

**PENNSYLVANIA GAME COMMISSION**

**SOUTHEAST REGIONAL OFFICE  
NEW 40'X80' STORAGE BUILDING  
Maidencreek Township, Berks County**

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**PROJECT SPECIFICATIONS**

The Contractor shall comply with the *Contract Terms and Conditions* provided with the Bid Documents including but not limited to the following:

**INSURANCE REQUIREMENTS** – In accordance with the *Contract Terms and Conditions*, the Contractor is required to have in place during the term of the Contract and any renewals or extensions thereof, the following types of insurance, issued by companies acceptable to the Commonwealth and authorized to conduct such business under the laws of the Commonwealth of Pennsylvania:

- A. **Worker's Compensation Insurance** for all of the Contractor's employees and those of any subcontractor, engaged in Work at the site of the project as required by law.
  
- B. **Public Liability and Property Damage Insurance** to protect the Commonwealth, the Contractor, and any and all subcontractors from claims for damages for personal injury (including bodily injury), sickness or disease, accidental death and damage to property including the loss of use resulting from any property damage, which may arise from the activities performed under the Contract or the failure to perform under the Contract, whether such performance or non-performance be by the Contractor, by any subcontractor, or by anyone directly or indirectly employed by either. **The minimum amounts of coverage shall be \$250,000 per person and \$1,000,000 per occurrence for bodily injury, including death, and \$250,000 per person and \$1,000,000 per occurrence for property damage.** Such policies shall be occurrence rather than claims-made policies and shall not contain any endorsements or any other form designated to limit and restrict any action by the Commonwealth, as an additional insured, against the insurance coverage in regard to Work performed for the Commonwealth.

Prior to commencement of the Work under the Contract and at each insurance renewal date during the term of the Contract, the Contractor shall provide the Commonwealth with current certificates of insurance. **These certificates or policies shall name the Commonwealth AND Pennsylvania Game Commission as additional insured and shall contain a provision that the coverage's afforded under the policies will not be cancelled or changed until at least thirty (30) days written notice has been given to the Commonwealth.**

**COMPLIANCE WITH LAW** – The Contractor shall comply with all applicable federal and state laws and regulations and local ordinances in the performance of the Contract.

**WORKMANSHIP** - All Work shall be performed in a Workmanlike manner and all materials and labor shall be in strict and entire conformity with the Drawings and Specifications.

**INSPECTION AND CHANGES** - All Work is subject to inspection and acceptance by the Pennsylvania Game Commission. Any Work rejected as defective or unsuitable shall be

removed and replaced with suitable Work and materials at the sole cost of the Contractor to the complete satisfaction of the Game Commission.

Changes shall be in accordance with the *Contract Terms and Conditions*.

**TEMPORARY SERVICES AND JOB CONDITIONS** - The Contractor shall be responsible for providing any and all temporary facilities necessary to execute and protect the Work. The Contractor shall accept all conditions as found upon examination of the site and shall coordinate, plan, and execute the Work accordingly. The Contractor shall cooperate in the arrangements of the Work as necessary to least affect the administration or operations of existing buildings, facilities, and infrastructure. The Contractor shall keep the Work site clean at all times.

**PREVAILING WAGE** – Prevailing minimum wages apply to this project. See *Contract Terms and Conditions* and attached Prevailing Wage Determination.

The Contractor and each Subcontractor shall file a statement each week and a final statement at the conclusion of the Work on the contract with the contracting agency, under oath, and in form satisfactory to the Secretary, certifying that workmen have been paid wages in strict conformity with the provisions of the contract as prescribed by this section or if wages remain unpaid to set forth the amount of wages due and owing to each workman respectively. The PA Labor and Industry “Weekly Payroll Certification for Public Works Projects” form shall be used. The initial and final Payroll Certifications shall be notarized.

**PAYMENT TERMS** - A schedule of values is provided with the bid. Payment will be made on a monthly basis upon satisfactory completion of items listed on the Schedule of Values and in accordance with the *Contract Terms and Conditions*.

All payments due to the Contractor shall be processed after all Work has been inspected and approved by an agent of the Pennsylvania Game Commission. Payment will not be made for Work that is not progressing satisfactorily or for unsuitable or defective Work.

Payments may be withheld for failure to provide required documentation for the project including but not limited to required submittals / shop drawings and weekly submission of Certified Payrolls.

**INVOICING** – All Project invoices shall be submitted directly to:

Matthew Spotts, Architectural Designer  
Pennsylvania Game Commission  
2001 Elmerton Ave  
Harrisburg PA 17110  
Office: 717-787-4250 Ext 73614  
Email: [matspotts@pa.gov](mailto:matspotts@pa.gov)

**SERO New Storage Building  
Contract No. PGC-SERO-23-01**

All invoices must be submitted in black and white with no color and shaded areas. Invoices must include the Purchase Order Number, Contractor's SAP Vendor Number, and the Contractor's name and address as listed on the Purchase Order. Payment items on invoices shall match the items on the Purchase Order. Failure to submit invoices that meet these requirements will result in a delay of payment.

**Please Note:** Vendors are reminded to **NOT** include employer identification numbers, Social Security Numbers, bank account information, or other personally identifiable information on their invoices. That information is uniquely tied to your SAP Vendor Number and, for security purposes, should not be explicitly stated on an invoice.

**CONTRACT TERM** - The Contract shall commence upon delivery of Purchase Order to Contractor and shall terminate on **December 30, 2024**. Contract time is of the essence of the Project. All Work must be completed and accepted by this date.

**EXCISE TAXES, PENNSYLVANIA SALES TAX** - The Commonwealth is exempt from all Excise Taxes. See *Contract Terms and Conditions*.

**OFFSET PROVISION** - The Contractor agrees that the Commonwealth may set off the amount of any state liability or other debt of the Contractor or its subsidiaries that is owed to the Commonwealth and not being contested on appeal against any payments due the Contractor under this or any other contract with the Commonwealth.

**PERFORMANCE SECURITY / CONTRACT BONDS** – Within 10 days after award of the purchase order, the Bidder to whom the Contract is awarded, shall provide **Contract Performance Security** and a **Payment Bond** in a form acceptable to the Commonwealth for the amounts listed below and in accordance with the *Contract Terms and Conditions*.

A **Performance Bond** at one hundred percent (100%) of the contract amount, conditioned upon the faithful performance of the contract in accordance with the plans, specifications and conditions of the contract.

A **Payment Bond** in an amount equal to one hundred percent (100%) of the contract amount.

Performance and Payment Bonds shall be executed by a surety company authorized to do business in the Commonwealth and listed on the current U.S. Dept. of Treasury, Bureau of Fiscal Service, Department Circular 570 (<https://fiscal.treasury.gov/surety-bonds/list-certified-companies.html>). Bonds shall include a current Power of Attorney dated the same as the date of the bond. Bonds shall be made payable to the Commonwealth.

**GUARANTY / WARRANTY** – See *Contract Terms and Conditions* – all items are warranted for a period of one year following delivery by the Contractor and acceptance by the Commonwealth.

**HOLD HARMLESS PROVISION** - See *Contract Terms and Conditions* - The Contractor shall hold the Commonwealth harmless from and indemnify the Commonwealth against any and

**SERO New Storage Building  
Contract No. PGC-SERO-23-01**

all third party claims, demands and actions based upon or arising out of any activities performed by the Contractor and its employees and agents under this Contract, provided the Commonwealth gives Contractor prompt notice of any such claim of which it learns.

**ADDITIONAL PROVISIONS -**

Contractor shall comply with the conditions listed below in accordance with the *Contract Terms and Conditions*:

1. **Steel Products Procurement Act**
2. **Prohibition Against the Use of Certain Steel and Aluminum Products (Trade Practices Act)**
3. **Reciprocal Limitations Act** - The form GSPUR89 (*Reciprocal Limitations Act Requirements*) is attached. The Contractor shall complete the applicable portions of pages 3 and 4 of the form and submit the completed pages within two days after the bid opening.

**BUREAU OF LABOR LAW COMPLIANCE  
PREVAILING WAGES PROJECT RATES**

Project Name:	SouthEast Regional Office -Storage Building
General Description:	The project is a 40'X 80' Pole Barn Structure with covered canopy complete with concrete floor slabs, wood framing, installing metal roofing and siding panels, installing insulation, interior OSB walls w/FRP panels, installing doors, windows, installation of HVAC, electrical, including a generator and plumbing building systems and other building appurtenances.
Project Locality	Maidencreek Township
Awarding Agency:	PA Game Commission
Contract Award Date:	5/30/2024
Serial Number:	24-04173
Project Classification:	Building
Determination Date:	4/24/2024
Assigned Field Office:	Scranton
Field Office Phone Number:	(570)963-4577
Toll Free Phone Number:	(877)214-3962
Project County:	Berks County

**BUREAU OF LABOR LAW COMPLIANCE  
PREVAILING WAGES PROJECT RATES**

<b>Project: 24-04173 - Building</b>	<b>Effective Date</b>	<b>Expiration Date</b>	<b>Hourly Rate</b>	<b>Fringe Benefits</b>	<b>Total</b>
Asbestos & Insulation Workers	6/26/2023		\$38.70	\$29.11	\$67.81
Asbestos & Insulation Workers	7/1/2024		\$35.80	\$34.06	\$69.86
Boilermakers	1/1/2023		\$51.27	\$35.30	\$86.57
Boilermakers	1/1/2024		\$52.10	\$35.72	\$87.82
Bricklayers, Stone Masons, Pointers, Caulkers, Cleaners	4/30/2023		\$39.98	\$17.17	\$57.15
Bricklayers, Stone Masons, Pointers, Caulkers, Cleaners	4/28/2024		\$39.83	\$19.17	\$59.00
Bricklayers, Stone Masons, Pointers, Caulkers, Cleaners	5/4/2025		\$41.68	\$19.17	\$60.85
Bricklayers, Stone Masons, Pointers, Caulkers, Cleaners	5/3/2026		\$43.53	\$19.17	\$62.70
Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers	6/1/2022		\$33.56	\$17.72	\$51.28
Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers	6/1/2023		\$35.06	\$17.72	\$52.78
Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers	6/1/2024		\$36.56	\$17.72	\$54.28
Cement Finishers & Plasterers	4/30/2023		\$28.23	\$22.27	\$50.50
Cement Finishers & Plasterers	4/28/2024		\$30.23	\$22.27	\$52.50
Cement Finishers & Plasterers	5/4/2025		\$32.23	\$22.27	\$54.50
Cement Finishers & Plasterers	5/3/2026		\$34.23	\$22.27	\$56.50
Cement Masons	5/1/2023		\$34.15	\$20.60	\$54.75
Cement Masons	5/1/2024		\$34.85	\$20.90	\$55.75
Dockbuilder, Pile Drivers	5/1/2023		\$50.48	\$37.99	\$88.47
Dockbuilder, Pile Drivers	5/1/2024		\$52.98	\$37.99	\$90.97
Dockbuilder, Pile Drivers	5/1/2025		\$55.23	\$37.99	\$93.22
Dockbuilder, Pile Drivers	5/1/2026		\$56.98	\$37.99	\$94.97
Dockbuilder/Pile Driver Diver	5/1/2023		\$58.41	\$41.74	\$100.15
Dockbuilder/Pile Driver Diver	5/1/2024		\$61.54	\$41.74	\$103.28
Dockbuilder/Pile Driver Diver	5/1/2025		\$64.35	\$41.74	\$106.09
Dockbuilder/Pile Driver Diver	5/1/2026		\$66.54	\$41.74	\$108.28
Dockbuilder/pile driver tender	5/1/2023		\$50.48	\$37.99	\$88.47
Dockbuilder/pile driver tender	5/1/2024		\$52.98	\$37.99	\$90.97
Dockbuilder/pile driver tender	5/1/2025		\$55.23	\$37.99	\$93.22
Dockbuilder/pile driver tender	5/1/2026		\$56.98	\$37.99	\$94.97
Drywall Finisher	5/1/2023		\$30.10	\$22.14	\$52.24
Electricians	9/1/2022		\$40.52	\$25.63	\$66.15
Electricians	9/1/2023		\$42.02	\$25.69	\$67.71
Elevator Constructor	1/1/2023		\$56.46	\$38.36	\$94.82
Elevator Constructor	1/1/2024		\$58.88	\$43.90	\$102.78
Floor Coverer	5/1/2023		\$36.21	\$18.36	\$54.57
Floor Coverer	5/1/2024		\$37.64	\$18.36	\$56.00
Glazier	5/1/2023		\$37.71	\$23.68	\$61.39
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	7/1/2021		\$34.01	\$31.13	\$65.14
Iron Workers (Bridge, Structural Steel, Ornamental,	7/1/2023		\$36.26	\$31.38	\$67.64

