



ADDENDUM #2

Date:	June 16, 2025
Re:	Nelson County Social Services Building – IFB # 2025-NCDSS
To:	Bidders
Bid Date:	Changed – Bids due July 2, 2025 at 2:00 PM EDT.
From:	Architect - PMA Architecture, 10325 Warwick Boulevard, Newport News VA, 23601
Contact:	Akshar Patel

Important Note: If submitting an electronic response in eVA, please ensure that it is submitted to the latest version of the solicitation.

Addendum #2 provides the following modifications and additions to the Scope of Work for the above referenced project and clarifications to questions received to date. Bidders are instructed to include the additional cost of work in their Bid for the project:

1. Revised Bid Form reflecting the new Bid Date indicated above (See attached).
2. Wm. S. Trimble Company, 1510 Southside Drive, Salem, VA (rklyle@wmtrimble.com) submitted the following questions regarding the security and IT scopes:
 - a. Spec Section 28 1300, 1.7, Software Service Agreement; Is the software system being provided by Nelson County or the Security Provider? What Software House series would be needed for a license, at a minimum they need M? **Response: Software to be provided by the security provider. This will be a standalone install so will need an MAS.**
 - b. For Cambium who is providing the POE switches is that supplied by the Owner or Div 27. **Response: POE switches are listed in the IT – Schedule of Equipment at the end of Section 27 2000. All equipment listed in the IT-Schedule of Equipment is to be provided by the IT specialist under Section 27 2000.**
 - c. Does the Owner need us to supply the client with a workstation for monitoring or will the client monitor remotely for the cameras? **Response: Section 28 1300, Part 2-Products, 2.1, A, 1. Indicates that the scope of work includes a workstation is to be provided.**

- d. For the ID badges do we need to supply them, and if so, do we need to provide printing for credentials? **Response: Suggest 250 badges. Section 28 1300, Part 2- Products, 2.1, A., 3. Indicates that the scope of work includes a printer to be provided.**
 - e. Does software house need to be integrated with the L-Depth System. **Response: Do you mean L-DAP as in an Active Directory connection? If so, no they will not.**
- 3. Missing Specification Sections are added to the project manual as follows:
 - a. **22 1116 SF Domestic Water Piping.pdf.**
 - b. **22 1316 SF Sanitary Waste and Vent Piping.pdf.**
 - c. **22 1123.21 SF – Inline, Domestic Water Pumps.pdf.**
 - d. **22 4700 SF Drinking Fountains and Water Coolers.pdf.**

Previously unanswered questions:

- A. Question: Sheet LT101 shows site lighting photometrics and shows a fixture schedule. Is this to be used to figure the site lighting? If so, is there a specification on the poles? Also, there are some pole light fixtures shown on this drawing that are not figured in the photometric calculations Are these pole fixtures to be included or ignored. **Response: Refer to the attached revised Sheet CS 101 and LT101 reflecting Addendum 2 which has been revised to clarify the location and number of site light fixtures to be provided.**
- B. **Electrical drawings E101, E102 and E601 are reissued in this Addendum per the attached pdf file titled "Nelson County Office Building – Addendum 2 Electrical Revision 6/16/25 to address electrical questions R, T and U from Addendum 1.**
- C. **In response to Question P in Addendum 1, Delete the requirement for concrete encasement of underground conduits.**
- D. **In response to Question V in Addendum 1, All controls for the HVAC are local to the building. There is not a DDC or BAS system requirement.**

Substitution Requests:

1.1 Metal Roofing Systems MRS System 1500 is approved for Metal Roofing Panels per the submittal received subject to compliance with requirements in the specifications.

END OF ADDENDUM #2

**BID FORM – BIDS DUE BY July 2, 2025 at 2:00 PM EDT IFB #2025-NCDSS
Revised 6/16/25 – Addendum 2 Version.**

NELSON COUNTY BOARD OF SUPERVISORS, 84 COURTHOUSE SQUARE, ROOM #435,
LOVINGSTON, VA, 22949

The undersigned, having visited and examined the site(s) and having carefully studied the project documents for **IFB#2025- NCDSS NELSON COUNTY SOCIAL SERVICES BUILDING** and hereby proposes to furnish all plant, labor, equipment, materials, and services and to perform all operations necessary to execute and complete the work required for the project, in strict accordance with the project documents and specifications provided by The Owner, dated March 10, 2025 together with Addenda numbered _____, issued during bidding period and hereby acknowledged, subject to the terms and conditions of the agreement:

IFB#2025- NCDSS NELSON COUNTY SOCIAL SERVICES BUILDING:

For the lump sum of _____ dollars

(\$ _____) which shall be referred to hereinafter as the base bid.

The base bid is founded upon furnishing equipment and materials of specified manufacturers. Equipment or materials of other manufacturers are offered as “Substitutes” as shown on the last page of this Bid Form.

Unit Price A: For additional removal and disposal of unsuitable soils and placement of suitable soils, including transportation and installation costs on a cubic yard basis. Removal of additional unsuitable soils shall be determined by the Owner’s Geotechnical Engineer. Contractor shall dispose of unsuitable soils in a proper and legal manner.

Unit Price A: of _____ dollars per cubic yard

(\$ _____/CY) which shall be referred to hereinafter as Unit Price for Unsuitable Soil)

Unit Price B: For removal of subsurface rock.

Unit Price B: of _____ dollars per cubic yard

(\$ _____/CY) which shall be referred to hereinafter as Unit Price for Rock Removal)

It is understood and agreed that the Nelson County Board of Supervisors, in protecting its best interest, reserves the right to:

Reject any and all bids, in whole or in part

Accept any bid at the base bid price, whereupon the contractor shall furnish equipment and materials as specified, or

Bid Form Page 1 of 2

Enclosed herewith is the following security, offered as evidence that the undersigned will enter into an agreement for the execution and completion of the work in accordance with the specifications and project documents:

Certified Check for the Sum of _____

Name of Bank _____

Bidder's Bond in Amount of _____

Bond Issued By _____

The undersigned further agrees that in case of failure on his part to execute the said agreement within the 10 consecutive calendar days after written notice being given on the award of the contract, the moneys payable by the securities accompanying this bid shall be paid to the Nelson County Board of Supervisors, Virginia as liquidated damages for such failure; otherwise, the securities accompanying this bid shall be returned to the undersigned.

This bid is subject to acceptance within a period of 45 days from this date.

Respectfully Submitted,

Contractor

Address

By _____

Telephone Number

Date _____

E-Mail Address

Contractor's Current Virginia Contractor's License Number _____ Code _____

End of Bid Form

Bid Form Page 2 of 2
Return with Bid Form

“SUBSTITUTE” EQUIPMENT OR MATERIALS

IFB#2025- NCDSS NELSON COUNTY SOCIAL SERVICES BUILDING:

Equipment or Material Item As Specified	Manufacturer’s name, catalog, or model # of “substitute” offered	Amount: Indicate Add or Deduct
1. _____	_____	\$ _____
2. _____	_____	\$ _____
3. _____	_____	\$ _____
4. _____	_____	\$ _____
5. _____	_____	\$ _____
6. _____	_____	\$ _____
7. _____	_____	\$ _____
8. _____	_____	\$ _____
9. _____	_____	\$ _____

10. _____ \$ _____

The above listed substitute items are hereby guaranteed to perform in all respects the functions of the items of specified manufacturers, and it is fully understood that approval of such items is contingent upon this guarantee.

Contractor's name: _____ Date: _____

Contractor's Signature: _____

Current License Number: _____ Code: _____

Return with Bid Form

CODE OF VIRGINIA 2.2-4311

EMPLOYMENT DISCRIMINATION

§ 2.2-4311. Employment discrimination by contractor prohibited; required contract provisions.

ALL PUBLIC BODIES SHALL INCLUDE IN EVERY CONTRACT OF MORE THAN \$10,000 THE FOLLOWING PROVISIONS:

1. During the performance of this contract, the contractor agrees as follows:

A. The contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the contractor. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

B. The contractor, in all solicitations or advertisements for employees placed by or on behalf of the contractor, will state that such contractor is an equal opportunity employer.

C. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

2. The contractor will include the provisions of the foregoing paragraphs a, b and c in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor. (1982, c. 647, § 11-51; 2000, c. 628; 2001, c. 844.)

We hereby certify to the Nelson County Board of Supervisors that in submission of this bid, we agree to conform to the provisions outlined above.

Certified By: _____ (Firm Name, City, and State)

Signed: _____
(Signature)

(Title)

(Date)

Return with Bid Form

CODE OF VIRGINIA 2.2-4311.1

COMPLIANCE WITH FEDERAL, STATE, AND LOCAL IMMIGRATION LAWS

§ 2.2-4311.1 Compliance with federal, state, and local laws and federal immigration law; required contract provisions.

ALL PUBLIC BODIES SHALL INCLUDE IN EVERY CONTRACT OF MORE THAN \$10,000 THE FOLLOWING PROVISIONS:

3. During the performance of this contract, the contractor agrees as follows:

A. The contractor does not, and shall not during the performance of the contract for goods and services in the Commonwealth; knowingly employ an unauthorized alien as defined in the federal Immigration Reform and Control Act of 1986.

We hereby certify to the Nelson County Board of Supervisors that in submission of this bid, we agree to conform to the provisions outlined above.

Certified By:

(Firm Name, City, and State)

Signed: _____
(Signature)

(Title)

(Date)

Return with Bid Form

CODE OF VIRGINIA

2.2-4312 DRUG-FREE WORKPLACE

§ 2.2-4312. Drug-free workplace to be maintained by contractor; required contract provisions.

All public bodies shall include in every contract over \$10,000 the following provisions:

During the performance of this contract, the contractor agrees to (i) provide a drug-free workplace for the contractor's employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the contractor that the contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.

For the purposes of this section, "drug-free workplace" means a site for the performance of work done in connection with a specific contract awarded to a contractor in accordance with this chapter, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the contract. (2000, c. 417, § 11-51.1; 2001, c. 844.)

We hereby certify to the Nelson County Board of Supervisors that in submission of this bid, we agree to conform to the provisions outlined above.

Certified By: _____ (Firm Name, City, and State)

Signed: _____
(Signature)

(Title)

(Date)

Return with Bid Form

CODE OF VIRGINIA

§2.2-4321 – CONTRACTOR’S CERTIFICATION OF NON-DEBARMENT

This is to certify that I (we) have not been barred from bidding on contracts by any agency of the Commonwealth of Virginia, nor am I (we) a part of any firm/corporation that has been barred from bidding on contracts by any agency of the Commonwealth of Virginia.

Contractor: _____

Address: _____

By: _____

Signature: _____

Title: _____

Date: _____

Company Seal:

Return with Bid Form

BID BOND (5% of Base Bid if Over \$100,000)

BIDDER (Name and Address):

SURETY (Name and Address of Principal Place of Business):

OWNER (Name and Address):

Nelson County Board of Supervisors P.O. Box 336 Lovington, VA 22949

BID DUE DATE: *June 26, 2025 at 2:00 PM EDT*

Nelson County Board of Supervisors (owner) fails to issue a Notice of Award to Bidder within the time specified in the Bid Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).

4. Payment under this Bond will be due and payable upon default by Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Nelson County Board of Supervisors (owner), which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Nelson County Board of Supervisors (owner) and bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from Bid Due Date without Surety's written consent.
6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in paragraph 4 above is received by Bidder and Surety and in no case later than one year after Bid due date.
7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the project is located.
8. Notice required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.
11. The term "Bid" as used herein includes a bid, offer, or proposal as applicable.

Bid Bond page 2 of 2

Return With Bid Form (If Alternate Form of Security is NOT Provided)

BIDDER'S QUALIFICATION STATEMENT

- 1) Name of Contractor _____
- 2) Years in Business _____
- 3) List three (3) recent projects of this nature that you have completed and give the completed cost of each project listed.

