify (1) the LOD required for each Model Element at each Project milestone, (2) the Model Element Author, and (3) references to any applicable notes found in Section 3.4.													
Insert abbreviations for each MEA identified in the table below, such as "A - Architect," or "C - Contractor."													
NOTE: LODs must be adapted for the unique characteristics of each Project.													
G2030 Pedestrian Pavement Curbs and Gutters													
G2030.30 Exterior Steps and Ramps													
G2030.40 Pedestrian Pavement Appurtenances													
G2030.70 Plaza and Walkway Lighting													
G2030.80 Exterior Pedestrian Control Equipment													
G2040 Airfields													
G2040.10 Aviation Pavement													
G2040.20 Aviation Pavement Curbs and Gutters													
G2040.40 Aviation Pavement Appurtenances													
G2040.70 Airfield Lighting													
G2040.80 Airfield Signaling and Control Equipment													
G2050 Athletic, Recreational, and Playfield Areas													
G2050.10 Athletic Areas													
G2050.30 Recreational Areas													
G2050.50 Playfield Areas													
G2060 Site Development													
G2060.10 Exterior Fountains													
G2060.20 Fences and Gates													
G2060.25 Site Furnishings													
G2060.30 Exterior Signage													
G2060.35 Flagpoles													
G2060.40 Covers and Shelters													
G2060.45 Exterior Gas Lighting													
G2060.50 Site Equipment													
G2060.60 Retaining Walls													
G2060.70 Site Bridges													
G2060.80 Site Screening Devices													
G2060.85 Site Specialties													
G2080 Landscaping													
G2080.10 Planting Irrigation													
G2080.20 Turf and Grasses													
G2080.30 Plants													

Model Elements Utilizing CSI UniFormat™	Construction Management Bid Package A			Construction Management Bid Package B			Construction Management Bid Package C			Construction Management Bid Package D			Notes (See Sec 3.4)
	LOD	MEA	Notes										
§ 3.3 Model Element Table Identify (1) the LOD required for each Model Element at each Project milestone, (2) the Model Element Author, and (3) references to any applicable notes found in Section 3.4.													
Insert abbreviations for each MEA identified in the table below, such as "A – Architect," or "C – Contractor."													
NOTE: LODs must be adapted for the unique characteristics of each Project.													
G2080.50 Planting Accessories													
G2080.70 Landscape Lighting													
G2080.80 Landscaping Activities													
G30 LIQUID AND GAS SITE UTILITIES													
G3010 Water Utilities													
G3010.10 Site Domestic Water Distribution													
G3010.30 Site Fire Protection Water Distribution													
G3010.50 Site Irrigation Water Distribution													
G3020 Sanitary Sewerage Utilities													
G3020.10 Sanitary Sewerage Utility Connection													
G3020.20 Sanitary Sewerage Piping													
G3020.40 Utility Septic Tanks													
G3020.50 Sanitary Sewerage Structures													
G3020.60 Sanitary Sewerage Lagoons													
G3030 Storm Drainage Utilities													
G3030.10 Storm Drainage Utility Connection													
G3030.20 Storm Drainage Piping													
G3030.30 Culverts													
G3030.40 Site Storm Water Drains													
G3030.50 Storm Drainage Pumps													
G3030.60 Site Subdrainage													
G3030.70 Storm Drainage Ponds and Reservoirs													
G3050 Site Energy Distribution													
G3050.10 Site Hydronic Heating Distribution													
G3050.20 Site Steam Energy Distribution													
G3050.40 Site Hydronic Cooling Distribution													
G3060 Site Fuel Distribution													
G3060.10 Site Gas Distribution													
G3060.20 Site Fuel-Oil Distribution													
G3060.30 Site Gasoline Distribution													
G3060.40 Site Diesel Fuel Distribution													
G3060.60 Site Aviation Fuel Distribution													

Model Elements Utilizing CSI UniFormat™	Construction Management Bid Package A			Construction Management Bid Package B			Construction Management Bid Package C			Construction Management Bid Package D			Notes (See Sec 3.4)
	LOD	MEA	Notes										
§ 3.3 Model Element Table Identify (1) the LOD required for each Model Element at each Project milestone, (2) the Model Element Author, and (3) references to any applicable notes found in Section 3.4. Insert abbreviations for each MEA identified in the table below, such as "A - Architect," or "C - Contractor." NOTE: LODs must be adapted for the unique characteristics of each Project.													
G3090 Liquid and Gas Site Utilities Supplementary Components													
G3090.10 Supplementary Components													
G40 ELECTRICAL SITE IMPROVEMENTS													
G4010 Site Electric Distribution Systems													
G4010.10 Electrical Utility Services													
G4010.20 Electric Transmission and Distribution													
G4010.30 Electrical Substations													
G4010.40 Electrical Transformers													
G4010.50 Electrical Switchgear and Protection Devices													
G4010.70 Site Grounding													
G4010.90 Electrical Distribution System Instrumentation and Controls													
G4050 Site Lighting													
G4050.10 Area Lighting													
G4050.20 Flood Lighting													
G4050.50 Building Illumination													
G4050.90 Exterior Lighting Supplementary Components													
G50 SITE COMMUNICATIONS													
G5010 Site Communications Systems													
G5010.10 Site Communications Structures													
G5010.30 Site Communications Distribution													
G5010.50 Wireless Communications Distribution													
G90 MISCELLANEOUS SITE CONSTRUCTION													
G9010 Tunnels													
G9010.10 Vehicular Tunnels													
G9010.20 Pedestrian Tunnels													
G9010.40 Service Tunnels													
G9010.90 Tunnel Construction Related Activities													

§ 3.4 Model Element Table Notes

Notes:

(List by number shown on table.)

Model Element Table is an add on document to all bid package noted above and relating to all contractors scope of work. The table identifies all bid package requirements to provide Building Information Models (BIM) during the BIM coordination process. In addition, refer to BIM protocol instruction to see LOD descriptions.

Contractors are required to attend coordination meetings, submit and post to BuildingBlok and maintain the BIM schedule production process.



EDiS BIM Services

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Silver Lake Elementary School
Additions and Renovations
Project Building Information Modeling (BIM)
Scope Participant List 16 March 2020

Contract: B-05: Structural Steel & Miscellaneous Metals

Contract: B-08: Metal Studs & Drywall

Contract: B-18: Fire Protection

Contract: B-19: Mechanical & Plumbing

Contract: B-21: Electrical

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