**BUREAU OF LABOR LAW COMPLIANCE  
PREVAILING WAGES PROJECT RATES**

<b>Project: 24-04173 - Building</b>	<b>Effective Date</b>	<b>Expiration Date</b>	<b>Hourly Rate</b>	<b>Fringe Benefits</b>	<b>Total</b>
Precast, Reinforcing)					
Laborers (Class 01 - See notes)	5/1/2023		\$27.62	\$16.77	\$44.39
Laborers (Class 01 - See notes)	5/1/2024		\$28.17	\$17.29	\$45.46
Laborers (Class 02 - see notes)	5/1/2023		\$29.62	\$16.77	\$46.39
Laborers (Class 02 - see notes)	5/1/2024		\$30.17	\$17.29	\$47.46
Laborers (Class 03 - See notes)	5/1/2023		\$30.32	\$17.03	\$47.35
Laborers (Class 03 - See notes)	5/6/2024		\$30.82	\$17.83	\$48.65
Laborers (Class 04 - See notes)	5/1/2023		\$31.82	\$16.78	\$48.60
Laborers (Class 04 - See notes)	5/6/2024		\$32.32	\$17.83	\$50.15
Laborers (Class 05 - See notes)	5/1/2023		\$29.62	\$16.77	\$46.39
Laborers (Class 05 - See notes)	5/1/2024		\$30.17	\$17.29	\$47.46
Laborers (Class 06 - See notes)	5/1/2022		\$28.87	\$16.28	\$45.15
Laborers (Class 06 - See notes)	5/1/2024		\$29.52	\$17.29	\$46.81
Marble Mason	5/1/2023		\$35.81	\$16.73	\$52.54
Marble Mason	5/1/2024		\$35.76	\$18.73	\$54.49
Marble Mason	5/1/2025		\$37.71	\$18.73	\$56.44
Marble Mason	5/1/2026		\$39.66	\$18.73	\$58.39
Millwright	5/1/2019		\$39.14	\$20.08	\$59.22
Millwright	6/1/2023		\$39.21	\$22.95	\$62.16
Millwright	6/1/2024		\$41.07	\$22.95	\$64.02
Millwright	6/1/2025		\$43.00	\$22.95	\$65.95
Millwright	6/1/2026		\$44.97	\$22.95	\$67.92
Operators (Building, Class 01 - See Notes)	5/1/2023		\$42.57	\$29.24	\$71.81
Operators (Building, Class 01A - See Notes)	5/1/2023		\$44.82	\$29.90	\$74.72
Operators (Building, Class 02 - See Notes)	5/1/2023		\$42.29	\$29.15	\$71.44
Operators (Building, Class 02A - See Notes)	5/1/2023		\$44.54	\$29.82	\$74.36
Operators (Building, Class 03 - See Notes)	5/1/2023		\$39.57	\$28.34	\$67.91
Operators (Building, Class 04 - See Notes)	5/1/2023		\$38.42	\$28.02	\$66.44
Operators (Building, Class 05 - See Notes)	5/1/2023		\$37.97	\$27.89	\$65.86
Operators (Building, Class 06 - See Notes)	5/1/2023		\$37.10	\$27.62	\$64.72
Operators (Building, Class 07A- See Notes)	5/1/2023		\$51.63	\$33.34	\$84.97
Operators (Building, Class 07B- See Notes)	5/1/2023		\$51.28	\$33.24	\$84.52
Painters Class 1 (see notes)	5/1/2023		\$31.09	\$23.19	\$54.28
Painters Class 2 (see notes)	5/1/2023		\$30.09	\$23.19	\$53.28
Painters Class 3 (see notes)	5/1/2017		\$36.25	\$18.17	\$54.42
Piledrivers	5/1/2021		\$43.73	\$37.99	\$81.72
Plasterers	5/1/2023		\$31.33	\$20.83	\$52.16
Plasterers	5/1/2024		\$32.93	\$21.08	\$54.01
plumber	5/1/2023		\$52.48	\$34.56	\$87.04
plumber	5/1/2024		\$54.28	\$35.26	\$89.54
Roofers (Composition)	5/1/2023		\$42.63	\$34.62	\$77.25
Roofers (Shingle)	5/1/2023		\$32.85	\$22.10	\$54.95
Roofers (Slate & Tile)	5/1/2023		\$35.85	\$22.10	\$57.95
Sheet Metal Workers	6/1/2022		\$40.22	\$41.01	\$81.23



**BUREAU OF LABOR LAW COMPLIANCE  
PREVAILING WAGES PROJECT RATES**

<b>Project: 24-04173 - Building</b>	<b>Effective Date</b>	<b>Expiration Date</b>	<b>Hourly Rate</b>	<b>Fringe Benefits</b>	<b>Total</b>
Sheet Metal Workers	6/1/2023		\$41.41	\$42.32	\$83.73
Sign Makers and Hangars	7/15/2022		\$30.54	\$24.35	\$54.89
Sign Makers and Hangars	7/15/2023		\$31.76	\$24.63	\$56.39
Sprinklerfitters	4/1/2023		\$44.33	\$28.04	\$72.37
Sprinklerfitters	4/1/2024		\$46.45	\$28.62	\$75.07
Steamfitters	5/1/2023		\$57.07	\$41.99	\$99.06
Terrazzo Finisher	5/1/2023		\$35.79	\$19.25	\$55.04
Terrazzo Finisher	5/1/2024		\$35.66	\$20.76	\$56.42
Terrazzo Grinder	5/1/2023		\$36.54	\$19.25	\$55.79
Terrazzo Grinder	5/1/2024		\$36.42	\$20.76	\$57.18
Terrazzo Mechanics	5/1/2023		\$36.51	\$21.00	\$57.51
Terrazzo Mechanics	5/1/2024		\$36.44	\$22.51	\$58.95
Tile & Marble Finisher	5/1/2023		\$32.16	\$16.24	\$48.40
Tile & Marble Finisher	5/1/2024		\$33.36	\$16.99	\$50.35
Tile & Marble Finisher	5/1/2025		\$35.31	\$16.99	\$52.30
Tile & Marble Finisher	5/1/2026		\$37.26	\$16.99	\$54.25
Tile Setter	5/1/2023		\$35.81	\$16.73	\$52.54
Tile Setter	5/1/2024		\$35.76	\$18.73	\$54.49
Tile Setter	5/1/2025		\$37.71	\$18.73	\$56.44
Tile Setter	5/1/2026		\$39.66	\$18.73	\$58.39
Truckdriver class 1(see notes)	5/1/2021		\$37.72	\$0.00	\$37.72
Truckdriver class 2 (see notes)	5/1/2021		\$37.79	\$0.00	\$37.79
Truckdriver class 3 (see notes)	5/1/2021		\$38.28	\$0.00	\$38.28
Window Film / Tint Installer	6/1/2019		\$24.52	\$12.08	\$36.60

**BUREAU OF LABOR LAW COMPLIANCE  
PREVAILING WAGES PROJECT RATES**

<b>Project: 24-04173 - Heavy/Highway</b>	<b>Effective Date</b>	<b>Expiration Date</b>	<b>Hourly Rate</b>	<b>Fringe Benefits</b>	<b>Total</b>
Carpenter - Chief of Party (Surveying & Layout)	5/1/2021		\$41.42	\$15.49	\$56.91
Carpenter - Instrument Person (Surveying & Layout)	5/1/2021		\$36.02	\$15.49	\$51.51
Carpenter - Rodman I (Survey & Layout)	5/1/2021		\$28.82	\$12.39	\$41.21
Carpenter	5/1/2023		\$35.32	\$19.09	\$54.41
Carpenter	5/1/2024		\$36.12	\$19.79	\$55.91
Carpenter	5/1/2025		\$36.87	\$20.49	\$57.36
Carpenter	5/1/2026		\$37.63	\$21.18	\$58.81
Carpenter Welder	5/1/2023		\$36.07	\$19.09	\$55.16
Carpenter Welder	5/1/2024		\$36.87	\$19.79	\$56.66
Carpenter Welder	5/1/2025		\$37.62	\$20.49	\$58.11
Carpenter Welder	5/1/2026		\$38.38	\$21.18	\$59.56
Carpenters - Piledriver/Welder	1/1/2023		\$36.07	\$19.09	\$55.16
Carpenters - Piledriver/Welder	1/1/2024		\$36.87	\$19.79	\$56.66
Carpenters - Piledriver/Welder	1/1/2025		\$37.62	\$20.49	\$58.11
Carpenters - Piledriver/Welder	1/1/2026		\$38.38	\$21.18	\$59.56
Cement Finishers	1/1/2017		\$27.70	\$20.20	\$47.90
Dockbuilder, Pile Drivers	5/1/2023		\$50.48	\$37.99	\$88.47
Dockbuilder, Pile Drivers	5/1/2024		\$52.98	\$37.99	\$90.97
Dockbuilder, Pile Drivers	5/1/2025		\$55.23	\$37.99	\$93.22
Dockbuilder, Pile Drivers	5/1/2026		\$56.98	\$37.99	\$94.97
Dockbuilder/Pile Driver Diver	5/1/2023		\$58.41	\$41.74	\$100.15
Dockbuilder/Pile Driver Diver	5/1/2024		\$61.54	\$41.74	\$103.28
Dockbuilder/Pile Driver Diver	5/1/2025		\$64.35	\$41.74	\$106.09
Dockbuilder/Pile Driver Diver	5/1/2026		\$66.54	\$41.74	\$108.28
Dockbuilder/pile driver tender	5/1/2023		\$50.48	\$37.99	\$88.47
Dockbuilder/pile driver tender	5/1/2024		\$52.98	\$37.99	\$90.97
Dockbuilder/pile driver tender	5/1/2025		\$55.23	\$37.99	\$93.22
Dockbuilder/pile driver tender	5/1/2026		\$56.98	\$37.99	\$94.97
Electric Lineman	5/30/2022		\$50.28	\$28.47	\$78.75
Electric Lineman	5/29/2023		\$51.40	\$29.62	\$81.02
Electric Lineman	6/3/2024		\$52.80	\$30.61	\$83.41
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	7/1/2021		\$34.01	\$31.13	\$65.14
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	7/1/2023		\$36.26	\$31.38	\$67.64
Laborers (Class 01 - See notes)	5/1/2023		\$24.81	\$18.99	\$43.80
Laborers (Class 01 - See notes)	5/1/2024		\$25.61	\$19.49	\$45.10
Laborers (Class 02 - See notes)	5/1/2023		\$31.43	\$18.99	\$50.42
Laborers (Class 02 - See notes)	5/1/2024		\$32.23	\$19.49	\$51.72
Laborers (Class 03 - See notes)	5/1/2023		\$28.42	\$18.99	\$47.41
Laborers (Class 03 - See notes)	5/1/2024		\$29.22	\$19.49	\$48.71
Laborers (Class 04 - See notes)	5/1/2023		\$28.77	\$18.99	\$47.76
Laborers (Class 04 - See notes)	5/1/2024		\$29.57	\$19.49	\$49.06
Laborers (Class 05 - See notes)	5/1/2023		\$29.44	\$18.99	\$48.43
Laborers (Class 05 - See notes)	5/1/2024		\$30.24	\$19.49	\$49.73