4) Have you ever failed to complete work awarded to you? If so, state where and why.

5) Do you plan to sublet any part of this work? If so, give details. List name, address, specialty and years of experience.

6) Have you ever performed similar work under the direction of a Consulting Engineer or Registered Architect? If so, list three such firms, giving firm name, address, telephone number and the name of the project. (List most recent projects)

7) List three material suppliers, including an individual's name and telephone number.

8) List Bank reference. Include an individual's name and telephone number.

Bidder's Qualification Statement page 1 of 2

9) Bonding reference, name, address and telephone.

10) Are you on any list of debarred contractors maintained by the U.S. Department of Labor, the U.S. Department of Housing and Urban Development or the Virginia Department of Highways?

Yes _____

No _____

11) The undersigned hereby authorizes and requests any person, firm or corporation to furnish any information requested by the owner, in verification of the recitals comprising this statement of contractor's qualifications.

12) State the true, exact, correct and complete name of the partnership, corporation or trade name under which you do business, and the address of the place of business. (If a corporation, state the name of the President and Secretary. If a partnership, state the names of all partners. If a trade name, state the names of the individuals who do business under the trade name.) It is absolutely necessary that this information be furnished.

Correct Name of Bidder

- a) The Business is a _____
- b) The address of principal place of business is: _____
- c) Phone number _____
- d) The name of the corporate officers, or partners, or individuals doing business under a trade name, are as follows:

13) Dated at _____ this _____ day of _____ 2010.

By _____

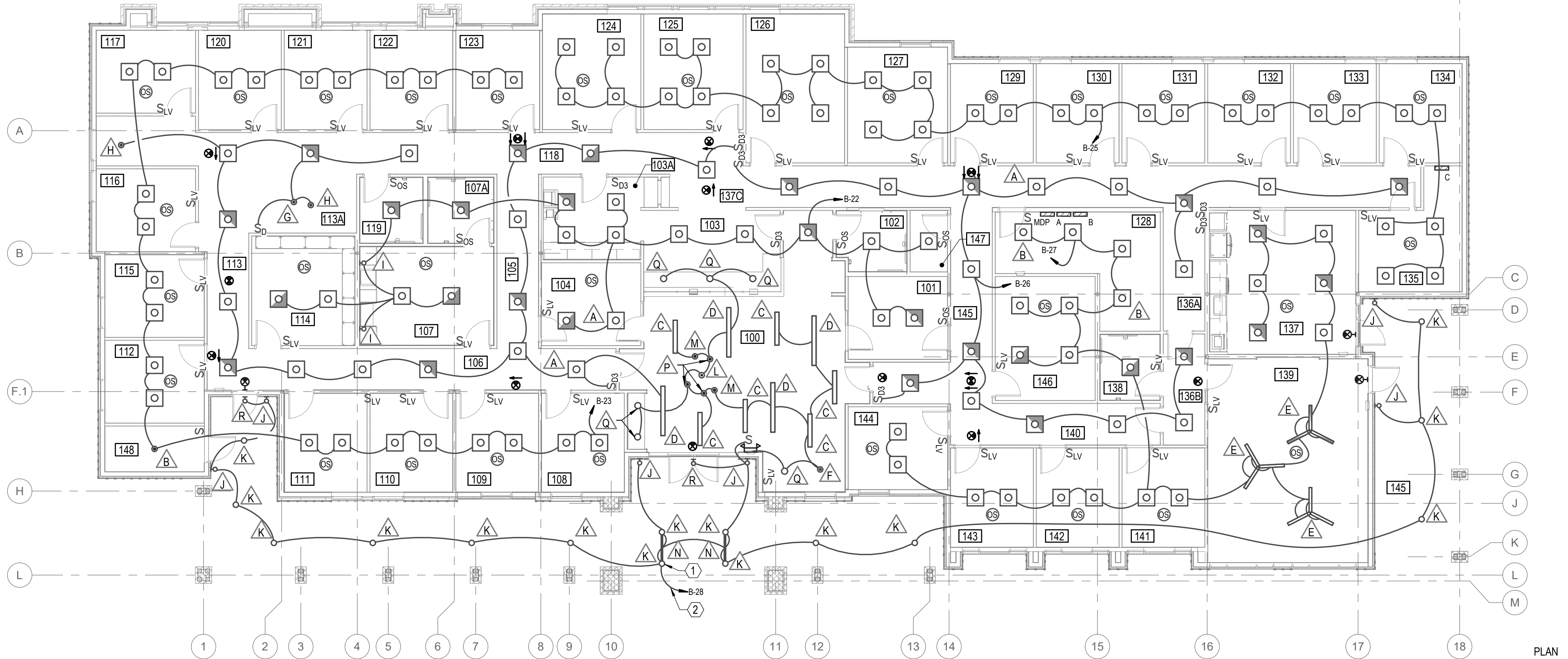
Attest _____

(Seal)

Return with Bid Form

6/10/2025 7:52:27 AM Autodesk Docs (22-14 Nelson County Office Building) (3/20/24 22-14 Nelson County Office Building).rvt

ROOM SCHEDULE	
ROOM #	ROOM NAME
100	LOBBY/WAITING
101	INTERVIEW
102	TLT
103	CLERK/RECEP.
103A	PRINT/COPY
104	INTERVIEW
105	CORRIDOR
106	CORRIDOR
107	FOSTER CARE SUPERVISION
107A	FOSTER CARE TLT
108	FSW 10
109	FSW 9
110	FSW 8
111	FSW 7
112	FSW 6
113	CORRIDOR
113A	MTG/TOUCH DOWN SPACE
114	FOSTER CARE STORAGE
115	FSW 5
116	FSW 4
117	FSW 3
118	CORRIDOR
119	STAFF TLT
120	FSW 2
121	FSW 1
122	INTAKE WORKER
123	HUMAN SERVICES AID 3
124	FSW SUPERVISOR
125	ADMIN MANAGER
126	DIRECTOR
127	BENEFITS SUPERVISOR
128	MECHANICAL/ELEC. ROOM
129	BENEFITS 1
130	BENEFITS 2
131	BENEFITS 3
132	BENEFITS 4
133	BENEFITS 5
134	BENEFITS 6
135	I.T.
136A	CORRIDOR
136B	CORRIDOR
137	BREAK ROOM
137C	MAIL/SUPPLIES
138	STAFF TLT
139	TRAINING ROOM/CONFERENCE
140	CORRIDOR
141	BENEFITS 7
142	BENEFITS 8
143	BENEFITS 9
144	BENEFITS 10
145	CORRIDOR
146	OUTDOOR AREA
147	FILE STORAGE
148	JAN
148	SPRINKLER RISER RM



A1 LIGHTING FLOOR PLAN
SCALE: 1/8" = 1'-0"

GENERAL SHEET NOTES

- 1 ALL 2'X2' LUMINAIRE ARE TYPE A, UNLESS OTHERWISE NOTED.
- 2 CONNECT EMERGENCY LUMINAIRE SO THAT WHEN UTILITY POWER IS AVAILABLE, THEY ARE CONTROLLED BY ROOM LIGHTING CONTROLS. UPON LOSS OF NORMAL POWER, EMERGENCY LUMINAIRE SHALL FULLY ILLUMINATE REGARDLESS OF ROOM LIGHTING CONTROLS.
- 3 CONNECT EXIT SIGNS TO ROOM LIGHTING CIRCUIT ON LINE SIDE OF ROOM LIGHTING CONTROLS.

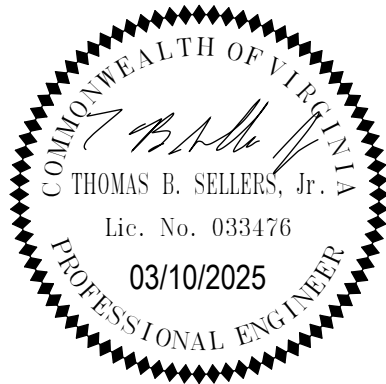
SHEET KEYNOTES

- 1 PROVIDE DUSK TO DAWN PHOTOCELL AND COUNTDOWN TIMER FOR EXTERIOR LIGHTING CONTROL OF EXTERIOR LUMINAIRE.
- 2 TIME CLOCK TO BE SET AND ACT AS CONTROL FOR DUSK TO DAWN PHOTOCELL PER VIA LIGHTING CONTACTOR FOR ALL EXTERIOR LUMINAIRE.

THE DRAWINGS, AND IDEAS DESCRIBED ON THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF THE ARCHITECT. THESE DOCUMENTS ARE NOT TO BE REPRODUCED, COPIED, OR USED IN CONJUNCTION WITH ANY CONSTRUCTION PROJECT OR PERSON OTHER THAN FOR THE SPECIFIC PROJECT FOR WHICH THEY WERE PREPARED WITHOUT WRITTEN CONSENT OF THE ARCHITECT. WRITTEN DIMENSIONS ON THESE DOCUMENTS SHALL TAKE PRECEDENCE OVER SCALED RELATIONSHIPS. EXISTING RELATIONSHIPS SHOWN ARE BASED ON INFORMATION PROVIDED BY THE OWNER TO THE BEST OF THE ARCHITECT'S ABILITY, AND SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IF DIMENSIONAL OR CONSTRUCTION CONDITIONS IN THE WORK VARY FROM THE CONDITIONS SPECIFIED IN THESE DOCUMENTS. CONTRACTOR IS RESPONSIBLE FOR ALL MEANS & METHODS OF CONSTRUCTION, ALL JOBSITE SAFETY, AND COMPLIANCE WITH APPLICABLE SAFETY REGULATIONS.

NELSON COUNTY SOCIAL SERVICES BLDG

37 TANBARK PLAZA
LOVINGSTON, VA 22949



#	Revision	Date
2	Addendum 2	06/09/25

DRAWN BY: DMG
CHECKED BY: TBS
PROJECT #: 22-14
DATE: 03/10/2025
SCALE: AS NOTED

SHEET NAME:
LIGHTING FLOOR PLAN

DRAWING #:

E101

DRAWING: of

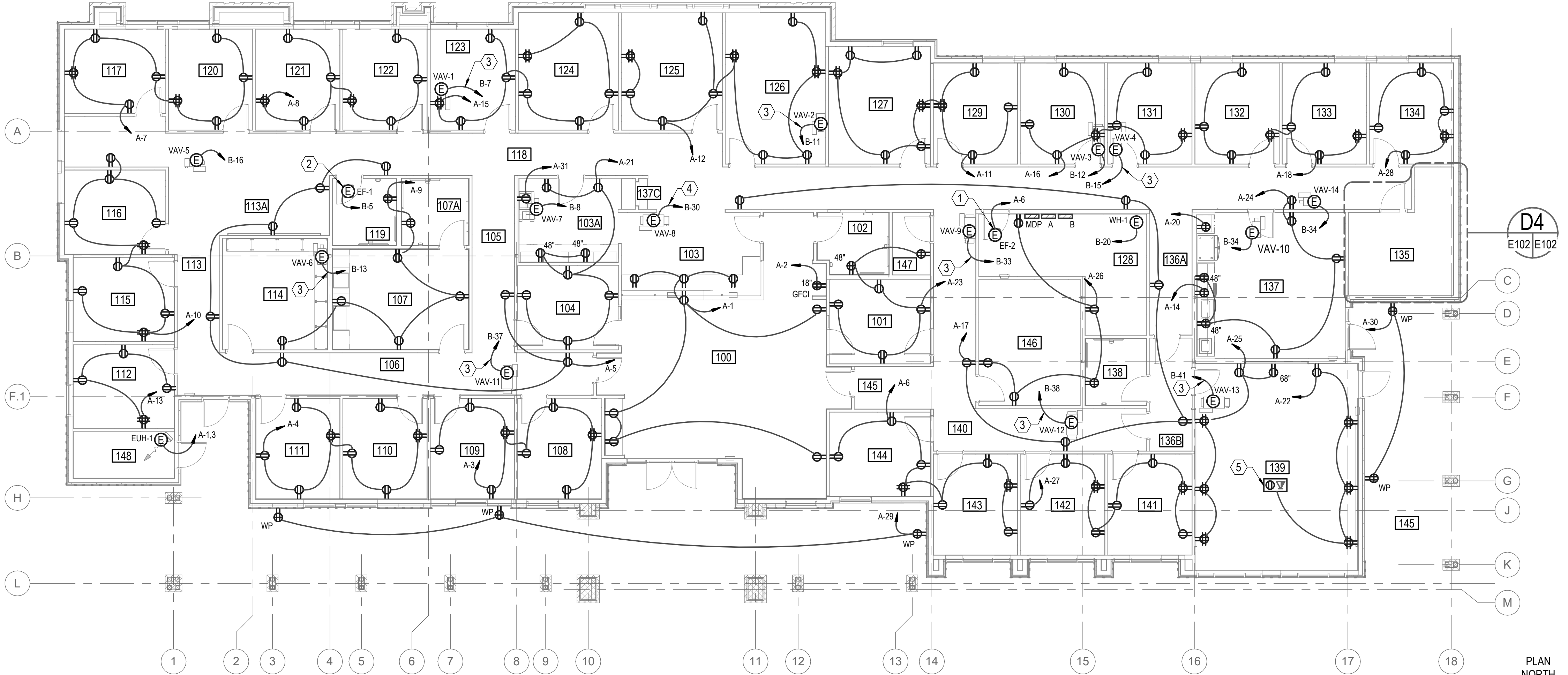


VANSANT & GUSLER, INC.
CONSULTING ENGINEERS
6330 NEWTOWN ROAD, SUITE 400 NORFOLK, VA. 23502
Telephone: 757 461-6757 Fax: 757 461-6516

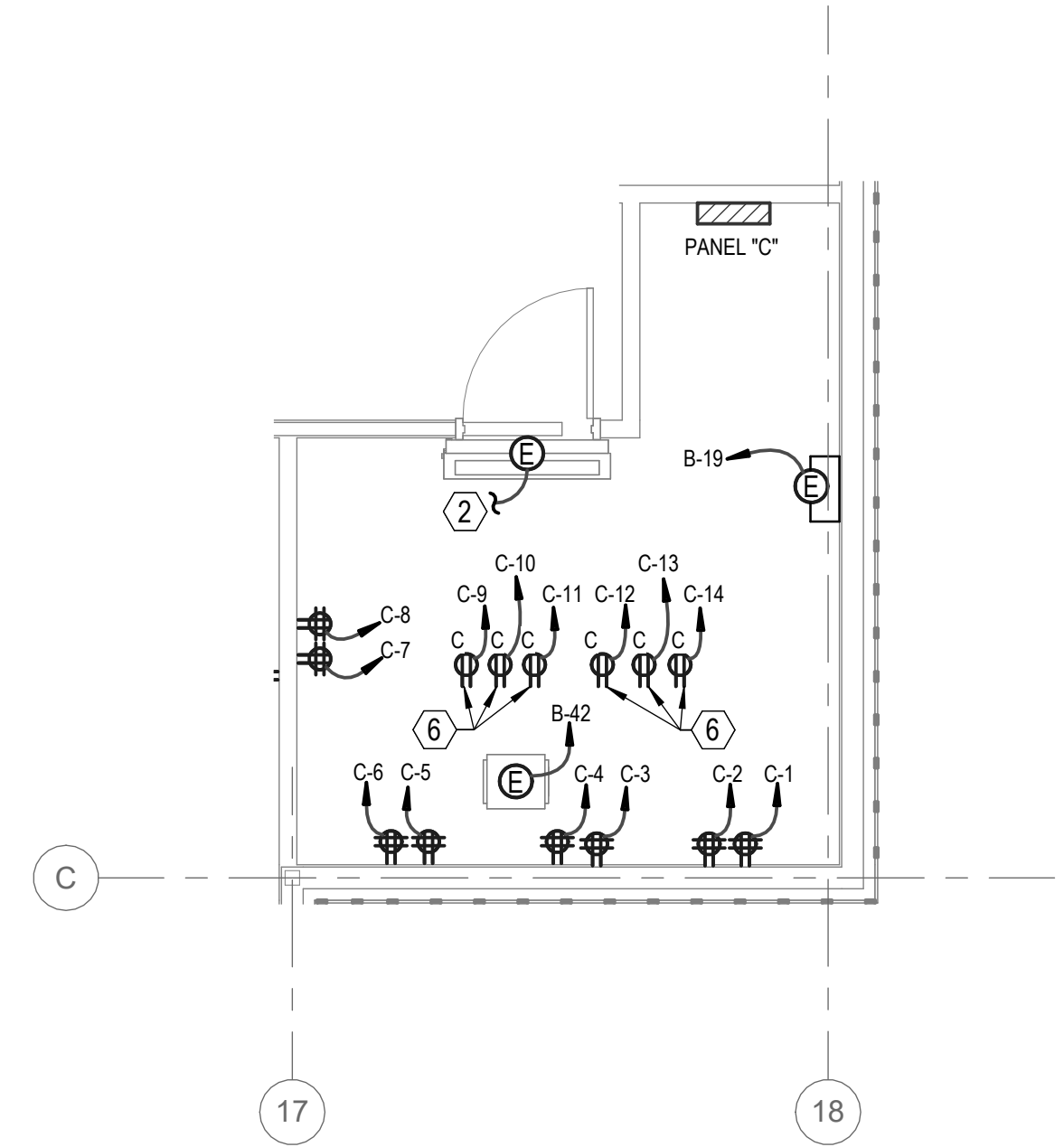
6/10/2025 7:52:27 AM Autodesk Docs (22-14 Nelson County Office Building) (3/2024) 22-14 Nelson County Office Building.rvt

SCALE: 3" = 1'-0"	ROOM SCHEDULE	2
SCALE: 1-1/2" = 1'-0"	ROOM # ROOM NAME	
SCALE: 1" = 1'-0"	100 LOBBY/WAITING	7
SCALE: 3/4" = 1'-0"	101 INTERVIEW	7
SCALE: 12" = 1'-0"	102 TLT	7
SCALE: 1/2" = 1'-0"	103 CLERK/RECEP.	7
SCALE: 3/8" = 1'-0"	103A PRINT/COPY	7
SCALE: 1/4" = 1'-0"	104 INTERVIEW	7
SCALE: 1/8" = 1'-0"	105 CORRIDOR	7
	106 CORRIDOR	7
	107 FOSTER CARE SUPERVISION	7
	107A FOSTER CARE TLT	7
	108 FSW 10	7
	109 FSW 9	7
	110 FSW 8	7
	111 FSW 7	7
	112 FSW 6	7
	113 CORRIDOR	7
	113A MTG/TOUCH DOWN SPACE	7
	114 FOSTER CARE STORAGE	7
	115 FSW 5	7
	116 FSW 4	7
	117 FSW 3	7
	118 CORRIDOR	7
	119 STAFF TLT	7
	120 FSW 2	7
	121 FSW 1	7
	122 INTAKE WORKER	7
	123 HUMAN SERVICES AID 3	7
	124 FSW SUPERVISOR	7
	125 ADMIN MANAGER	7
	126 DIRECTOR	7
	127 BENEFITS SUPERVISOR	7
	128 MECHANICAL/ELEC. ROOM	7
	129 BENEFITS 1	7
	130 BENEFITS 2	7
	131 BENEFITS 3	7
	132 BENEFITS 4	7
	133 BENEFITS 5	7
	134 BENEFITS 6	7
	135 I.T.	7
	136A CORRIDOR	7
	136B CORRIDOR	7
	137 BREAK ROOM	7
	137C MAIL/SUPPLIES	7
	138 STAFF TLT	7
	139 TRAINING ROOM/CONFERENCE	7
	140 CORRIDOR	7
	141 BENEFITS 7	7
	142 BENEFITS 8	7
	143 BENEFITS 9	7
	144 BENEFITS 10	7
	145 CORRIDOR	7
	146 OUTDOOR AREA	7
	147 FILE STORAGE	7
	148 JAN	7
	148 SPRINKLER RISER RM	7

A1 POWER FLOOR PLAN
SCALE: 1/8" = 1'-0"



D4 ENLARGED PLAN -ROOM 135
SCALE: 1/4" = 1'-0"



- GENERAL SHEET NOTES
- 1 COORDINATE RECEPTACLE LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION.
- SHEET KEYNOTES
- 1 PROVIDE MANUFACTURER'S RECOMMENDED ELECTRICAL DISCONNECT.
- 2 MINI-SPLIT INDOOR UNIT IS POWERED BY OUTDOOR UNIT.
- 3 (2) 10 AWG AND (1) 10 AWG EGC IN 1/2" CONDUIT.
- 4 (2) 8 AWG AND (1) 10 AWG EGC IN 1/2" CONDUIT.
- 5 PROVIDE LEGRAND WIREMOLD RESOURCE RFB SERIES LARGE CAPACITY FLOOR BOX FOR POWER AND COMMUNICATIONS. 1 1/2" PVC CONDUIT FOR RECEPTACLES, (4) CAT 6A DATA CABLES, AND HDMI CABLE.
- 6 120V 30-AMP NEMA L5-30R LOCKING RECEPTACLES.
- 7 DUPLEX RECEPTACLES IN THIS ROOM SHALL BE SPLIT CIRCUIT PRE-MARKED CONTROLLED RECEPTACLES. CONNECT BOTTOM RECEPTACLE SO THAT IT IS CONTROLLED BY ROOM OCCUPANCY SENSOR AND AUTOMATICALLY TURNS OFF AFTER 20 MINUTES.

P M A
ARCHITECTURE
10325 WARWICK BOULEVARD
NEWPORT NEWS, VIRGINIA 23601
(757) 596.8200 • (757) 596.6598
WWW.PMAARCHITECTURE.COM

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NELSON COUNTY SOCIAL SERVICES
BLDG
37 TANBARK PLAZA
LOVINGSTON, VA 22949

COMMONWEALTH OF VIRGINIA
THOMAS B. SELLERS, Jr.
Lic. No. 033476
PROFESSIONAL ENGINEER
03/10/2025

#	Revision	Date
2	Addendum 2	06/09/25

DRAWN BY: DMG
CHECKED BY: TBS
PROJECT #: 22-14
DATE: 03/10/2025
SCALE: AS NOTED
SHEET NAME:
POWER FLOOR PLAN

DRAWING #:
E102

DRAWING: of

VANSANT & GUSLER, INC.
CONSULTING ENGINEERS
6330 NEWTOWN ROAD SUITE 400 NORFOLK, VA. 23502
Telephone: 757 461-6757 Fax: 757 461-6516

6/16/2025 7:12:36 AM Autodesk Docs (22-14 Nelson County Office Building) (3/2024) 22-14 Nelson County Office Building.rvt

SCALE: 3" = 1'-0"
SCALE: 1-1/2" = 1'-0"
SCALE: 1" = 1'-0"
SCALE: 3/4" = 1'-0"
SCALE: 1/2" = 1'-0"
SCALE: 3/8" = 1'-0"
SCALE: 1/4" = 1'-0"
SCALE: 1/8" = 1'-0"