**BUREAU OF LABOR LAW COMPLIANCE  
PREVAILING WAGES PROJECT RATES**

<b>Project: 24-04173 - Heavy/Highway</b>	<b>Effective Date</b>	<b>Expiration Date</b>	<b>Hourly Rate</b>	<b>Fringe Benefits</b>	<b>Total</b>
Laborers (Class 06 - See notes)	5/1/2023		\$28.86	\$18.99	\$47.85
Laborers (Class 06 - See notes)	5/1/2024		\$29.66	\$19.49	\$49.15
Laborers (Class 07 - See notes)	5/1/2023		\$29.15	\$18.99	\$48.14
Laborers (Class 07 - See notes)	5/1/2024		\$29.95	\$19.49	\$49.44
Laborers (Class 08 - See notes)	5/1/2023		\$29.63	\$18.99	\$48.62
Laborers (Class 08 - See notes)	5/1/2024		\$30.43	\$19.49	\$49.92
Millwright	6/1/2023		\$41.51	\$23.33	\$64.84
Millwright	6/1/2024		\$43.46	\$23.33	\$66.79
Millwright	6/1/2025		\$45.46	\$23.33	\$68.79
Millwright	6/1/2026		\$47.52	\$23.33	\$70.85
Operators (Heavy, Class 01 - See Notes)	5/1/2023		\$41.14	\$28.82	\$69.96
Operators (Heavy, Class 01 - See Notes)	5/1/2024		\$42.30	\$29.66	\$71.96
Operators (Heavy, Class 01 - See Notes)	5/1/2025		\$43.46	\$30.50	\$73.96
Operators (Heavy, Class 01 - See Notes)	5/1/2026		\$44.61	\$31.35	\$75.96
Operators (Heavy, Class 01A - See Notes)	5/1/2023		\$43.39	\$29.48	\$72.87
Operators (Heavy, Class 01A - See Notes)	5/1/2024		\$44.55	\$30.32	\$74.87
Operators (Heavy, Class 01A - See Notes)	5/1/2025		\$45.71	\$31.16	\$76.87
Operators (Heavy, Class 01A - See Notes)	5/1/2026		\$46.86	\$32.01	\$78.87
Operators (Heavy, Class 02 - See Notes)	5/1/2023		\$40.86	\$28.73	\$69.59
Operators (Heavy, Class 02 - See Notes)	5/1/2024		\$42.02	\$29.57	\$71.59
Operators (Heavy, Class 02 - See Notes)	5/1/2025		\$43.18	\$30.41	\$73.59
Operators (Heavy, Class 02 - See Notes)	5/1/2026		\$44.34	\$31.25	\$75.59
Operators (Heavy, Class 02A - See Notes)	5/1/2023		\$43.11	\$29.40	\$72.51
Operators (Heavy, Class 02A - See Notes)	5/1/2024		\$44.27	\$30.24	\$74.51
Operators (Heavy, Class 02A - See Notes)	5/1/2025		\$45.43	\$31.08	\$76.51
Operators (Heavy, Class 02A - See Notes)	5/1/2026		\$46.59	\$31.92	\$78.51
Operators (Heavy, Class 03 - See Notes)	5/1/2023		\$37.95	\$27.86	\$65.81
Operators (Heavy, Class 03 - See Notes)	5/1/2024		\$39.11	\$28.70	\$67.81
Operators (Heavy, Class 03 - See Notes)	5/1/2025		\$40.26	\$29.55	\$69.81
Operators (Heavy, Class 03 - See Notes)	5/1/2026		\$41.43	\$30.38	\$71.81
Operators (Heavy, Class 04 - See Notes)	5/1/2023		\$36.80	\$27.54	\$64.34
Operators (Heavy, Class 04 - See Notes)	5/1/2024		\$37.96	\$28.38	\$66.34
Operators (Heavy, Class 04 - See Notes)	5/1/2025		\$39.12	\$29.22	\$68.34
Operators (Heavy, Class 04 - See Notes)	5/1/2026		\$40.28	\$30.06	\$70.34
Operators (Heavy, Class 05 - See Notes)	5/1/2023		\$36.35	\$27.41	\$63.76
Operators (Heavy, Class 05 - See Notes)	5/1/2024		\$37.51	\$28.25	\$65.76
Operators (Heavy, Class 05 - See Notes)	5/1/2025		\$38.67	\$29.09	\$67.76
Operators (Heavy, Class 05 - See Notes)	5/1/2026		\$39.83	\$29.93	\$69.76
Operators (Heavy, Class 06 - See Notes)	5/1/2023		\$35.48	\$27.14	\$62.62
Operators (Heavy, Class 06 - See Notes)	5/1/2024		\$36.64	\$27.98	\$64.62
Operators (Heavy, Class 06 - See Notes)	5/1/2025		\$37.80	\$28.82	\$66.62
Operators (Heavy, Class 06 - See Notes)	5/1/2026		\$38.96	\$29.66	\$68.62
Operators (Heavy, Class 07A - See Notes)	5/1/2023		\$49.93	\$32.83	\$82.76
Operators (Heavy, Class 07A - See Notes)	5/1/2024		\$51.39	\$33.77	\$85.16

**BUREAU OF LABOR LAW COMPLIANCE  
PREVAILING WAGES PROJECT RATES**

<b>Project: 24-04173 - Heavy/Highway</b>	<b>Effective Date</b>	<b>Expiration Date</b>	<b>Hourly Rate</b>	<b>Fringe Benefits</b>	<b>Total</b>
Operators (Heavy, Class 07A - See Notes)	5/1/2025		\$52.85	\$34.71	\$87.56
Operators (Heavy, Class 07A - See Notes)	5/1/2026		\$54.32	\$35.64	\$89.96
Operators (Heavy, Class 07B - See Notes)	5/1/2023		\$49.58	\$32.73	\$82.31
Operators (Heavy, Class 07B - See Notes)	5/1/2024		\$51.04	\$33.67	\$84.71
Operators (Heavy, Class 07B - See Notes)	5/1/2025		\$52.51	\$34.60	\$87.11
Operators (Heavy, Class 07B - See Notes)	5/1/2026		\$53.97	\$35.54	\$89.51
Operators (Highway, Class 01 - See Notes)	5/1/2023		\$40.25	\$28.55	\$68.80
Operators (Highway, Class 01 - See Notes)	5/1/2024		\$41.41	\$29.39	\$70.80
Operators (Highway, Class 01 - See Notes)	5/1/2025		\$42.56	\$30.24	\$72.80
Operators (Highway, Class 01 - See Notes)	5/1/2026		\$43.72	\$31.08	\$74.80
Operators (Highway, Class 01a - See Notes)	5/1/2023		\$42.50	\$29.23	\$71.73
Operators (Highway, Class 01a - See Notes)	5/1/2024		\$43.66	\$30.07	\$73.73
Operators (Highway, Class 01a - See Notes)	5/1/2025		\$44.81	\$30.92	\$75.73
Operators (Highway, Class 01a - See Notes)	5/1/2026		\$45.97	\$31.76	\$77.73
Operators (Highway, Class 02 - See Notes)	5/1/2023		\$39.08	\$28.20	\$67.28
Operators (Highway, Class 02 - See Notes)	5/1/2024		\$40.24	\$29.04	\$69.28
Operators (Highway, Class 02 - See Notes)	5/1/2025		\$41.39	\$29.89	\$71.28
Operators (Highway, Class 02 - See Notes)	5/1/2026		\$42.55	\$30.73	\$73.28
Operators (Highway, Class 03 - See Notes)	5/1/2023		\$38.39	\$27.99	\$66.38
Operators (Highway, Class 03 - See Notes)	5/1/2024		\$39.55	\$28.83	\$68.38
Operators (Highway, Class 03 - See Notes)	5/1/2025		\$40.70	\$29.68	\$70.38
Operators (Highway, Class 03 - See Notes)	5/1/2026		\$41.87	\$30.51	\$72.38
Operators (Highway, Class 04 - See Notes)	5/1/2023		\$37.94	\$27.86	\$65.80
Operators (Highway, Class 04 - See Notes)	5/1/2024		\$39.10	\$28.70	\$67.80
Operators (Highway, Class 04 - See Notes)	5/1/2025		\$40.26	\$29.54	\$69.80
Operators (Highway, Class 04 - See Notes)	5/1/2026		\$41.41	\$30.39	\$71.80
Operators (Highway, Class 05 - See Notes)	5/1/2023		\$37.42	\$27.72	\$65.14
Operators (Highway, Class 05 - See Notes)	5/1/2024		\$38.58	\$28.56	\$67.14
Operators (Highway, Class 05 - See Notes)	5/1/2025		\$39.73	\$29.41	\$69.14
Operators (Highway, Class 05 - See Notes)	5/1/2026		\$40.89	\$30.25	\$71.14
Operators (Highway, Class 06 - See Notes)	5/1/2023		\$40.48	\$28.62	\$69.10
Operators (Highway, Class 06 - See Notes)	5/1/2024		\$41.64	\$29.46	\$71.10
Operators (Highway, Class 06 - See Notes)	5/1/2025		\$42.80	\$30.30	\$73.10
Operators (Highway, Class 06 - See Notes)	5/1/2026		\$43.95	\$31.15	\$75.10
Operators (Highway, Class 06/A - See Notes)	5/1/2023		\$42.73	\$29.28	\$72.01
Operators (Highway, Class 06/A - See Notes)	5/1/2024		\$43.89	\$30.12	\$74.01
Operators (Highway, Class 06/A - See Notes)	5/1/2025		\$45.05	\$30.96	\$76.01
Operators (Highway, Class 06/A - See Notes)	5/1/2026		\$46.21	\$31.80	\$78.01
Operators (Highway, Class 07/A - See Notes)	5/1/2023		\$48.86	\$32.51	\$81.37
Operators (Highway, Class 07/A - See Notes)	5/1/2024		\$50.32	\$33.45	\$83.77
Operators (Highway, Class 07/A - See Notes)	5/1/2025		\$51.79	\$34.38	\$86.17
Operators (Highway, Class 07/A - See Notes)	5/1/2026		\$53.25	\$35.32	\$88.57
Operators (Highway, Class 07/B - See Notes)	5/1/2023		\$47.44	\$32.10	\$79.54
Operators (Highway, Class 07/B - See Notes)	5/1/2024		\$48.91	\$33.03	\$81.94