LUMINAIRE SCHEDULE

MARK	DESCRIPTION	MANUFACTURER	MODEL	LIGHT ENGINE			INPUT WATTS	MOUNTING	REMARKS
				TYPE	LUMENS	VOLTAGE			
A	2 X 2 TROFFER	SLG	TL 22 25/35/45 G2 FSK EMD-DH08D-UNV-055	LED	4643	120-277V	20 W	CEILING, RECESSED/SURFACE	SURFACE MOUNT OPTION
B	2 X 2 TROFFER	SLG	TPS 22 LS45 G3 FSK EMD-PA08DUNV-060 TP-SCABLE	LED	2849	120-277V	24 W	CEILING, SUSPENDED	MOUNT 7'-6" AFF
C	LINEAR WOOD PANELS	BASO LIGHTING	PAN05-WLV-BL-PS-OP-35K-C90-UNV-010V-0550LF-ST-04FT	LED	1062	120-277V	10.4 W	CEILING, RECESSED	
D	LINEAR WOOD PANELS	BASO LIGHTING	PAN05-WLS-BL-PS-OP-35K-C90-UNV-010V-00775LF-ST-06FT	LED	2124	120-277V	20.7 W	CEILING, RECESSED	
E	PENDANT	LUX ILLUMINAIRE	EOS 2.0-P-DI BAT 375 BAT 375-CEN-C-135Y-3X3X3-B-3500K-8-2-UNV-S1-B-15C-42-WF-WC	LED	2901	120-277V	24.84 W	CEILING, SUSPENDED	MOUNT 8'-0" AFF
F	PENDANT	LUX ILLUMINAIRE	HLCN 2.0 DR2-18 D LT WH 1000-DMF-55-WH-NN-935-UNV-S1-FRC-SV-SST	LED	1000	120-277V	10 W	CEILING, SUSPENDED	MOUNT 7'-6" AFF
G	PENDANT	LUX ILLUMINAIRE	HLCN 2.0 FL2-12 D LG WH 500-DMF-55-WH-NN-935-UNV-S1-FRC-SV-SST	LED	500	120-277V	5 W	CEILING, SUSPENDED	MOUNT 7'-6" AFF
H	PENDANT	LUX ILLUMINAIRE	HLCN 2.0 FL2-18 D LG WH 1000-DMF-55-WH-NN-935-UNV-S1-FRC-SV-SST	LED	1000	120-277V	10 W	CEILING, SUSPENDED	MOUNT 7'-6" AFF
I	WALL SCONCE	RBW LIGHTING	CU-WS-AL001-35-10_TRIAC_120V	LED	657	120V	7 W	WALL, SURFACE	
J	WALL LUMINAIRE	BEGA	B24503-K35-BRZ	LED	2023	120-277V	14 W	WALL, SURFACE	
K	DOWNLIGHT	BEGA	B24416-K35-BRZ	LED	2920	120-277V	24 W	CANOPY, SURFACE	
L	BUBBLE PENDANT	HERMANMILLER	NELSON SAUCER BUBBLE PENDANT LARGE	LED	1500	120V		CEILING, SUSPENDED	MOUNT 8'-0" AFF
M	BUBBLE PENDANT	HERMANMILLER	NELSON BALL BUBBLE PENDANT MEDIUM	LED	1500	120V		CEILING, SUSPENDED	MOUNT 8'-0" AFF
N	LED FAÇADE FLOODLIGHTS	BEGA	77 155-3500K-BRZ	LED	2565	120-277V	34 W	CANOPY, SURFACE	
O	EDGE-LITE EXIT SIGN	DUAL LITE	LESWDRDNE-W	LED		120V	4 W	SURFACE, CEILING/WALL	
P	BUBBLE PENDANT	HERMANMILLER	NELSON CIGAR BUBBLE PENDANT SMALL	LED	1500	120V		CEILING, SUSPENDED	MOUNT 8'-0" AFF
Q	DOWNLIGHT	ALPHABET LIGHTING	NU4-RD-SW-15LM-35K-90-8D-NL-WH-WH-NC-UNV-DIM10-EM7	LED	990	120-277V	8W	CEILING, RECESSED	
R	LINEAR EMERGENCY EGRESS	BARRON LIGHTING	NF5-WB-10L-MWM-BR	LED		120-277V	10W	SURFACE, WALL	

PANELBOARD MDP SCHEDULE

600-AMP MCB, 208Y/120-VOLT, 3-PHASE, 4-WIRE, 18,000-AMP SCCR, SURFACE MOUNTED												
LOAD SERVED	LOAD (AMPS)			BKR RTG	CKT NO	CKT NO	BKR RTG	LOAD (AMPS)			LOAD SERVED	
	A	B	C					A	B	C		
PANELBOARD A	102			225	1	2	225	184			PANELBOARD B	
		134							180			
			116							197		
RTU-1	108			125	7	8	100	15			PANELBOARD C	
		108							9			
			108							9		
	0				13	14		0				
		0			15	16			0			
			0		17	18				0		
	0				19	20		0				
		0			21	22			0			
			0		23	24				0		
	0				25	26		0				
		0			27	28			0			
			0		29	30				0		
	0				31	32		0				
		0			33	34			0			
			0		35	36				0		
	0				37	38		0				
		0			39	40			0			
			0		41	42				0		
TOTAL	210	242	224					199	189	206	TOTAL	
TOTAL CONNECTED AMPS A:409 B:430.5 C:429.5												

PANELBOARD C SCHEDULE

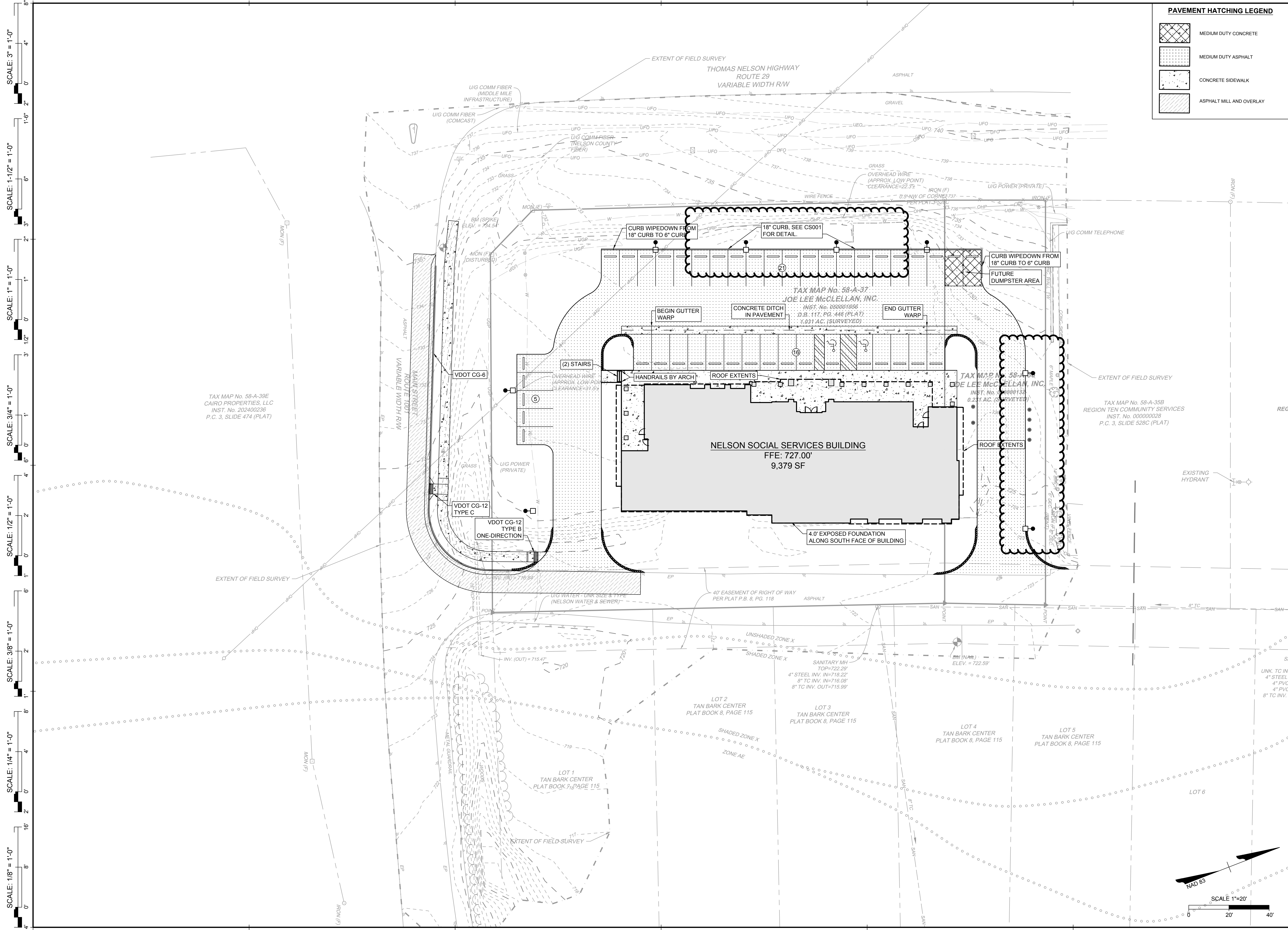
100-AMP MLO, 208Y/120-VOLT, 3-PHASE, 4-WIRE, 10,000-AMP SCCR, SURFACE MOUNTED												
LOAD SERVED	LOAD (AMPS)			BKR RTG	CKT NO	CKT NO	BKR RTG	LOAD (AMPS)			LOAD SERVED	
	A	B	C					A	B	C		
QUAD RECEPTACLE - IT RM 135	3			20	1	2	20	3			QUAD RECEPTACLE - IT RM 135	
QUAD RECEPTACLE - IT RM 135		3		20	3	4	20		3		QUAD RECEPTACLE - IT RM 135	
QUAD RECEPTACLE - IT RM 135			3	20	5	6	20			3	QUAD RECEPTACLE - IT RM 135	
QUAD RECEPTACLE - IT RM 135	3			20	7	8	20	3			QUAD RECEPTACLE - IT RM 135	
CLG RECEPTACLE - IT RM 135		2		30	9	10	30		2		CLG RECEPTACLE - IT RM 135	
CLG RECEPTACLE - IT RM 135			2	30	11	12	30			2	CLG RECEPTACLE - IT RM 135	
CLG RECEPTACLE - IT RM 135	2			30	13	14	30	2			CLG RECEPTACLE - IT RM 135	
SPACE		0			15	16			0		SPACE	
SPACE			0		17	18				0	SPACE	
SPACE	0				19	20		0			SPACE	
SPACE		0			21	22			0		SPACE	
SPACE			0		23	24				0	SPACE	
SPACE	0				25	26		0			SPACE	
SPACE		0			27	28			0		SPACE	
SPACE			0		29	30				0	SPACE	
SPACE	0				31	32		0			SPACE	
SPACE		0			33	34			0		SPACE	
SPACE			0		35	36				0	SPACE	
SPACE	0				37	38		0			SPACE	
SPACE		0			39	40			0		SPACE	
SPACE			0		41	42				0	SPACE	
TOTAL	8	5	5					8	5	5	TOTAL	
TOTAL CONNECTED AMPS A:15 B:9 C:9												