**BUREAU OF LABOR LAW COMPLIANCE  
PREVAILING WAGES PROJECT RATES**

<b>Project: 24-04173 - Heavy/Highway</b>	<b>Effective Date</b>	<b>Expiration Date</b>	<b>Hourly Rate</b>	<b>Fringe Benefits</b>	<b>Total</b>
Operators (Highway, Class 07/B - See Notes)	5/1/2025		\$50.37	\$33.97	\$84.34
Operators (Highway, Class 07/B - See Notes)	5/1/2026		\$51.84	\$34.90	\$86.74
Painters - Line Stripping	12/1/2023		\$42.10	\$27.43	\$69.53
Painters Class 2 (see notes)	5/1/2023		\$33.99	\$23.20	\$57.19
Painters Class 3 (see notes)	5/1/2023		\$40.09	\$23.20	\$63.29
Piledrivers	5/1/2023		\$35.32	\$19.09	\$54.41
Piledrivers	5/1/2024		\$36.12	\$19.79	\$55.91
Piledrivers	5/1/2025		\$36.87	\$20.49	\$57.36
Piledrivers	5/1/2026		\$37.63	\$21.18	\$58.81
Steamfitters (Heavy and Highway - Gas Distribution)	5/1/2022		\$48.43	\$40.28	\$88.71
Steamfitters (Heavy and Highway - Gas Distribution)	5/1/2023		\$50.53	\$41.68	\$92.21
Steamfitters (Heavy and Highway - Gas Distribution)	3/4/2024		\$50.53	\$41.83	\$92.36
Truckdriver class 1(see notes)	5/1/2021		\$37.72	\$0.00	\$37.72
Truckdriver class 2 (see notes)	5/1/2021		\$37.79	\$0.00	\$37.79
Truckdriver class 3 (see notes)	5/1/2021		\$38.28	\$0.00	\$38.28

## RECIPROCAL LIMITATIONS ACT REQUIREMENTS

Please Complete Applicable Portion of Pages 3 & 4 and Return with Bid.

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NOTE: These Requirements Do Not Apply To Bids Under \$10,000.00

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### I. REQUIREMENTS

- A.** The Reciprocal Limitations Act requires the Commonwealth to give preference to those bidders offering supplies produced, manufactured, mined or grown in Pennsylvania as against those bidders offering supplies produced, manufactured, mined or grown in any state that gives or requires a preference to supplies produced, manufactured, mined or grown in that state. The amount of the preference shall be equal to the amount of the preference applied by the other state for that particular supply.

The following is a list of states which have been found by the Department of General Services to have applied a preference for in-state supplies and the amount of the preference:

	<b>STATE</b>	<b>PREFERENCE</b>
1.	Alaska	7% (applies only to timber, lumber, and manufactured lumber products originating in the state)
2.	Arizona	5% (construction materials produced or manufactured in the state only)
3.	Hawaii	10%
4.	Illinois	10% for coal only
5.	Iowa	5% for coal only
6.	Louisiana	4% meat and meat products 4% catfish 10% milk & dairy products 10% steel rolled in Louisiana 7% all other products
7.	Montana	5% for residents * 3% for non-residents* *offering in-state goods, supplies, equipment and materials
8.	New Mexico	5%
9.	New York	3% for purchase of food only
10.	Oklahoma	5%
11.	Virginia	4% for coal only
12.	Washington	5% (fuels mined or produced in the state only)
13.	Wyoming	5%

- B.** The Reciprocal Limitations Act requires the Commonwealth to give preference to those bidders offering printing performed in Pennsylvania as against those bidders offering printing performed in any state that gives or requires a preference to printing performed in that state. The amount of the preference shall be equal to the amount of the preference applied by the other state for that particular category of printing.

The following is a list of states which have been found by the Department of General Services to have applied a preference for in-state printing and the amount of the preference:

	<b>STATE</b>	<b>PREFERENCE</b>
1.	Hawaii	15%
2.	Idaho	10%
3.	Louisiana	3%
4.	Montana	8%
5.	New Mexico	5%
6.	Wyoming	10%

- C.** The Reciprocal Limitations Act, also requires the Commonwealth to give resident bidders a preference against a nonresident bidder from any state that gives or requires a preference to bidders from that state or exclude bidders from states that exclude nonresident bidders. The amount of the preference shall be equal to the amount of the preference applied by the state of the nonresident bidder. The following is a list of the states which have been found by the Department of General Services to have applied a preference for in-state bidders and the amount of the preference:

<b>STATE</b>	<b>PREFERENCE</b>
1. Alaska	5% (supplies only)
2. Arizona	5% (construction materials from Arizona resident dealers only)
3. California	5% (for supply contracts only in excess of \$100,000.00)
4. Connecticut	10% (for supplies only)
5. Montana	3%
6. New Mexico	5% (for supplies only)
7. South Carolina	2% (under \$2,500,000.00) 1% (over \$2,500,000.00)
	This preference does not apply to construction contracts nor where the price of a single unit exceeds \$10,000.
8. West Virginia	2.5% (for the construction, repair or improvement of any buildings)
9. Wyoming	5%

<b>STATE</b>	<b>PROHIBITION</b>
1. New Jersey	For supply procurements or construction projects restricted to Department of General Services Certified Small Businesses, New Jersey bidders shall be excluded from award even if they themselves are Department of General Services Certified Small Businesses.

D. The Reciprocal Limitations Act also requires the Commonwealth not to specify, use or purchase supplies which are produced, manufactured, mined or grown in any state that prohibits the specification for, use, or purchase of such items in or on its public buildings or other works, when such items are not produced, manufactured, mined or grown in such state. The following is a list of the states which have been found by the Department of General Services to have prohibited the use of out-of-state supplies:

<b>STATE</b>	<b>PROHIBITION</b>
1. Alabama	Only for printing and binding involving "messages of the Governor to the Legislature", all bills, documents and reports ordered by and for the use of the Legislature or either house thereof while in session; all blanks, circulars, notices and forms used in the office of or ordered by the Governor, or by any state official, board, commission, bureau or department, or by the clerks of the supreme court . . ./and other appellate courts/; and all blanks and forms ordered by and for the use of the Senate and Clerk or the House of Representatives, and binding the original records and opinions of the Supreme Court . . . /and other appellate courts/
2. Georgia	Forest products only
3. Indiana	Coal
4. Michigan	Printing
5. New Mexico	Construction
6. Ohio	Only for House and Senate bills, general and local laws, and joint resolutions; the journals and bulletins of the Senate and house of Representatives and reports, communications, and other documents which form part of the journals; reports, communications, and other documents ordered by the General Assembly, or either House, or by the executive department or elective state officers; blanks, circulars, and other work for the use of the executive departments, and elective state officers; and opinions of the Attorney General.
7. Rhode Island	Only for food for state institutions.

\*If the bid discloses that the bidder is offering to supply one of the above-listed products that is manufactured, mined, or grown in the listed state, it shall be rejected. Contractors are prohibited from supplying these items from these states.

**II. CALCULATION OF PREFERENCE**

In calculating the preference, the amount of a bid submitted by a Pennsylvania bidder shall be reduced by the percentage preference which would be given to a nonresident bidder by its state of residency (as found by the Department of General Services in Paragraph C<sub>above</sub>). Similarly, the amount of a bid offering Pennsylvania goods, supplies, equipment or materials shall be reduced by the percentage preference which would be given to another bidder by the state where the goods, supplies, equipment or materials are produced, manufactured, mined or grown (as found by the Department of General Services in Paragraphs A and B above).

THIS FORM MUST BE COMPLETED AND RETURNED WITH THE BID

**III. STATE OF MANUFACTURE**

All bidders must complete the following chart by listing the name of the manufacturer and the state (or foreign country) of manufacture for each item. If the item is domestically produced, the bidder must indicate the state in the United States where the item will be manufactured. **This chart must be completed and submitted with the bid or no later than two (2) business days after notification from the Issuing Office to furnish the information. Failure to complete this chart and provide the required information prior to the expiration of the second business day after notification shall result in the rejection of the bid.**

ITEM NUMBER	NAME OF MANUFACTURER	STATE (OR FOREIGN COUNTRY) OF MANUFACTURE

**IV. BIDDER'S RESIDENCY**

**A.** In determining whether the bidder is a nonresident bidder from a state that gives or requires a preference to bidders from that state, the address given on the first page of this invitation to bid shall be used by the Commonwealth. If that address is incorrect, or if no address is given, the correct address should be provided in the space below:

Correct Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



- B.** In order to claim the preference provided under Section I.B., Pennsylvania resident bidders must complete the following or have such information on file with the Issuing Office:
- 1.** Address of bidder's bona fide establishment in Pennsylvania at which it was transacting business on the date when bids for this contract/requisition were first solicited: \_\_\_\_\_
  - 2. a.** If the bidder is a corporation:
    - (1)** The corporation  is or  is not incorporated under the laws of the Commonwealth of Pennsylvania.
      - (a)** If the bidder is incorporated under the laws of the Commonwealth of Pennsylvania, provide date of incorporation: \_\_\_\_\_
      - (b)** If the bidder is not incorporated under the laws of the Commonwealth of Pennsylvania, it must have a certificate of authority to do business in the Commonwealth of Pennsylvania from the Pennsylvania Department of State as required by the Pennsylvania Business Corporation Law (15 P.S. §2001). Provide date of issuance of certificate of authority: \_\_\_\_\_
    - (2)** The corporation  is or  is not conducting business in Pennsylvania under an assumed or fictitious name. If the bidder is conducting business under an assumed or fictitious name, it must register the fictitious name with the Secretary of the Commonwealth and the office of the prothonotary of the county wherein the registered office of such corporation is located as required by the Fictitious Corporate Name Act, as amended 15 P.S. §51 et seq. Corporate bidders conducting business under an assumed or fictitious name must provide date of registry of the assumed or fictitious name: \_\_\_\_\_
  - b.** If the bidder is a partnership:
    - (1)** The partnership  is or  is not conducting business in Pennsylvania under an assumed or fictitious name. If the bidder is conducting business under an assumed or fictitious name, it must file with the Secretary of the Commonwealth and the office of the prothonotary the county wherein the principal place of business is located as required by the Fictitious Name Act of May 24, 1945, P.L. 967, as amended 54 P.S. §28.1. Partnerships conducting business under an assumed or fictitious name must provide the date of filing of the assumed or fictitious name with the Secretary of the Commonwealth: \_\_\_\_\_
    - (2)** The partnership  is or  is not a limited partnership formed under the laws of any jurisdiction other than the Commonwealth of Pennsylvania. If the bidder is an Out-of-state limited partnership, it must register with the Pennsylvania Department of State as required by the Act of July 10, 1981, P.L. 237, as amended, 59 Pa. C.S.A. §503. Out-of-state limited partnerships must provide the date of registry with the Pennsylvania Department of State: \_\_\_\_\_
  - c.** If the bidder is an individual:

He or she  is or  is not conducting business under an assumed or fictitious name. If the bidder is conducting business under an assumed or fictitious name, he or she must file with the Secretary of the Commonwealth and the office of the prothonotary in the county wherein the principal place of business is located as required by the Fictitious Name Act of May 24, 1945, P.L. 967, as amended, 54 P.S. §28.1. Individuals conducting business under an assumed or fictitious name must provide the date of filing of the assumed or fictitious name with the Secretary of the Commonwealth: \_\_\_\_\_



## **WORKER PROTECTION AND INVESTMENT CERTIFICATION FORM**

A. Pursuant to Executive Order 2021-06, *Worker Protection and Investment* (October 21, 2021), the Commonwealth is responsible for ensuring that every worker in Pennsylvania has a safe and healthy work environment and the protections afforded them through labor laws. To that end, contractors and grantees of the Commonwealth must certify that they are in compliance with Pennsylvania's Unemployment Compensation Law, Workers' Compensation Law, and all applicable Pennsylvania state labor and workforce safety laws including, but not limited to:

1. Construction Workplace Misclassification Act
2. Employment of Minors Child Labor Act
3. Minimum Wage Act
4. Prevailing Wage Act
5. Equal Pay Law
6. Employer to Pay Employment Medical Examination Fee Act
7. Seasonal Farm Labor Act
8. Wage Payment and Collection Law
9. Industrial Homework Law
10. Construction Industry Employee Verification Act
11. Act 102: Prohibition on Excessive Overtime in Healthcare
12. Apprenticeship and Training Act
13. Inspection of Employment Records Law

B. Pennsylvania law establishes penalties for providing false certifications, including contract termination; and three-year ineligibility to bid on contracts under 62 Pa. C.S. § 531 (Debarment or suspension).

### **CERTIFICATION**

I, the official named below, certify I am duly authorized to execute this certification on behalf of the contractor/grantee identified below, and certify that the contractor/grantee identified below is compliant with applicable Pennsylvania state labor and workplace safety laws, including, but not limited to, those listed in Paragraph A, above. I understand that I must report any change in the contractor/grantee's compliance status to the Purchasing Agency immediately. I further confirm and understand that this Certification is subject to the provisions and penalties of 18 Pa. C.S. § 4904 (Unsworn falsification to authorities).

<i>Signature</i>	<i>Date</i>
<i>Name (Printed)</i>	
<i>Title of Certifying Official (Printed)</i>	
<i>Contractor/Grantee Name (Printed)</i>	

# COMMONWEALTH OF PENNSYLVANIA

## DEPARTMENT OF LABOR AND INDUSTRY

### Bureau of Occupational and Industrial Safety



## UNIFORM CONSTRUCTION CODE

# BUILDING PERMIT

The plans and specifications for the building or structure named below have been reviewed by the Department of Labor and Industry and found to be in compliance with the Pennsylvania Construction Code Law (1999, November 10, P.L. 491, No. 45).

Permit Number	202400335
Permit Holder	PA GAME COMMISSION ENGINEERING DIVISION
Address	2001 ELMERTON AVENUE HARRISBURG PA 17110
Building/Structure Name	GAME COMMISSION SOUTHEAST REGIONAL OFFICE - STORAGE BLDG
Building Address	253 SNYDER RD READING 19605
Political Subdivision:	MAIDENCREEK TOWNSHIP
County:	BERKS
Approved use and occupancy classification(s)	B S1
Approved construction type	VB
Plan code	BUILDING

This permit authorizes construction of the above named building or structure in accordance with the Pennsylvania Construction Code Act, its regulations and all plans and specifications approved by the Department. A copy of this permit shall be retained at the work site until the completion of all construction.

File Number	551428
Date Issued	4/5/2024

A handwritten signature in black ink, appearing to read "Joseph C. Martin".

Joseph C. Martin  
Building Code Official

A highway access occupancy permit is required under S420 of the State highway Law (36 P.S.S 670-420) before driveway access to a commonwealth highway is permitted.

Uniform Construction Code (UCC)  
**INSPECTION LOG**

**THIS LOG MUST BE RETAINED AT THE CONSTRUCTION OR DEMOLITION SITE UNTIL THE COMPLETION OF ALL WORK AND MUST BE MADE AVAILABLE TO ALL DEPARTMENT CODE OFFICIALS, UPON REQUEST.** All Inspections preceded by a "Y" must be performed in accordance with the approved construction documents and section 403.45 of the UCC before a "Certificate of Compliance or a Certificate of Occupancy and Use" will be issued. This document's only use is to inform the permit holder of required inspections and is to enable L&I staff to record the completion of these inspections during the course of the construction process. It is not intended to document the fulfillment of all required UCC obligations or establish the right to legally occupy the building or structure named below.

**Drawing Index Number:** 202400335  
**Building/Structure Name:** GAME COMMISSION  
**Address:** 253 SNYDER RD  
READING PA 19605

**File Number:** 551428

Requests for inspections must be made in conformance with the Inspection Procedures Statement and should be directed to the inspector named below.

<b>Inspector:</b> George Inhof Jr (610)741-8644 ginhof@pa.gov				
If unavailable, contact Central Office: 717-787-1291 jecole@pa.gov				
REQUIRED	INSPECTION	INSPECTOR (PRINT)	INSPECTOR (SIGNATURE)	DATE ACCEPTED
Y	Footing Environment			
Y	Foundation			
Y	Concrete Under Slab/Floor			
	Underground Plumbing			
	Underground Mechanical			
Y	Underground Electrical			
Y	Plumbing Rough-in			
Y	Mechanical Rough-in			
Y	Electrical Rough-in			
D	Framing			
Y	Insulation			
	Fire Protection			
Y	Accessibility Final			
Y	Energy Final			
Y	Mechanical Final			
Y	Electrical Final			
Y	Plumbing Final			
Y	Building Final			
	Demolition Final			
	Alterations Final			
	Sign Final			
	Structure Final			

## **TECHNICAL SPECIFICATIONS**

The following stipulations, specifications and description of Work are defined and described as Technical Specifications and it is understood and agreed that everything herein contained is hereby made part of the Contract. Wherever any feature of the Work is not fully set forth in these Technical Specifications and is necessary for the completion of Work, it shall be understood that the same is governed by the rules of the best prevailing practice for that class of Work, as determined by the Pennsylvania Game Commission and its representatives.

These Technical Specifications and any drawings, maps and/or plans forming a part thereof, will cover the furnishing of all labor, equipment, tools, materials, and related items necessary to perform the Work, as required under this Contract.

- Section 1 – Summary of Work
- Section 2 – Submittals
- Section 3 – ES Control
- Section 4 – Excavation
- Section 5 – Compacted Backfill
- Section 6 – Retaining Wall
- Section 7 - Paving
- Section 8 – Aggregate
- Section 9 – Vapor Barrier
- Section 10 – Concrete
- Section 11 – Gutter and Spouting
- Section 12 – Framing Lumber and Carpentry
- Section 13 – Roof Trusses
- Section 14 – Metal Roofing and Siding
- Section 15 – Soffits and Fascia
- Section 16 – Insulation
- Section 17 – Suspended Ceiling System
- Section 18 – Windows
- Section 19 – Doors
- Section 20 – Architectural Wood Casework
- Section 21 – Incidentals
- Section 21 – Seeding
- Section 23 – HVAC Installation/Components (CONTRACT No. 2)
- Section 24 – Plumbing System/Components (CONTRACT No. 3)
- Section 25 – Electrical Power Supply Connection (CONTRACT No. 4)
- Section 26 – Electric Power Distribution & Lighting (CONTRACT No. 4)
- Section 27 – Electric Emergency Generator (CONTRACT No. 4)

## **DRAWINGS**

The following Drawings are included:

- CS-1 Cover Sheet
- SP-1 Existing Building Site Plan
- SP-2 Building Site Plan & Details
- A-1 Building Floor Plan & Details
- A-2 Elevations, Sections, Schedules & Reflected Ceiling Plan
- A-3 Wall Section & Details
- A-4 Wall Section & Details
- A-5 Enlarged Plan & Elevations
- P-1 Plumbing Floor Plan, Elevations & Details
- M-1 Mechanical Floor Plan & Details
- E-1 Electrical Floor Plan, Schedules & Details

**TECHNICAL SPECIFICATION SECTION No. 1 - SUMMARY OF WORK**

**1.1 – SCOPE OF PROJECT**

The intent of this project is to construct a new 40' x 80' pole building complete with a covered canopy section to serve as the Pennsylvania Game Commission (PGC) Southeast Regional Office, as a New Storage and Research Building. The new building is in Maidencreek Township, Berks County. The project consists of constructing the pole building structure with concrete floor slabs, wood framing, installing metal roofing and siding panels, installing insulation, interior OSB walls w/FRP panels, installing doors, windows, installation of HVAC, electrical, including a generator and plumbing building systems and other building appurtenances. Connections of the utilities for the new building are part of this project and include the telephone, electric, sewer and water supply systems. The connections including trenching and backfilling will be the responsibility of the associated contract. The site is mainly level but will need some excavation and additional fill w/stone for the exterior slab work and new paving. This is included in the quantities.

**1.2 – WORK AREA**

The work area for this project is located at the Southeast Regional Office. The building address is 253 Snyder Road, Reading, PA 19605. The property is owned by the PGC.

**1.3 – WORK HOURS**

The work hours at the project site are during regular PGC business hours which are Monday through Friday, 7:30AM to 4:00PM. Work during different hours is permitted with prior approval by the PGC. Requests should be submitted two days in advance.

**1.4 – ACCESS TO WORK AREA**

Access to the work area is directly off Dries Road. The Contractor is to review with PGC on available space to store equipment or materials on site, so that normal daily operations at the Regional office are not interrupted.

**1.5 – SITE LAYOUT AND PREPARATION**

The PGC will locate the approximate building footprint and mark the floor elevation during the initial job conference. The Contractor is responsible for the new building construction, installing the required utility systems and/or lines and grading/placement of the concrete and paved parking area(s) around the new building.