PANELBOARD A SCHEDULE

225-AMP MLO, 208Y/120-VOLT, 3-PHASE, 4-WIRE, 18,000-AMP SCCR, SURFACE MOUNTED												
LOAD SERVED	LOAD (AMPS)			BKR RTG	CKT NO	CKT NO	BKR RTG	LOAD (AMPS)			LOAD SERVED	
	A	B	C					A	B	C		
RECEPT RM 100, 103	11			20	1	2	20	8			RECEPT RM 100 WATER DISPENSER	
RECEPT RM 108, 109		15		20	3	4	20		15		RECEPT RM 110, 111	
RECEPT RM 105, 106, 113, 113A, 118			11	20	5	6	20			15	RECEPT RM 143, 144	
RECEPT RM 117 & 120	15			20	7	8	20	15			RECEPT RM 121 & 122	
RECEPT RM 107, 107A, 119, 114		11		20	9	10	20		15		RECEPT RM 115 & 116	
RECEPT RM 127 & 129			20	20	11	12	20			20	RECEPT RM 125, 126	
RECEPT RM 112	8			20	13	14	20	0			RECEPT RM 137 DISHWASHER	
RECEPT RM 123 & 124		17		20	15	16	20		15		RECEPT RM 130 & 131	
RECEPT RM 136-137C, 140			9	20	17	18	20			15	RECEPT RM 132 & 133	
RECEPT RM 135	8			20	19	20	20	8			RECEPT RM 137 REF	
RECEPT RM 103A, 104		9		20	21	22	20		12		RECEPT RM 139, FLOOR BOX	
RECEPT RM 101, 102, 147			9	20	23	24	20			11	RECEPT RM 137	
RECEPT RM 139	13			20	25	26	20	8			RECEPT RM 128, 138, 146	
RECEPT RM 141 & 142		15		20	27	28	20		11		RECEPT RM 134	
EXTERIOR RECEPT- FRONT CANOPY			5	20	29	30	20			3	EXTERIOR RECEPT- EAST CANOPY	
PRINTER RM 103A	10			20	31	32	20	0			RECEPT - ROOF TOP	
SPARE		0		20	33	34	20		0		SPARE	
SPARE			0	20	35	36	20			0	SPARE	
SPARE	0			20	37	38	20	0			SPARE	
SPARE		0		20	39	40	20		0		SPARE	
SPARE			0	20	41	42	20			0	SPARE	
TOTAL	64	66	53					39	68	63	TOTAL	
TOTAL CONNECTED AMPS A:102 B:133.5 C:115.5												

PANELBOARD B SCHEDULE

225-AMP MLO, 208Y/120-VOLT, 3-PHASE, 4-WIRE, 18,000-AMP SCCR, SURFACE MOUNTED												
LOAD SERVED	LOAD (AMPS)			BKR RTG	CKT NO	CKT NO	BKR RTG	LOAD (AMPS)			LOAD SERVED	
	A	B	C					A	B	C		
SPARE				20	1	2	20				SPARE	
EF-1			1	15	5	6	15			5	EF-2	
VAV-1	21			30	7	8	20	14			VAV-7	
VAV-2		21							14			
			20	30	11	12	20			12	VAV-3	
	20							12				
VAV-4		17		25	15	16	20		14		VAV-5	
			17							14		
CLEAN AGENT CONTROL UNIT	1			20	19	20	20	13			WH-1	
LTG RM 100,105-106, 113-113A, 118		7		20	21	22	20		4		LTG RM 101-104, 107,107A, 114, 119, 147	
LTG RM 108-112, 115-117, 120-123, 148			5	20	23	24	20			4	FIRE ALARM CONTROL UNIT	
LTG RM 124 -127, 129-135	6			20	25	26	20	3			LTG RM 136-136B, 145	
LTG RM 137-139, 141-144		6		20	27	28	20		1		EXTERIOR LIGHTING	
VAV-6			15	25	29	30	35			23	VAV-8	
	15							23				
VAV-9		17		25	33	34	20		14		VAV-10	
			17							14		
VAV-11	20			30	37	38	25	18			VAV-12	
		20							18			
VAV-13			18	25	41	42	15			5	EF-3	
	18					44	20	1			VAV-14	
EUH-1		16		20	45	46	20		12		MS/OU-1	
			16							12		
SPARE	0			20	49	50	20	0			SPARE	
SPARE		0		20	51	52	20		0		SPARE	
SPARE			0	20	53	54	20			0	SPARE	
TOTAL	101	104	109	TOTAL CONNECTED AMPS			A:185 B:181 C:198	84	77	89	TOTAL	



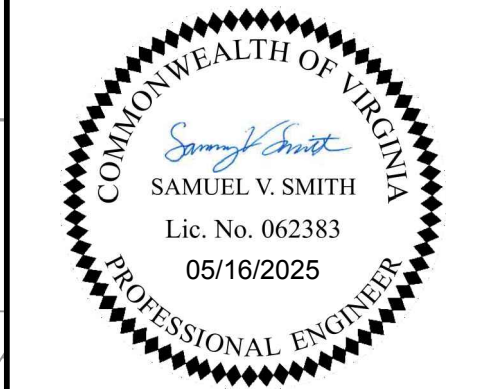
PAVEMENT HATCHING LEGEND	
	MEDIUM DUTY CONCRETE
	MEDIUM DUTY ASPHALT
	CONCRETE SIDEWALK
	ASPHALT MILL AND OVERLAY

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NELSON COUNTY SOCIAL SERVICES BUILDING
CALOCHILL DRIVE
LOVINSTON, VA 22549



#	Revision	Date
1	1ST SITE PLAN	12/18/24
2	2ND SITE PLAN	03/18/25
3	3RD SITE PLAN	04/21/25
4	4TH SITE PLAN	05/08/25
5	SITE PLAN	05/16/25
6	ADDENDUM 2	06/12/25

DRAWN BY: NPH
CHECKED BY: SVS
PROJECT #: 22-14
DATE: 05-16-2025
SCALE: AS NOTED
SHEET NAME:

SITE LAYOUT

DRAWING #: **CS101**
DRAWING: of 1

NELSON COUNTY SOCIAL
SERVICES BUILDING

CALLOHILL DRIVE
LOVINSTON, VA 22549



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6	ADDENDUM 2	06/12/25

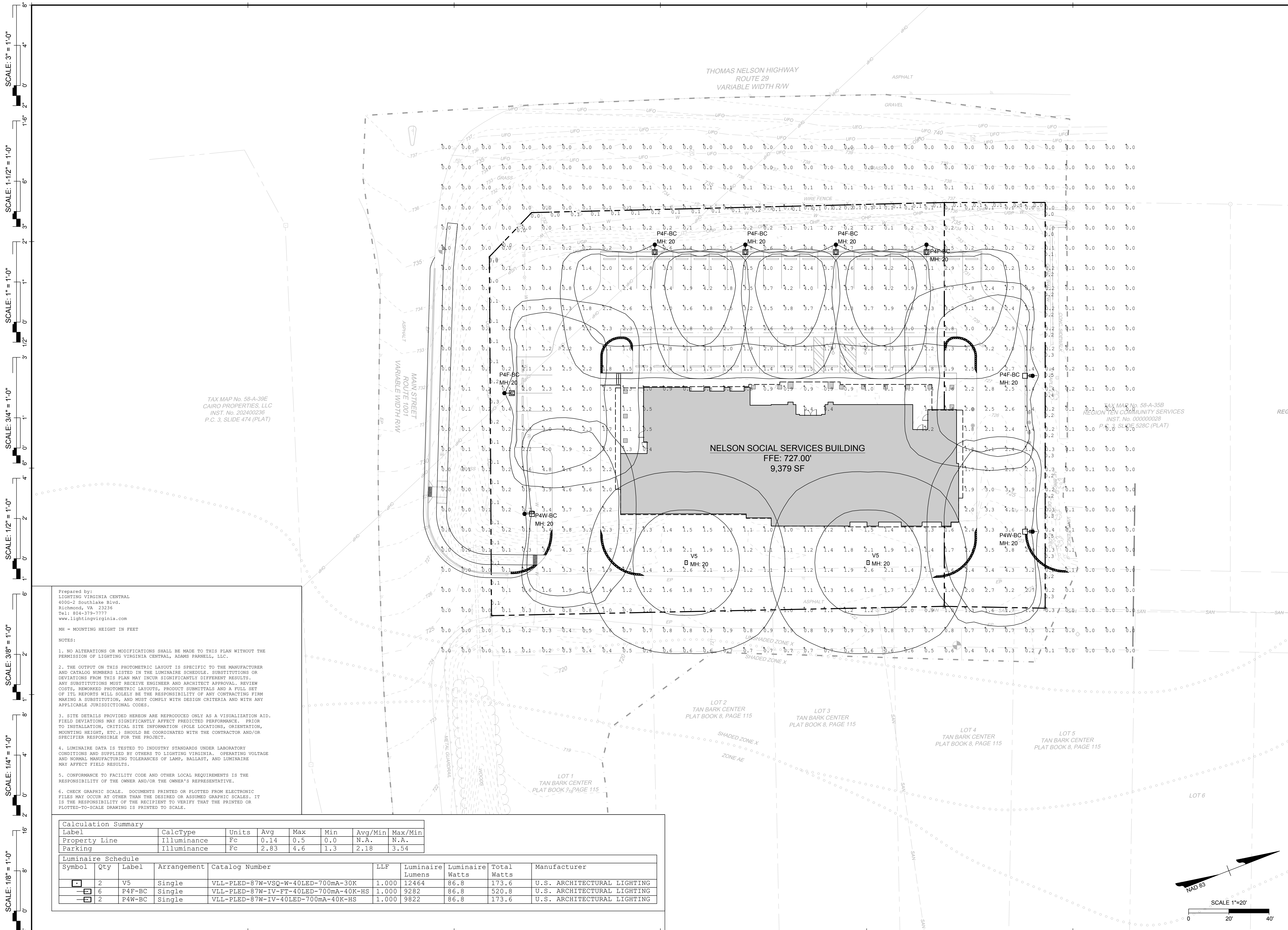
DRAWN BY: MJR
CHECKED BY: MJR
PROJECT #: 22-14
DATE: 05-16-2025
SCALE: AS NOTED
SHEET NAME:

SITE LIGHTING
AND
PHOTOMETRIC
PLAN

DRAWING #:

LT101

DRAWING: of 1



SECTION 22 1116 - DOMESTIC WATER PIPING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. PEX tube and fittings - domestic water.
2. Piping joining materials - domestic water.
3. Transition fittings - domestic water.

B. Related Requirements:

1. Section 33 1415 "Site Water Distribution Piping" for water-service piping outside the building from source to the point where water-service piping enters the building.

1.2 ACTION SUBMITTALS

A. Product data.

1.3 INFORMATIONAL SUBMITTALS

- A. System purging and disinfecting activities report.
- B. Field quality-control reports.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Installers of pressure-sealed joints are to be certified by pressure-seal joint manufacturer as having been trained and qualified to join piping with pressure-seal pipe couplings and fittings.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Domestic water piping, tubing, fittings, joints, and appurtenances intended to convey or dispense water for human consumption are to comply with the U.S. Safe Drinking Water Act, with requirements of authorities having jurisdiction, and with NSF 61 and NSF 372, or be certified in compliance with NSF 61 and NSF 372 by an ANSI-accredited third-party certification body, in that the weighted average lead content at wetted surfaces is less than or equal to 0.25 percent.

2.2 PIPING MATERIALS

- A. Potable-water piping and components are to comply with NSF 14, NSF 61, and NSF 372. Include marking "NSF-pw" on piping.

2.3 PEX TUBE AND FITTINGS - DOMESTIC WATER

- A. PEXa Tube - Domestic Water:
 - 1. Tube Material: PEX plastic in accordance with ASTM F876 and ASTM F877.
- B. PEXa Tube Fittings - Domestic Water:
 - 1. Fittings: ASTM F1960, cold expansion fittings and reinforcing rings. Provide PEX rings and fittings from same manufacturer as tube to ensure warranty.
 - 2. Push-Fit Fittings: ASSE 1061, push-fit fittings.
- C. Manifold: Multiple-outlet, plastic or corrosion-resistant-metal assembly complying with ASTM F876; with plastic or corrosion-resistant-metal valve for each outlet.

2.4 PIPING JOINING MATERIALS - DOMESTIC WATER

- A. Plastic, Pipe-Flange Gaskets, Bolts, and Nuts: Type and material recommended by piping system manufacturer unless otherwise indicated.

2.5 TRANSITION FITTINGS - DOMESTIC WATER

- A. General Requirements:
 - 1. Same size as pipes to be joined.
 - 2. Pressure rating at least equal to pipes to be joined.
 - 3. End connections compatible with pipes to be joined.
- B. Fitting-Type Transition Couplings: Manufactured piping coupling or specified piping system fitting.
- C. Sleeve-Type Transition Couplings - Domestic Water: AWWA C219.