## **1.6 – PERMITS, LAWS AND REGULATIONS**

The Contractor shall procure and pay for all permits, licenses, inspections, conveniences, or other approvals necessary for the execution of the contract. *The only fee expected may or may not be a third-party inspection of the electrical meter base and trenching.* The PGC has secured a building permit from the PA Department of Labor & Industry (L&I) for construction of this building at no cost to the contractor. A copy of this permit will be provided to the contractor along with an inspection log checklist. The contractor shall notify the L&I inspector and coordinate with the PGC so that the required inspections take place, and the project is not unduly delayed. ***Local building code officials have no jurisdiction over this project.***

The Contractor shall comply with all laws, ordinances, rules, orders and regulations relating to the performance of the work, the protection of adjacent property, the maintaining of surface passageways, safety measures, and/or other protective facilities.

All applicable Federal and State laws and regulations and regulations of all utilities, having jurisdiction over construction of the project shall apply to the contract throughout, and they shall be deemed to be included in the contract as a part, thereof, the same as though herein written out in full.

All regulations of the Occupational Safety and Health Act are in effect on this contract. It will be the Contractor's responsibility to make himself aware of all appropriate County, State and Federal regulations that apply to this contract.

Any violations incurred from improper execution of the above provisions shall be paid for by the Contractor. Loss of time on the project from such violations will not be tolerated.

## **1.7 – ROAD PERMITS AND BONDING**

The Contractor shall coordinate, acquire, pay for, and maintain for the duration of the project any and all permits or bonds required by local municipalities and/or PennDOT to utilize public roads and infrastructure for heavy hauling and related construction activities. Responsibilities shall include any pre or post construction inspections and related reports if required. All costs related to permitting and bonding public roadways and infrastructure shall be included with and incidental to the Bid submitted by the Contractor and will not be paid for separately.

**TECHNICAL SPECIFICATION SECTION No. 2 - SUBMITTALS**

**2.1 – SECTION INCLUDES/CONTENT**

- A. Included in this section of the specifications is a list of approvals required for all materials incorporated into the project. The Pennsylvania Game Commission reserves the right to require additional approvals if necessary. No material, equipment or supplies listed herein shall be incorporated into the work until the Contractor has obtained prior approval from the Department.
- B. Submittals required by each prime contract are indicated in the description of items to be submitted, Paragraph 2.8.

**2.2 - SUBMITTAL PROCEDURES**

- A. Comply with the following or resubmission will be required:
  - 1. Indicate contract number and specification section on each item submitted.
  - 2. Signify approval by stamp, initialing and dating each item prior to submission to the Designer.
- B. Items requiring testing shall be forwarded directly to the approved laboratory. The Contractor shall pay all costs associated with testing.
- C. Expedite critical materials, equipment and shop drawings, and other required submissions.
- D. Incomplete submissions will be returned for resubmission.
- E. Use of substitutions for materials or details shown on the contract drawings or called for in these specifications require written approval from the Department.

**2.3 - PRODUCT DATA**

- A. Manufacturer's printed directions and manufacturer's standard specifications showing all dimensions, cuts, finishes, etc., as well as catalog cuts and ratings of all material will be required and shall be submitted in advance prior to application and/or installation.

**2.4 - TESTS**

- A. Submit required reports listing items tested, tests conducted, and results obtained as specified.

**2.5 - CERTIFICATIONS**

- A. Submit required certifications in written form identifying authorized representative, manufacturer, systems designer, and other required data as specified.



## **2.6 - WARRANTIES**

- A. Refer to Specifications for required warranties. Copies of proposed warranties specified for products shall accompany the designated submittal of that product.

## **2.7 - OPERATION AND MAINTENANCE MANUALS**

- A. Manual Format (Use 3-ring binder):

1. Title page with the following information for each system covered:
  - a. Project Title and Contract Number (in capital letters)
  - b. Name of Company
  - c. Name of the individual to be called
  - d. Normal telephone numbers
  - e. Contractor's account number for project
2. Index listing all sections of the Manual.
3. Copies of all warranties for equipment or materials furnished in contract. (Index tabbed)
4. Complete system circuit diagrams, block diagrams, copies of all approved shop drawings, which shall clearly illustrate how all the components relate and how they are interconnected and a point wiring diagram.
5. Reports, testing analysis.
6. Operating instructions and maintenance instructions for all equipment and finish materials furnished.
7. All approved, shop drawings, descriptive data, and any certifications.

## **2.8 - SUBMITTALS LIST**

- A. Abbreviations
  1. Mfr - for Manufacturer
  2. Prod - for Producer or Supplier
  3. SHDR - for Shop Drawings
  4. DeDa - for Descriptive Data or Catalog Cuts
  5. Samp - for Samples
  6. Cert - for Certification
  7. Tests - required Test Reports
  8. Warr – for Warranties

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<b>GENERAL CONSTRUCTION</b>								
DESCRIPTION OF ITEMS TO BE SUBMITTED	MFR	PROD	SHDR	DeDa	SAMP	CERT	TESTS	WARR
CONCRETE	X	X		X			X	
WOOD POLE BUILDING FRAMING & ENGINEERED LUMBER	X	X		X			X	
WOOD ROOF TRUSSES	X	X	X	X		X		
EXPOSED FASTENER METAL ROOFING & SIDING SYSTEMS	X	X		X	X	X		X
SNOW GUARDS	X	X		X				
NEW SEAMLESS ALUMINUM GUTTERS & DOWNSPOUTING	X	X		X				
NEW ALUMINUM SOFFIT, FASCIA & TRIMS	X	X		X				
BATT INSULATION	X	X		X				
RIGID FOUNDATION INSULATION	X	X		X				
STEEL DOORS, FRAMES & HARDWARE	X	X		X				X
12' & 14' WIDE O.H. DOORS, MAN. OPERATORS & HARDWARE	X	X		X				
WINDOWS	X	X		X				
ARCHIECTURAL CASE WORK & COUNTERTOPS	X	X	X	X				
FIBERGLASS REINF. PLASTIC (FRP) WALL PANEL SYSTEM	X	X		X				
MR DRYWALL SYSTEM	X	X		X				
SEALANTS	X	X		X			X	
RETAING WALL BLOCK	X	X		X				
PAVING, SEALANTS AND LINE STRIPING	X	X		X				
PROJECT SCHEDULE				X				
<b>MECHANICAL CONSTRUCTION</b>								
DESCRIPTION OF ITEMS TO BE SUBMITTED	MFR	PROD	SHDR	DeDa	SAMP	CERT	TESTS	WARR
HEAT PUMP & FURNACE	X	X		X				X
INSULATED DUCTORK	X	X	X	X				
THERMOSTAT/CONTROLS	X	X		X				
AIR REGISTERS AND DAMAPERS	X	X		X				
NG GAS FIRED UNIT HEATER W/DIRECT VENT	X	X		X				X
PROJECT SCHEDULE				X				

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<b>PLUMBING CONSTRUCTION</b>								
DESCRIPTION OF ITEMS TO BE SUBMITTED	MFR	PROD	SHDR	DeDa	SAMP	CERT	TESTS	WARR
ADA COMPLIANT WATER CLOSET	X	X		X				
WALL HUNG LAVAVTORY	X	X		X				
SHOWER COMPARTMENT	X	X		X				
COUNTERTOP SET IN SINK BASIN	X	X		X				
UTILTIY SINK	X	X		X				
LAVAVTORY & SINK FAUCETS	X	X		X				
STAINLESS STEEL UTILITY SINK	X	X		X				
HOT WATER HEATER	X	X		X				
POLYCAST PRE-SLOPED TRENCH DRAIN SYSTEM	X	X		X				
4" FLOOR DRAIN	X	X		X				
CLOTHES WASHER WATER VALVE CABINET	X	X		X				
DOMESTIC WATER SUPPLY PIPING	X	X		X				
PIPING INSUALTION	X	X		X				
SANITARY SEWER PIPING								
HOSE BIB	X	X		X				
BATH ACCESSORIES	X	X		X				
PROJECT SCHEDULE				X				
<b>ELECTRICAL CONSTRUCTION</b>								
DESCRIPTION OF ITEMS TO BE SUBMITTED	MFR	PROD	SHDR	DeDa	SAMP	CERT	TESTS	WARR
BATTERY BACK UP EMERGENCY EXIT SINAGE w/ EXIT LIGHTING	X	X		X				
LIGHTING FIXTURES & CONTROLS	X	X		X				
WIRING DEVICES AND DUPLEX RECEPTACLES	X	X		X				
ELECTRICAL POWER CONDUCTORS & CONDUIT	X	X		X				
GROUNDING AND BONDING ELECTRICAL SYSTEMS	X	X		X				
DISCONNECT & PANELS	X	X		X				
GENERATOR AND AUTOMATIC TRANSFER SWITCH								
UTILITY VAULT BOX	X	X		X				
PROJECT SCHEDULE				X				

**TECHNICAL SPECIFICATION SECTION No. 3 - EROSION AND SEDIMENTATION CONTROL**

**3.1 -SCOPE**

This work is implementing the erosion and sedimentation control measures to protect the surrounding environment. Compliance is required with Chapter 102 of the Department of Environmental Protection's regulations is also required.

**3.2 - PROCEDURE**

The Contractor shall install a 12-inch diameter silt sock around the building site as indicated on the Site Plan drawing. The silt sock shall be anchored with 1" x 1" x 3' wood posts on 8-foot centers. The end of the silt sock shall be extended uphill so that water cannot flow around the barrier.

Failure to implement soil erosion and sediment pollution control measures may result in a cease-and-desist order, causing shutdown of the work. No extension of time, nor additional compensation will be granted if such a shutdown should occur because of act or neglect of the Contractor.

The Contractor may, with the approval of the Game Commission, perform temporary seeding operations to maintain finished graded areas until the optimum time for performing permanent seeding. Areas that will be surfaced by stone to serve as parking areas of driveways do not need to be seeded.

Periodically remove accumulated sediments from control measures and dispose of in suitable work areas. Remove all temporary erosion and sediment pollution control measures upon completion of construction, unless otherwise directed by the Game Commission.

**3.3 - MEASUREMENT AND PAYMENT**

This price and payment shall constitute full compensation for the installation of soil erosion and sediment controls, including temporary seeding as specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work.

A. Unit of Measurement: Lump Sum.

**TECHNICAL SPECIFICATION SECTION No. 4 - EXCAVATION**

**4.1- SCOPE**

This work involves the drilling, hauling, and disposal of all materials encountered for construction of the building pole foundations, installation of drainage pipes, water lines and other utilities, as indicated on the Drawings, or designated by the Game Commission.

**4.2 - PROCEDURE**

**A. General** - Follow all guidelines set forth in the Construction Industry Standards, OSHA 2207, of the Occupational Safety and Health Administration, U.S. Department of Labor. Protect the work, adjacent buildings, and property.

The Contractor is required to contact the PA One Call System at 8-1-1 or 1-800-242-1776 (outside PA) prior to excavation operations at the site.

During excavation operations, keep the top surface graded for drainage. Do not over-excavate because unauthorized excavation and replacement of materials in the over-excavated areas will not be measured and paid for. Replace over-excavated work with concrete, gravel, earth or other materials designated by, and at no additional cost to the Game Commission.

**B. Excavation** - Remove all materials to the limits shown on the Drawings or as necessary to construct the pole foundations for the new building, installation of utility lines, new gravel parking area and roadway.

**C. Disposal** – Suitable excavated materials will be used for backfill of drainage pipes, utility lines and building pole foundations. The excavated materials will also be used to establish the finished grade around the new building. This project is intended to be a balanced cut/fill job and the Contractor will not be required to transport extra material off the site.

**4.3 - MEASUREMENT AND PAYMENT**

This price and payment shall constitute full compensation for all excavation of soils to the required depths for the construction of new building foundations, concrete aprons and entry slabs, and utility trenches as specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work.

A. Unit of Measurement: Lump Sum.

**TECHNICAL SPECIFICATION SECTION No. 5 - COMPACTED BACKFILL**

**5.1 – SCOPE**

This work is backfilling around the completed pole foundations and installed utility lines with suitable materials obtained from the required excavation as shown on the Drawings, or as directed by the Game Commission.

**5.2 - MATERIALS**

Secure backfill materials from the required excavation. The onsite soil may contain cobbles and boulders which are not suitable for backfill around pipes or concrete foundations. Screening of the excavated soils may be necessary to separate objectionable stones and other debris from the backfill material. Materials shall be free from roots, brush, frozen and other objectionable materials, and stones having any dimension greater than three (3) inches. The Game Commission will decide the material's suitability for use as backfill during excavation operations.

**5.3 - PROCEDURE**

Conduct backfill operations so that the building foundations and utility lines are not damaged. At your own expense, and to the satisfaction of the Game Commission, repair or replace any structure damaged by your operations.

Place backfill in the dry. Place material in layers not exceeding four (4) inches in depth and compact each layer with vibratory compactors. Where working clearances permit, backfill may be placed in layers not exceeding eight (8) inches in depth, and compacted with a roller. Do not drop backfill materials, but scatter and bring up evenly. Add water or dry the backfill materials as necessary to attain as close to the optimum moisture content as possible during compaction. No free water shall drain off and adversely affect the underlying or adjacent materials. Acceptable compaction will be determined on the basis of non-movement of the material under the compaction equipment. If the density and/or moisture content of the backfill is not satisfactory, replace and/or re-compact the materials to the satisfaction of, and at no additional cost to the Game Commission.

**5.4 - MEASUREMENT AND PAYMENT**

This price and payment shall constitute full compensation for performing all compacted backfilling to the required depths for the construction of new building foundations, and utility trenches as specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work.

A. Unit of Measurement: Lump Sum.

## **TECHNICAL SPECIFICATION SECTION No. 6 – RETAINING WALL**

### **6.1- SCOPE**

Work includes furnishing and installing modular concrete block retaining wall units to the lines and grades designated on the construction drawings and as specified herein. Manufacturer to be Allan Block or approved equal.

### **6.2- REFERENCE STANDARDS**

- A. ASTM C1372 Standard Specification for Segmental Retaining Wall Units.
- B. ASTM C1262 Evaluating the Freeze thaw Durability of Manufactured CMU's and Related concrete Units
- C. ASTM D698 Moisture Density Relationship for Soils, Standard Method
- D. ASTM D422 Gradation of Soils
- E. ASTM C140 Sample and Testing concrete Masonry Units

### **6.3 - DELIVERY, STORAGE, AND HANDLING**

- A. Contractor shall check the materials upon delivery to assure proper material has been received.
- B. Contractor shall prevent excessive mud, cementitious material, and like construction debris from coming in contact with the materials.
- C. Contractor shall protect the materials from damage. Damaged material shall not be incorporated in the project (ASTM C1372).

### **6.4 – MATERIALS**

- A. Wall units shall be Allan Block Retaining Wall units, AB Collection, AB Stones complete with AB Caps, Color to be Rustic Blend or approved equal. PGC to review samples prior to ordering.
- B. Wall units shall have minimum 28-day compressive strength of 3000 psi (20.7 MPa) in accordance with ASTM C1372. The concrete units shall have adequate freeze-thaw protection with an average absorption rate in accordance with ASTM C1372 or an average absorption rate of 7.5 lb./ft<sup>3</sup> (120 kg/m<sup>3</sup>) for northern climates and 10 lb./ft<sup>3</sup> (160 kg/m<sup>3</sup>) for southern climates.
- C. Exterior dimensions shall be uniform and consistent. Maximum dimensional deviations on the height of any two units shall be 0.125 in. (3 mm).
- D. Wall units shall provide a minimum of 110 lbs total weight per square foot of wall face area (555 kg/m<sup>2</sup>). Hollow cores to be filled with wall rock and compacted by using plate compactor on top of wall units (see section 3.4). Unit weight of wall rock in cores may be less than 100% depending on compaction levels.
- E. Exterior face shall be textured. Color as specified by owner.
- F. Freeze Thaw Durability: Like all concrete products, dry-cast concrete SRW units are susceptible to freeze-thaw degradation with exposure to de-icing salts and cold temperature. This is a concern in northern tier states or countries that use deicing salts. Based on good performance experience by several agencies, ASTM C1372, or

equivalent governing standard or public authority, Standard Specification for Segmental Retaining Wall Units should be used as a model, except that, to increase durability, the compressive strength for the units should be increased to a minimum of 4,000 – 5,800 psi (28 - 40 MPa) unless local requirements dictate higher levels. Also, maximum water absorption should be reduced and requirements for freeze-thaw testing increased.

- a. Require a current passing ASTM C1262 or equivalent governing standard or public authority, test report from material supplier in northern or cold weather climates.
- b. See the Best Practices for SRW Design document for detailed information on freeze thaw durability testing criteria and regional temperature and exposure severity figures and tables to define the appropriate zone and requirements for the project.

## **6.5 - PROCEDURE**

1. Excavation
  - A. Contractor shall excavate to the lines and grades shown on the construction drawings. Contractor shall use caution not to over-excavate beyond the lines shown, or to disturb the base elevations beyond those shown.
  - B. Contractor shall verify locations of existing structures and utilities prior to excavation. Contractor shall ensure all surrounding structures are protected from the effects of wall excavation.
2. Foundation Soil Preparation
  - A. Foundation soil shall be defined as any soils located beneath a wall.
  - B. Foundation soil shall be excavated as dimensioned on the plans and compacted to a minimum of 95% of Standard Proctor (ASTM D698) prior to placement of the base material.
  - C. Foundation soil shall be examined by the on-site soils engineer to ensure that the actual foundation soil strength meets or exceeds assumed design strength. Soil not meeting the required strength shall be removed and replaced with acceptable material.
3. Base
  - A. The base material shall be the same as the Wall Rock material (Section 2.2) or a low permeable granular material.
  - B. Base material shall be placed as shown on the construction drawing. Top of base shall be located to allow bottom wall units to be buried to proper depths as per wall heights and specifications.
  - C. Base material shall be installed on undisturbed native soils or suitable replacement fills compacted to a minimum of 95% Standard Proctor (ASTM D698).



- D. Base shall be compacted at 95% Standard Proctor (ASTM D698) to provide a level hard surface on which to place the first course of blocks. The base shall be constructed to ensure proper wall embedment and the final elevation shown on the plans. Well-graded sand can be used to smooth the top 1/2 in. (13 mm) on the base material.
- E. Base material shall be a 4 in. (100 mm) minimum depth for walls under 4 ft. (1.2 m) and a 6 in. (150 mm) minimum depth for walls over 4 ft. (1.2 m).
- F. Base material should be installed to allow for a minimum of one buried block to be extended into the slope to prevent erosion.

4. Unit Installation

- A. Install units in accordance with the manufacturer's instructions and recommendations for the specific concrete retaining wall unit, and as specified herein.
- B. Ensure that units are in full contact with base. Proper care shall be taken to develop straight lines and smooth curves on base course as per wall layout.
- C. Fill all cores and cavities and a minimum of 12 in. (300 mm) behind the base course with wall rock. Use infill soils behind the wall rock and approved soils in front of the base course to firmly lock in place. Check again for level and alignment. Use a plate compactor to consolidate the area behind the base course. All excess material shall be swept from top of units.
- D. Install next course of wall units on top of base course. Position blocks to be offset from seams of blocks below. Perfect "running bond" is not essential, but a 3 in. (75 mm) minimum offset is recommended. Check each block for proper alignment and level. Fill all cavities in and around wall units and to a minimum of 12 in. (300 mm) depth behind block with wall rock. Block, wall rock and infill soil placed in uniform lifts not exceeding 8 in. (200 mm). Compaction requirements for all soils in areas in, around and behind the reinforced mass shall be compacted to 95% of maximum Standard Proctor dry density (ASTM D698) with a moisture content control of +1% to -3% of optimum.
- E. For taller wall applications, structural fill should be specified for a minimum bottom 1/3 to 1/2 of the reinforced fill. If structural fill is not utilized in the reinforced mass, the depth of wall rock behind the block should be increased. See the Best Practices for SRW Design document for more information.
- F. F. The consolidation zone shall be defined as 3 ft (0.9 m) behind the wall. Compaction within the consolidation zone shall be accomplished by using a hand operated plate compactor and shall begin by running the plate compactor directly on the block and then compacting in parallel paths from the wall face until the entire consolidation zone has been compacted. A minimum of two passes of the plate compactor are required with maximum lifts of 8 in. (200 mm). Expansive or fine-grained soils may require additional compaction passes and/or specific compaction equipment such as a sheepsfoot roller. Maximum lifts of 4 in. (100 mm) may be required to achieve adequate compaction within the consolidation zone. Employ methods using lightweight compaction equipment that will not disrupt the stability or batter of the wall. Final compaction requirements in the consolidation zone shall be established by the engineer of record.

- G. Install each subsequent course in like manner. Repeat procedure to the extent of wall height. Individual course height may vary due to allowable block manufacturing tolerances per ATSM C1372. Contractor must verify wall height, if noted as being critical, prior to completion of construction to ensure the elevation of the top of the wall or the controlling elevation matches desired plan elevation, if noted as critical. Contractor must follow this method for single walls or walls that branch off into a terraced orientation.
  - H. As with any construction work, some deviation from construction drawing alignments will occur. Variability in construction of SRWs is approximately equal to that of cast-in-place concrete retaining walls. As opposed to cast-in-place concrete walls, alignment of SRWs can be simply corrected or modified during construction. Based upon examination of numerous completed SRWs, the following recommended minimum tolerances can be achieved with good construction techniques.
    - a. Vertical Control -  $\pm 1.25$  in. (32 mm) max over 10 ft. (3 m) distance
    - b. Horizontal Location Control - straight lines  $\pm 1.25$  in. (32 mm) over a 10 ft. (3 m) distance
    - c. Rotation - from established plan wall batter:  $\pm 2.0^\circ$
    - d.
5. Additional Construction Notes
- A. When one wall branches into two terraced walls, it is important to note that the soil behind the lower wall is also the foundation soil beneath the upper wall. This soil shall be compacted to a minimum of 95% of Standard Proctor (ASTM D698) prior to placement of the base material. Achieving proper compaction in the soil beneath an upper terrace prevents settlement and deformation of the upper wall. One way is to replace the soil with wall rock and compact in 8 in. (200 mm) lifts. When using on-site soils, compact in maximum lifts of 4 in. (100 mm) or as required to achieve specified compaction.
  - B. Vertical filter fabric use is not suggested for use with cohesive soils. Clogging of such fabric creates unacceptable hydrostatic pressures in soil reinforced structures. When filtration is deemed necessary in cohesive soils, use a three-dimensional filtration system of clean sand or filtration aggregate. Vertical filter fabric may be used to separate wall rock zone from fine grained, sandy infill soils if the design engineer deems it necessary based on potential water migration from above or below grade, through the reinforced zone into the wall rock on the project. Horizontal filter fabric should be placed above the wall rock column to prevent soils from above migrating into the wall rock column.
  - C. Embankment protection fabric is used to stabilize rip rap and foundation soils in water applications and to separate infill materials from the retained soils. This fabric should permit the passage of fines to preclude clogging of the material. Embankment protection fabric shall be a high strength polypropylene monofilament material designed to meet or exceed typical NTPEP specifications; stabilized against ultraviolet (UV) degradation and typically exceeding the values in Section 3, Table 1 in the AB Spec Book.