PART 3 - EXECUTION

3.1 PIPING APPLICATIONS

- A. Transition and special fittings with pressure ratings at least equal to piping rating may be used in applications below unless otherwise indicated.
- B. Flanges and unions may be used for aboveground piping joints unless otherwise indicated.

- C. Under-building-slab, domestic water, building-service piping, NPS 2 and smaller is to be the following:
 - 1. PEXa; with 12 month UV rating; and cold expansion fittings.
- D. Aboveground domestic water piping, NPS 2 (DN 50) and smaller is to be the following:
 - 1. PEXa tube, NPS 1-1/2 and smaller.
 - a. Fittings for PEX tube:
 - 1) ASTM F1960, cold expansion fittings and reinforcing rings.
 - 2) ASSE 1061, push-fit fittings.

3.2 EARTHWORK

- A. Comply with requirements in Section 31 2000 "Earth Moving" for excavating, trenching, and backfilling.

3.3 INSTALLATION OF PIPING

- A. Drawing plans, schematics, and diagrams indicate general location and arrangement of domestic water piping. Indicated locations and arrangements are used to size pipe and calculate friction loss, expansion, and other design considerations. Install piping as indicated unless deviations to layout are approved on coordination drawings.
- B. Use an installer with demonstrated experience on projects of similar size and complexity and who has been trained by manufacturer or manufacturer's representative.
- C. Install valves in accordance with Section 22 0523 "General-Duty Valves for Plumbing Piping."
- D. Install domestic water piping level without pitch and plumb.
- E. Install piping concealed from view and protected from physical contact by building occupants unless otherwise indicated and except in equipment rooms and service areas.
- F. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise.
- G. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal, and coordinate with other services occupying that space.
- H. Install piping to permit valve servicing.
- I. Install nipples, unions, special fittings, and valves with pressure ratings the same as or higher than the system pressure rating used in applications below unless otherwise indicated.
- J. Install piping free of sags and bends.

- K. Install fittings for changes in direction and branch connections.
- L. Install PEX tube with loop at each change of direction of more than 90 degrees.
- M. Install pressure gauges on suction and discharge piping for each plumbing pump. Comply with requirements for pressure gauges in Section 22 0500 "Common Work Results for Plumbing."
- N. Install thermostats in hot-water circulation piping. Comply with requirements for thermostats in Section 22 1123.21 "Inline, Domestic Water Pumps."
- O. Install thermometers on inlet and outlet piping from each water heater. Comply with requirements for thermometers in Section 22 0500 "Common Work Results for Plumbing."
- P. Install sleeves for piping penetrations of walls, ceilings, and floors. Comply with requirements for sleeves specified in Section 22 0500 "Common Work Results for Plumbing."
- Q. Install sleeve seals for piping penetrations of concrete walls and slabs. Comply with requirements for sleeve seals specified in Section 22 0500 "Common Work Results for Plumbing."
- R. Install escutcheons for piping penetrations of walls, ceilings, and floors. Comply with requirements for escutcheons specified in Section 22 0500 "Common Work Results for Plumbing."

3.4 JOINT CONSTRUCTION

- A. Remove scale, slag, dirt, and debris from inside and outside of pipes, tubes, and fittings before assembly.
- B. Threaded Joints: Thread pipe with tapered pipe threads in accordance with ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:
 - 1. Apply appropriate tape or thread compound to external pipe threads.
 - 2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged.
- C. Joint Construction for Solvent-Cemented Plastic Piping: Clean and dry joining surfaces. Join pipe and fittings in accordance with the following:
 - 1. Comply with ASTM F402 for safe-handling practice of cleaners, primers, and solvent cements. Apply primer.
 - 2. PVC Piping: Join in accordance with ASTM D2855.
- D. Joints for PEX Tubing, ASTM: Join in accordance with ASTM F1807 for metal insert and copper crimp ring fittings and ASTM F1960 for cold expansion fittings and reinforcing rings.
- E. Joints for PEX Tubing, ASSE: Join in accordance with ASSE 1061 for push-fit fittings.

3.5 INSTALLATION OF TRANSITION FITTINGS

- A. Install transition couplings at joints of dissimilar piping.
- B. Transition Fittings in Underground Domestic Water Piping:
 - 1. Fittings for NPS 1-1/2 (DN 40) and Smaller: Fitting-type coupling.
 - 2. Fittings for NPS 2 (DN 50) and Larger: Sleeve-type coupling.
- C. Transition Fittings in Aboveground Domestic Water Piping NPS 2 (DN 50) and Smaller: Plastic-to-metal transition unions.

3.6 INSTALLATION OF HANGERS AND SUPPORTS

- A. Comply with requirements for hangers, supports, and anchor devices in Section 22 0529 "Hangers and Supports for Plumbing Piping and Equipment."
- B. Install vinyl-coated hangers for PVC pipe, with maximum horizontal spacing and minimum rod diameters, to comply with manufacturer's written instructions, locally enforced codes, and authorities having jurisdiction requirements, whichever are most stringent.
- C. Install vinyl-coated hangers for PEX tube, with maximum horizontal spacing and minimum rod diameters, to comply with manufacturer's written instructions, locally enforced codes, and authorities having jurisdiction requirements, whichever are most stringent.
- D. Support horizontal piping within 12 inches of each fitting.
- E. Support vertical runs of PVC pipe to comply with manufacturer's written instructions, locally enforced codes, and authorities having jurisdiction requirements, whichever are most stringent.
- F. Support vertical runs of PEX tube to comply with manufacturer's written instructions, locally enforced codes, and authorities having jurisdiction requirements, whichever are most stringent.

3.7 PIPING CONNECTIONS

- A. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. When installing piping adjacent to equipment and machines, allow space for service and maintenance.
- C. Connect domestic water piping to exterior water-service piping. Use transition fitting to join dissimilar piping materials.
- D. Connect domestic water piping to water-service piping with shutoff valve; extend and connect to the following:
 - 1. Water Heaters: Cold-water inlet and hot-water outlet piping in sizes indicated, but not smaller than sizes of water heater connections.
 - 2. Plumbing Fixtures: Cold- and hot-water-supply piping in sizes indicated, but not smaller than that required by plumbing code.

3. Equipment: Cold- and hot-water-supply piping as indicated, but not smaller than equipment connections. Provide shutoff valve and union for each connection. Use flanges instead of unions for NPS 2-1/2 and larger.

3.8 IDENTIFICATION

- A. Identify system components. Comply with requirements for identification materials and installation in Section 22 0553 "Identification for Plumbing Piping and Equipment."

3.9 CLEANING

- A. Clean and disinfect potable domestic water piping as follows:
 1. Purge new piping and parts of existing piping that have been altered, extended, or repaired before using.
 2. Use purging and disinfecting procedures prescribed by authorities having jurisdiction; if methods are not prescribed, use procedures described in either AWWA C651 or AWWA C652 or follow procedures described below:
 - a. Flush piping system with clean, potable water until dirty water does not appear at outlets.
 - b. Fill and isolate system in accordance with either of the following:
 - 1) Fill system or part thereof with water/chlorine solution with at least 50 ppm of chlorine. Isolate with valves and allow to stand for 24 hours.
 - 2) Fill system or part thereof with water/chlorine solution with at least 200 ppm of chlorine. Isolate and allow to stand for three hours.
 - c. Flush system with clean, potable water until no chlorine is in water coming from system after the standing time.
 - d. Repeat procedures if biological examination shows contamination.
 - e. Submit water samples in sterile bottles to authorities having jurisdiction.
- B. Prepare and submit reports of purging and disinfecting activities. Include copies of water-sample approvals from authorities having jurisdiction.
- C. Clean interior of domestic water piping system. Remove dirt and debris as work progresses.

3.10 ADJUSTING

- A. Perform the following adjustments before operation:
 1. Close drain valves, hydrants, and hose bibbs.
 2. Open shutoff valves to fully open position.
 3. Open throttling valves to proper setting.
 4. Adjust balancing valves in hot-water-circulation return piping to provide adequate flow.

- a. Manually adjust ball-type balancing valves in hot-water-circulation return piping to provide hot-water flow in each branch.
 - b. Adjust calibrated balancing valves to flows indicated.
5. Remove plugs used during testing of piping and for temporary sealing of piping during installation.
6. Remove and clean strainer screens. Close drain valves and replace drain plugs.
7. Remove filter cartridges from housings and verify that cartridges are as specified for application where used and are clean and ready for use.
8. Check plumbing specialties and verify proper settings, adjustments, and operation.

3.11 FIELD QUALITY CONTROL

A. Tests and Inspections:

1. Piping Inspections:

- a. Do not enclose, cover, or put piping into operation until it has been inspected and approved by authorities having jurisdiction.
- b. During installation, notify authorities having jurisdiction at least one day before inspection must be made. Perform tests specified below in presence of authorities having jurisdiction:
 - 1) Roughing-in Inspection: Arrange for inspection of piping before concealing or closing in after installation and before setting fixtures.
 - 2) Final Inspection: Arrange for authorities having jurisdiction to observe tests specified in "Piping Tests" Subparagraph and to ensure compliance with requirements.
- c. Reinspection: If authorities having jurisdiction find that piping will not pass tests or inspections, make required corrections and arrange for reinspection.
- d. Reports: Prepare inspection reports and have them signed by authorities having jurisdiction.

2. Piping Tests:

- a. Fill domestic water piping. Check components to determine that they are not air bound and that piping is full of water.
- b. Test for leaks and defects in new piping and parts of existing piping that have been altered, extended, or repaired. If testing is performed in segments, submit a separate report for each test, complete with diagram of portion of piping tested.
- c. Leave new, altered, extended, or replaced domestic water piping uncovered and unconcealed until it has been tested and approved. Expose work that was covered or concealed before it was tested.
- d. Cap and subject piping to static water pressure of 50 psig above operating pressure, without exceeding pressure rating of piping system materials. Isolate test source and allow it to stand for four hours. Leaks and loss in test pressure constitute defects that must be repaired.
- e. Repair leaks and defects with new materials, and retest piping or portion thereof until satisfactory results are obtained.

- f. Prepare reports for tests and for corrective action required.
- B. Domestic water piping will be considered defective if it does not pass tests and inspections.
- C. Prepare test and inspection reports.

END OF SECTION 22 1116

SECTION 22 1123.21 - INLINE, DOMESTIC-WATER PUMPS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Horizontally mounted, in-line, close-coupled centrifugal pumps.

1.2 ACTION SUBMITTALS

A. Product data.

1.3 INFORMATIONAL SUBMITTALS

A. Field quality-control reports.

1.4 CLOSEOUT SUBMITTALS

A. Operation and maintenance data.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. UL Compliance: UL 778 for motor-operated water pumps.
- C. Drinking Water System Components - Health Effects and Drinking Water System Components - Lead Content Compliance: NSF 61 and NSF 372.

2.2 HORIZONTALLY MOUNTED, IN-LINE, CLOSE-COUPLED CENTRIFUGAL PUMPS

- A. Description: Factory-assembled and -tested, in-line, single-stage, close-coupled, overhung-impeller centrifugal pumps designed for installation with pump and motor shaft mounted horizontal. See RP-1 in Plumbing Equipment Schedule on contract drawings for additional details.
- B. Capacities and Characteristics:

1. Capacity: 2 gpm.
2. Total Dynamic Head: 10 feet.
3. Inlet and Outlet Size: 3/4" NPS.
4. Pump Control: Thermostat.

2.3 MOTORS

- A. Comply with NEMA designation, temperature rating, service factor, enclosure type, and efficiency requirements for motors specified in Section 22 0500 "Common Work Results for Plumbing."
 1. Motor Sizes: Minimum size as indicated. If not indicated, large enough so driven load will not require motor to operate in service factor range above 1.0.

2.4 CONTROLS

- A. Thermostats: Electric; adjustable for control of hot-water circulation pump.
 1. Type: Water-immersion temperature sensor, for installation in piping.
 2. Range: 65 to 200 deg F.
 3. Enclosure: NEMA 250.
 4. Operation of Pump: On or off.
 5. Transformer: Provide if required.
 6. Power Requirement: 120 V ac.
 7. Settings: Start pump at 115 deg F and stop pump at 120 deg F.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Comply with HI 1.4.
- B. Mount pumps in orientation complying with manufacturer's written instructions.
- C. Install continuous-thread hanger rods and vibration isolation of size required to support pump weight.
 1. Comply with requirements for hangers and supports specified in Section 22 0529 "Hangers and Supports for Plumbing Piping and Equipment."
- D. Install thermostats in hot-water return piping.
- E. Identify system components. Comply with requirements for identification specified in Section 22 0553 "Identification for Plumbing Piping and Equipment" for identification of pumps.
- F. Perform startup service.

1. Complete installation and startup checks according to manufacturer's written instructions.
2. Check piping connections for tightness.
3. Clean strainers on suction piping.
4. Set thermostats for automatic starting and stopping operation of pumps.
5. Perform the following startup checks for each pump before starting:
 - a. Verify bearing lubrication.
 - b. Verify that pump is free to rotate by hand and that pump for handling hot liquid is free to rotate with pump hot and cold. If pump is bound or drags, do not operate until cause of trouble is determined and corrected.
 - c. Verify that pump is rotating in the correct direction.
6. Prime pump by opening suction valves and closing drains, and prepare pump for operation.
7. Start motor.
8. Open discharge valve slowly.
9. Adjust temperature settings on thermostats.
10. Adjust timer settings.

3.2 PIPING CONNECTIONS

- A. Comply with requirements for piping specified in Section 22 1116 "Domestic Water Piping." Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Where installing piping adjacent to inline, domestic-water pumps, allow space for service and maintenance.
- C. Connect domestic-water piping to pumps. Install suction and discharge piping equal to or greater than size of pump nozzles.
 1. Install flexible connectors adjacent to pumps in suction and discharge piping of the following pumps:
 - a. Horizontally mounted, in-line, close-coupled centrifugal pumps.
 - b. Comply with requirements for flexible connectors specified in Section 22 1116 "Domestic Water Piping."
- D. Install shutoff valve and strainer on suction side of each pump, and check, shutoff, and throttling valves on discharge side of each pump. Install valves same size as connected piping. Comply with requirements for strainers specified in Section 22 1119 "Domestic Water Piping Specialties." Comply with requirements for valves specified in Section 22 0523 "General-Duty Valves for Plumbing Piping."
 1. Install pressure gauge at suction of each pump and pressure gauge at discharge of each pump. Install at integral pressure-gauge tapings where provided or install pressure-gauge connectors in suction and discharge piping around pumps. Comply with requirements for pressure gauges and snubbers specified in Section 22 0500 "Common Work Results for Plumbing."

3.3 CONTROL CONNECTIONS

- A. Install control and electrical power wiring to field-mounted control devices.
- B. Connect control wiring between temperature controllers and devices.

3.4 FIELD QUALITY CONTROL

- A. Testing Agency:
 - 1. Engage a qualified testing agency to perform tests and inspections.
- B. Perform tests and inspections.
- C. Tests and Inspections:
 - 1. Leak Test: After installation, charge system and test for leaks. Repair leaks and retest until no leaks exist.
 - 2. Operational Test: After electrical circuitry has been energized, start units to confirm proper motor rotation and unit operation.
 - 3. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- D. Inline, domestic-water pump will be considered defective if it does not pass tests and inspections.
- E. Prepare test and inspection reports.

3.5 ADJUSTING

- A. Adjust inline, domestic-water pumps to function smoothly, and lubricate as recommended by manufacturer.
- B. Adjust initial temperature set points.
- C. Set field-adjustable switches and circuit-breaker trip ranges as indicated.

END OF SECTION 22 1123.21

SECTION 221316 - SANITARY WASTE AND VENT PIPING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. PVC pipe and fittings.
2. Specialty pipe fittings.

B. Related Requirements:

1. Section 22 1313 "Facility Sanitary Sewers" for sanitary sewerage piping and structures outside the building.

1.2 ACTION SUBMITTALS

A. Product data.

1.3 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: Plans and elevations, or Building Information Model (BIM) drawn to scale, showing items described in this Section and coordinated with all building trades.
- B. Field quality-control reports.

1.4 WARRANTY

- A. Listed manufacturers to provide labeling and warranty of their respective products.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Components and installation can withstand the following minimum working pressure unless otherwise indicated:
1. Soil, Waste, and Vent Piping: 10 ft. head of water.

2.2 PIPING MATERIALS

- A. Piping materials to bear label, stamp, or other markings of specified testing agency.
- B. Comply with requirements in "Piping Schedule" Article for applications of pipe, tube, fitting materials, and joining methods for specific services, service locations, and pipe sizes.

2.3 PVC PIPE AND FITTINGS

- A. Comply with NSF 14 for plastic piping components. Include "NSF-dwv" marking for plastic drain, waste, and vent piping and "NSF-sewer" marking for plastic sewer piping.
- B. Solid-Wall PVC Pipe: ASTM D2665 drain, waste, and vent.
- C. PVC Socket Fittings: ASTM D2665, made in accordance with ASTM D3311, drain, waste, and vent patterns and to fit Schedule 40 pipe.
- D. Adhesive Primer: ASTM F656.
- E. Solvent Cement: ASTM D2564.

2.4 SPECIALTY PIPE FITTINGS

- A. Transition Couplings:
 - 1. General Requirements: Fitting or device for joining piping with small differences in ODs or of different materials. Include end connections of same size as and compatible with pipes to be joined.
 - 2. Shielded, Nonpressure Transition Couplings:
 - a. Standard: ASTM C1460.
 - b. Description: Elastomeric or rubber sleeve with full-length, corrosion-resistant outer shield and corrosion-resistant-metal tension band and tightening mechanism on each end.
 - c. End Connections: Same size as and compatible with pipes to be joined.

PART 3 - EXECUTION

3.1 EARTH MOVING

- A. Comply with requirements for excavating, trenching, and backfilling specified in Section 31 2000 "Earth Moving."

3.2 INSTALLATION OF PIPING

- A. Drawing plans, schematics, and diagrams indicate general location and arrangement of piping systems.
 - 1. Indicated locations and arrangements were used to size pipe and calculate friction loss, expansion, pump sizing, and other design considerations.
 - 2. Install piping as indicated unless deviations to layout are approved on coordination drawings.
- B. Install piping in concealed locations unless otherwise indicated and except in equipment rooms and service areas.
- C. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise.
- D. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal.
- E. Install piping to permit valve servicing.
- F. Install piping at indicated slopes.
- G. Install piping free of sags and bends.
- H. Install fittings for changes in direction and branch connections.
- I. Install piping to allow application of insulation.
- J. Make changes in direction for soil and waste drainage and vent piping using appropriate branches, bends, and long-sweep bends.
 - 1. Sanitary tees and short-sweep 1/4 bends may be used on vertical stacks if change in direction of flow is from horizontal to vertical.
 - 2. Use long-turn, double Y-branch, and 1/8-bend fittings if two fixtures are installed back to back or side by side with common drain pipe.
 - a. Straight tees, elbows, and crosses may be used on vent lines.
 - 3. Do not change direction of flow more than 90 degrees.
 - 4. Use proper size of standard increasers and reducers if pipes of different sizes are connected.
 - a. Reducing size of waste piping in direction of flow is prohibited.
- K. Lay buried building waste piping beginning at low point of each system.
 - 1. Install true to grades and alignment indicated, with unbroken continuity of invert. Place hub ends of piping upstream.

2. Install required gaskets according to manufacturer's written instructions for use of lubricants, cements, and other installation requirements.
 3. Maintain swab in piping and pull past each joint as completed.
- L. Install soil and waste and vent piping at the following minimum slopes unless otherwise indicated:
1. Building Sanitary Waste: Two percent downward in direction of flow for piping NPS 3 and smaller; 1 percent downward in direction of flow for piping NPS 4 and larger.
 2. Horizontal Sanitary Waste Piping: Two percent downward in direction of flow.
 3. Vent Piping: One percent down toward vertical fixture vent or toward vent stack.
- M. Install aboveground PVC piping in accordance with ASTM D2665.
- N. Install underground PVC piping in accordance with ASTM D2321.
- O. Plumbing Specialties:
1. Install cleanouts at grade and extend to where building sanitary drains connect to building sanitary sewers in sanitary waste gravity-flow piping.
 - a. Install cleanout fitting with closure plug inside the building in sanitary drainage force-main piping.
 - b. Comply with requirements for cleanouts specified in Section 22 1319 "Sanitary Waste Piping Specialties."
 2. Install drains in sanitary waste gravity-flow piping.
 - a. Comply with requirements for drains specified in Section 22 1319 "Sanitary Waste Piping Specialties."
- P. Do not enclose, cover, or put piping into operation until it is inspected and approved by authorities having jurisdiction.
- Q. Install sleeves for piping penetrations of walls, ceilings, and floors.
1. Comply with requirements for sleeves specified in Section 22 0500 "Common Work Results for Plumbing."
- R. Install sleeve seals for piping penetrations of concrete walls and slabs.
1. Comply with requirements for sleeve seals specified in Section 22 0500 "Common Work Results for Plumbing."
- S. Install escutcheons for piping penetrations of walls, ceilings, and floors.
1. Comply with requirements for escutcheons specified in Section 22 0500 "Common Work Results for Plumbing."

3.3 JOINT CONSTRUCTION

- A. Plastic, Nonpressure-Piping, Solvent-Cement Joints: Clean and dry joining surfaces. Join pipe and fittings in accordance with the following:
 - 1. Comply with ASTM F402 for safe-handling practice of cleaners, primers, and solvent cements.
 - 2. ABS Piping: Join in accordance with ASTM D2235 and ASTM D2661 appendixes.
 - 3. PVC Piping: Join in accordance with ASTM D2855 and ASTM D2665 appendixes.
- B. Joint Restraints and Sway Bracing:
 - 1. Provide joint restraints and sway bracing for storm drainage piping joints to comply with the following conditions:
 - a. Provide axial restraint for pipe and fittings 5 inches and larger, upstream and downstream of all changes in direction, branches, and changes in diameter greater than two pipe sizes.
 - b. Provide rigid sway bracing for pipe and fittings 4 inches and larger, upstream and downstream of all changes in direction 45 degrees and greater.
 - c. Provide rigid sway bracing for pipe and fittings 5 inches and larger, upstream and downstream of all changes in direction and branch openings.

3.4 INSTALLATION OF SPECIALTY PIPE FITTING

- A. Transition Couplings:
 - 1. Install transition couplings at joints of piping with small differences in ODs.
 - 2. In Waste Drainage Piping: Unshielded, nonpressure transition couplings.

3.5 INSTALLATION OF HANGERS AND SUPPORTS

- A. Comply with requirements for pipe hanger and support devices and installation specified in Section 22 0529 "Hangers and Supports for Plumbing Piping and Equipment".
 - 1. Install stainless steel pipe hangers for horizontal piping in corrosive environments.
 - 2. Install stainless steel pipe support clamps for vertical piping in corrosive environments.
 - 3. Vertical Piping: MSS Type 8 or Type 42 clamps.
 - 4. Install individual, straight, horizontal piping runs:
 - a. 100 Ft. (30 m) and Less: MSS Type 1, adjustable, steel clevis hangers.
 - b. Longer Than 100 Ft. (30 m): MSS Type 43, adjustable roller hangers.
 - c. Longer Than 100 Ft. (30 m) if Indicated: MSS Type 49, spring cushion rolls.
 - 5. Multiple, Straight, Horizontal Piping Runs 100 Ft. (30 m) or Longer: MSS Type 44 pipe rolls. Support pipe rolls on trapeze.
 - 6. Base of Vertical Piping: MSS Type 52 spring hangers.

- B. Install hangers for PVC piping, with maximum horizontal spacing and minimum rod diameters, to comply with manufacturer's written instructions, locally enforced codes, and authorities having jurisdiction requirements, whichever are most stringent.
- C. Support horizontal piping and tubing within 12 inches of each fitting and coupling.
- D. Support vertical runs of cast-iron soil piping to comply with MSS SP-58, locally enforced codes, and authorities having jurisdiction requirements, whichever are most stringent.
- E. Support vertical runs of PVC piping to comply with manufacturer's written instructions, locally enforced codes, and authorities having jurisdiction requirements, whichever are most stringent.

3.6 CONNECTIONS

- A. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Connect soil and waste piping to exterior sanitary sewerage piping. Use transition fitting to join dissimilar piping materials.
- C. Connect waste and vent piping to the following:
 - 1. Plumbing Fixtures: Connect waste piping in sizes indicated, but not smaller than required by plumbing code.
 - 2. Plumbing Fixtures and Equipment: Connect atmospheric vent piping in sizes indicated, but not smaller than required by authorities having jurisdiction.
 - 3. Plumbing Specialties: Connect waste and vent piping in sizes indicated, but not smaller than required by plumbing code.
 - 4. Install test tees (wall cleanouts) in conductors near floor and floor cleanouts with cover flush with floor.
 - 5. Comply with requirements for cleanouts and drains specified in Section 22 1319 "Sanitary Waste Piping Specialties."
 - 6. Equipment: Connect waste piping as indicated.
 - a. Provide shutoff valve if indicated and union for each connection.
 - b. Use flanges instead of unions for connections NPS 2-1/2 and larger.
- D. Where installing piping adjacent to equipment, allow space for service and maintenance of equipment.
- E. Make connections in accordance with the following unless otherwise indicated:
 - 1. Install unions, in piping NPS 2 and smaller, adjacent to each valve and at final connection to each piece of equipment.
 - 2. Install flanges, in piping NPS 2-1/2 and larger, adjacent to flanged valves and at final connection to each piece of equipment.

3.7 IDENTIFICATION

- A. Identify exposed sanitary waste and vent piping.
- B. Comply with requirements for identification specified in Section 22 0553 "Identification for Plumbing Piping and Equipment."

3.8 FIELD QUALITY CONTROL

- A. During installation, notify authorities having jurisdiction at least 24 hours before inspection must be made. Perform tests specified below in presence of authorities having jurisdiction.
 - 1. Roughing-in Inspection: Arrange for inspection of piping before concealing or closing-in after roughing-in and before setting fixtures.
 - 2. Final Inspection: Arrange for final inspection by authorities having jurisdiction to observe tests specified below and to ensure compliance with requirements.
- B. Reinspection: If authorities having jurisdiction find that piping will not pass test or inspection, make required corrections and arrange for reinspection.
- C. Reports: Prepare inspection reports and have them signed by authorities having jurisdiction.
- D. Test sanitary waste and vent piping in accordance with procedures of authorities having jurisdiction or, in absence of published procedures, as follows:
 - 1. Test for leaks and defects in new piping and parts of existing piping that have been altered, extended, or repaired.
 - a. If testing is performed in segments, submit separate report for each test, complete with diagram of portion of piping tested.
 - 2. Leave uncovered and unconcealed new, altered, extended, or replaced waste and vent piping until it has been tested and approved.
 - a. Expose work that was covered or concealed before it was tested.
 - 3. Roughing-in Plumbing Test Procedure: Test waste and vent piping except outside leaders on completion of roughing-in.
 - a. Close openings in piping system and fill with water to point of overflow, but not less than 10 ft. head of water.
 - b. From 15 minutes before inspection starts to completion of inspection, water level must not drop.
 - c. Inspect joints for leaks.
 - 4. Finished Plumbing Test Procedure: After plumbing fixtures have been set and traps filled with water, test connections and prove they are gastight and watertight.

- a. Plug vent-stack openings on roof and building drains where they leave building. Introduce air into piping system equal to pressure of 1 inch wg.
 - b. Use U-tube or manometer inserted in trap of water closet to measure this pressure.
 - c. Air pressure must remain constant without introducing additional air throughout period of inspection.
 - d. Inspect plumbing fixture connections for gas and water leaks.
5. Repair leaks and defects with new materials and retest piping, or portion thereof, until satisfactory results are obtained.
 6. Prepare reports for tests and required corrective action.

3.9 CLEANING AND PROTECTION

- A. Clean interior of piping. Remove dirt and debris as work progresses.
- B. Protect sanitary waste and vent piping during remainder of construction period to avoid clogging with dirt and debris and to prevent damage from traffic and construction work.
- C. Place plugs in ends of uncompleted piping at end of day and when work stops.
- D. Exposed PVC Piping: Protect plumbing vents exposed to sunlight with two coats of water-based latex paint.
- E. Repair damage to adjacent materials caused by waste and vent piping installation.

3.10 PIPING SCHEDULE

- A. Flanges and unions may be used on aboveground pressure piping unless otherwise indicated.
- B. Aboveground, soil and waste piping NPS 4 and smaller are to be the following:
 1. Solid-wall PVC pipe, PVC socket fittings, and solvent-cemented joints.
 2. Dissimilar Pipe-Material Couplings: Unshielded, nonpressure transition couplings.
- C. Aboveground, soil and waste piping NPS 5 and larger are to be the following:
 1. Solid-wall PVC pipe, PVC socket fittings, and solvent-cemented joints.
 2. Dissimilar Pipe-Material Couplings: Unshielded, nonpressure transition couplings.
- D. Aboveground, vent piping NPS 4 and smaller is to be the following:
 1. Solid-wall PVC pipe, PVC socket fittings, and solvent-cemented joints.
 2. Dissimilar Pipe-Material Couplings: Unshielded, nonpressure transition couplings.
- E. Underground, soil, waste, and vent piping NPS 4 and smaller are to be the following:
 1. Solid-wall PVC pipe, PVC socket fittings, and solvent-cemented joints.
 2. Dissimilar Pipe-Material Couplings: Unshielded, nonpressure transition couplings.

- F. Underground, soil and waste piping NPS 5 and larger are to be the following:
1. Solid-wall PVC pipe, PVC socket fittings, and solvent-cemented joints.
 2. Dissimilar Pipe-Material Couplings: Unshielded, nonpressure transition couplings.

END OF SECTION 22 1316

SECTION 22 4700 - DRINKING FOUNTAINS AND WATER COOLERS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Water coolers.
2. Fixture carriers.

1.2 ACTION SUBMITTALS

A. Product data.

B. Shop Drawings:

1. Plans, elevations, sections, and mounting details.
2. Details of fixture assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.

1.3 CLOSEOUT SUBMITTALS

A. Operation and maintenance data.

1. In addition to items specified in Section 01 7823 "Operation and Maintenance Data," include servicing and adjustment of Electronic-sensor fixtures.

1.4 WARRANTY

A. Manufacturer Warranty: Manufacturer and Installer agree to repair or replace water coolers and bottle filling stations that fail in materials or workmanship within specified warranty period.

B. Warranty Period: One year(s) from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Standards:

1. Drinking fountains, water coolers, bottle filling stations, and remote water coolers intended to convey or dispense water for human consumption are to comply with the U.S.

Safe Drinking Water Act (SDWA), requirements of the authority having jurisdiction, and with NSF 61 or NSF 372, or be certified in compliance with NSF 61 or NSF 372 by an ANSI-accredited third-party certification body, that the weighted average lead content at wetted surfaces is less than or equal to 0.25 percent.

2.2 WATER COOLERS

A. Water Coolers - Surface Wall Mounted, Stainless Steel P-4:

1. Source Limitations: Obtain surface wall-mounted, stainless steel, water coolers from single source from single manufacturer.
2. Standards:
 - a. NSF 61.
 - b. NSF 372.
 - c. ASME A112.19.3/CSA B45.4.
 - d. ASHRAE 18.
 - e. UL 399.
 - f. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
3. Bubbler: One, with adjustable stream regulator, located on each cabinet deck.
4. Control: Push bar.
5. Bottle Filler: Sensor activation: Fill rate is 0.5 to 1.5 gpm.
6. Drain: Grid with NPS 1-1/4 tailpiece.
7. Supply: NPS 3/8 with shutoff valve.
8. Waste Fitting: ASME A112.18.2/CSA B125.2, NPS 1-1/4 brass P-trap.
9. Cooling System: Electric, with hermetically sealed compressor, cooling coil, air-cooled condensing unit, corrosion-resistant tubing, refrigerant, corrosion-resistant-metal storage tank, and adjustable thermostat.
10. Support: Fixture carrier.
11. Water-Cooler Mounting Height High/low - standard/accessible in accordance with ICC A117.1.
12. Capacities and Characteristics:
 - a. Cooled Water: 8 gph.
 - b. Ambient-Air Temperature: 90 deg F.
 - c. Inlet-Water Temperature: 80 deg F.
 - d. Cooled-Water Temperature: 50 deg F.
 - e. Electrical Characteristics:
 - 1) Volts: 120 V ac.
 - 2) Phase: Single.
 - 3) Hertz: 60 Hz.

2.3 FIXTURE CARRIERS

A. Fixture Carriers:

1. Standard: ASME A112.6.1M.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine roughing-in for water-supply and sanitary drainage and vent piping systems to verify actual locations of piping connections before fixture installation.
- B. Examine walls and floors for suitable conditions where fixtures will be installed.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install fixtures level and plumb in accordance with roughing-in drawings. For fixtures indicated for juveniles, install at height required by authorities having jurisdiction.
- B. Install off-the-floor carrier supports, affixed to building substrate, for wall-mounted fixtures.
- C. Install mounting frames, affixed to building construction, and attach recessed water coolers and bottle filling stations to mounting frames.
- D. Install water-supply piping with shutoff valve on supply to each fixture to be connected to domestic-water distribution piping. Use ball valve. Install valves in locations where they can be easily reached for operation. Valves are specified in Section 22 0523 "General-Duty Valves for Plumbing Piping."
- E. Install trap and waste piping on drain outlet of each fixture to be connected to sanitary drainage system.
- F. Install wall flanges or escutcheons at piping wall penetrations in exposed, finished locations. Use deep-pattern escutcheons where required to conceal protruding fittings. Comply with escutcheon requirements specified in Section 22 0500 "Common Work Results for Plumbing."
- G. Seal joints between fixtures and walls using sanitary-type, one-part, mildew-resistant, silicone sealant. Match sealant color to fixture color. Comply with sealant requirements specified in Section 07 9200 "Joint Sealants."

3.3 PIPING CONNECTIONS

- A. Connect fixtures with water supplies, stops, and risers, and with traps, soil, waste, and vent piping. Use size fittings required to match fixtures.

- B. Comply with water piping requirements specified in Section 22 1116 "Domestic Water Piping."
- C. Install ball shutoff valve on water supply to each fixture. Comply with valve requirements specified in Section 22 0523 "General-Duty Valves for Plumbing Piping."
- D. Comply with soil and waste piping requirements specified in Section 22 1316 "Sanitary Waste and Vent Piping."

3.4 ADJUSTING

- A. Adjust fixture flow regulators for proper flow and stream height.
- B. Adjust electronic-sensor settings.

3.5 CLEANING

- A. After installing fixtures, inspect unit. Remove paint splatters and other spots, dirt, and debris. Repair damaged finish to match original finish.
- B. Clean fixtures, on completion of installation, in accordance with manufacturer's written instructions.
- C. Provide protective covering for installed fixtures.
- D. Do not allow use of fixtures for temporary facilities unless approved in writing by Owner.

END OF SECTION 22 4700