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- D. Water management is of extreme concern during and after construction. Steps must be taken to ensure that drainpipes are properly installed and vented to daylight or connected to an underground drainage system and a grading plan has been developed that routes water away from the retaining wall location. Site water management is required both during construction of the wall and after completion of construction.

**6.6 - MEASUREMENT AND PAYMENT**

This price and payment shall constitute full compensation for completing all retaining wall installation including, backfilling, grading and installation of trenching and drain piping as specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work.

- A. Unit of Measurement: Lump Sum.

## **TECHNICAL SPECIFICATION SECTION 7 – PAVING**

### **7.1 - SCOPE**

The work covered by this section consists of milling and removal of existing paving, preparation and installation of new binder and wearing course paving, tack coating of existing paving surfaces, joint sealing and providing pavement markings as indicated and shown on the drawings.

### **7.2 – MATERIALS**

- A. **Paving**-All materials for superpave asphalt binder course and bituminous wearing course shall conform with the requirements of Section 313, 410, 412, 413 and 419 respectively of the Pennsylvania Department of Transportation Specifications, Publication 408. The superpave wearing course 9.5mm mix and the binder course should be 25mm mix.
  
- B. **Joint Sealant**-Use asphalt rubber sealing compound conforming with the requirements of Section 705.4g of the Pennsylvania Department of Transportation Specifications, Publication 408. Use a premixed, prepackaged material. Heat the material within the safe heating temperature range and recommended pouring temperatures found on the manufacturer's shipping container. Place the material as close as possible to the manufacturer's recommended pouring temperature. Do not maintain batches of material at the pouring temperature for more than 6 hours. Reheat according to the manufacturer's recommendations.
  
- C. **Pavement Marking Paint** -Waterborne traffic paint conforming to Section 962.2 of PennDOT Pub. 408. Conform to PennDOT standards for unified paint standards for line marking under the Publication No. 46 for traffic engineering standards and recommendations.

### **7.3 - PROCEDURE**

#### **A. MILLING**

- 1. **Removal** – Use the Drawing to mark with paint the damaged sections of pavement to be removed. Have the pavement removal limits checked by the PGC before sawcutting. Precut the pavement to full depth by saw or other means. The thickness of the existing pavement is unknown. Protect the pavement outside the removal limits as indicated on the Drawing. Repair any damage made to pavement outside the removal limits at no additional cost to and to the satisfaction of the Game Commission.
  
- 2. **Disposal** - Dispose of the pavement in an off-site spoil area. The PGC will not supply a spoil area for this project.

**B. PAVING**

1. Preparation of subbase shall be in accordance with the requirements of Section 350 of Pub. 408. The minimum thickness of the subbase is eight (8) inches.
2. Superpave binder course shall be constructed in accordance with the methods specified in section 313 of Pub. 408. The thicknesses of the superpave base course shall be two and half (2.5) inches.
3. Superpave wearing course shall be constructed in accordance with the methods specified in section 313 of Pub. 408. The thicknesses of the superpave wearing course shall be one and half (1.5) inches.
4. The joints between the new and existing pavement shall be constructed and sealed according to Section 469-1 of Pub. 408.

**C. TACK COATING**

1. Condition the existing pavement surface including milled areas by applying bituminous tack coat. The bituminous tack coat shall be an emulsified asphalt, Class AE-T conforming to Section 460.2a of PennDOT Publication 408. Condition the existing pavement surface and apply the bituminous tack coat according to Section 460.3 of PennDOT Publication 408.

**D. JOINT SEALING**

1. Surface Preparation – Clean, dry and remove debris and loose material from cracks and joints and adjacent pavement surfaces. Clean the pavement 4 to 6 inches on both sides of the joint or crack. Immediately before sealing, use a compressed air stream or a hot compressed air lance to clean and dry damp cracks. Do not damage the surrounding pavement with overheating.
2. Sealing – Fill prepared cracks and joints level with the pavement surface. Wipe the sealant flush with the pavement surface, leaving a thin film of sealant approximately 1/16 inch thick and 1 to 3 inches wide. After wiping the crack or joint, remove and dispose of excess sealant. Do not place sealant when the air temperature is below 40 degrees or above 90 degrees.

**E. PAVEMENT MARKINGS**

1. Layout – All lines should be constructed and applied per the drawings. Additional resources may be references under Pub. 46 and may be implemented by the PennDOT inspector as needed during the construction and maintenance of traffic. The widths, thicknesses and other dimensions are to be industry standard conforming to PennDOT standards and applications.
2. Painting – Apply paint according to Section 962.3 of PennDOT Pub. 408.

**7.4 – MEASUREMENT AND PAYMENT**

Lump sum-to be included in price per construction location.

**TECHNICAL SPECIFICATION SECTION No.8 - AGGREGATE**

**8.1 - SCOPE**

This work is providing a subbase for concrete slabs and backfilling around the building, parking areas with #2A coarse aggregate as shown on the Drawings. Work includes stone around the perimeter around the building and the parking areas s required to eliminate any low or uneven spots. Related work includes AASHTO #57 and #10 aggregate for backfill around drainage pipes, water lines, electric conduits, etc.

**8.2 - APPLICABLE PUBLICATIONS**

AASHTO T 27 - Standard Method of Test for Sieve Analysis of Fine and Coarse Aggregates.

Pub. 408 - Specifications,  
Pennsylvania Department of Transportation.

Bulletin 14 - Aggregate Producers,  
Pennsylvania Department of Transportation.

**8.3 - MATERIALS**

Aggregate used for the subbase of concrete slabs shall be Type C, #2A modified aggregate, as specified in Section 703.2 of Pub. 408.

Aggregate used for backfilling around the foundation drainpipes and parking areas shall be 2B AASHTO #57 aggregate as specified in Section 703.2 of Pub. 408.

AASHTO #10 stone shall also be used to backfill around installed water lines, electric conduit and drainage pipes.

Obtain aggregates from a source listed in Bulletin 14.

**8.4 - PROCEDURE**

Place aggregates and stone in the dry, and not on frozen ground for concrete slab foundations. Conduct aggregate placement operations in such a way that the permanent structures are not damaged.

At concrete slab foundations, place stone in loose layers not exceeding 4 inches in depth and compact each layer with mechanical tampers or other approved means. If working clearances permit, place stone in loose layers not exceeding 8 inches in depth and compact each layer with rollers, tracked vehicles or other approved equipment. After compacting to the required thickness shown on the Drawings, accurately shape the foundation bed by a template to provide uniform contact for concrete placement.

Trenching and backfill around the drainpipes and utility lines are the responsibility of the electrical and plumbing contractor's work. Electrical and plumbing trades own their own trenching and backfill.

#### **8.5 - MEASUREMENT AND PAYMENT**

This price and payment shall constitute full compensation for providing all aggregates and the placement and compacting of aggregates to the required depths for the construction of new building foundations, concrete aprons and slabs and utility trenches as specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work. Aggregate used for replacing caved-in-material, and material excavated beyond the established payment lines will not be measured and paid for.

A. Unit of Measurement: Tons, measured by the weight slips from stone supplier, as applicable for the three types of aggregate used for the project.



**TECHNICAL SPECIFICATION SECTION No.9 – VAPOR BARRIER**

**9.1 – SCOPE**

This work is providing and installing a polyethylene vapor barrier under the concrete floor slab for the new building as shown on the Drawings.

**9.2 – MATERIALS** – The vapor barrier shall be a polyethylene sheet conforming to ASTM E 1745 and ASTM D4397 with a minimum thickness of 6 mils and a perm rating of <0.03 perms. No C&A film is to be used. Tape and seal all joints with approved pressure-sensitive or waterproof tape. Submit a catalog cut or other information for the vapor barrier from the manufacturer to the PGC for review and approval before ordering any materials.

**9.3 - PROCEDURE**

Prepare the #2A coarse aggregate subbase for the concrete floor slab according to the requirements of Section 6 of these Technical Specifications. Smooth the top surface of the stone subbase to lessen the chance of puncturing the vapor barrier. Install rigid foam insulation panels along the exterior edges of the floor slab. Place the vapor barrier on top of the stone subbase and under the insulation panels. Smooth and stretch the vapor barrier so there are no folds or creases. Make sure that the vapor barrier extends to the splash boards along all four sides of the concrete floor slab.

Cut the vapor barrier around the trench drains and vertical pipe. Use pressure-sensitive or waterproof tape along seams in the vapor barrier and around trench drains. Repair or replace any damaged or punctured sections in the vapor barrier.

**9.4 – MEASUREMENT AND PAYMENT**

This price and payment shall constitute full compensation for the installation of vapor barriers including vapor barrier tapes as specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work. No separate measurement or payment for vapor barrier used to repair cuts or holes.

A. Unit of Measurement: Lump Sum.

## **TECHNICAL SPECIFICATION SECTION No. 10 – CONCRETE**

### **10.1 - SCOPE**

This work is furnishing all materials, plant, and equipment, and performing all labor for the manufacture, transporting, placing, finishing, patching, curing, and testing of concrete to be placed under the Contract. Concrete is to be used for the pole footings and the floor slabs of the new building. Concrete slabs are to be constructed for the rear doorway and front apron. The Contractor shall protect all concrete against injury until final inspection and acceptance by the Game Commission.

Except as herein qualified, matters pertaining to measuring, placing and testing of concrete; materials used; construction of formwork; concrete finishing; curing of concrete; detailing, fabricating and placing of reinforcing and accessories shall be governed by the following codes and regulations:

- (a) Building Code Requirements for Reinforced Concrete (ACI 318)
- (b) Current "Manual of Standard Practice for Detailing Reinforced Concrete Structures" (ACI 315)
- (c) Current "Recommended Practice for Measuring, Mixing, and Placing Concrete" (ACI 304)
- (d) All matters in connection with concrete work, not otherwise specified, shall conform to the applicable sections of the Pennsylvania Department of Transportation Specification Publication 408.

### **10.2 - TESTING AND CERTIFICATIONS**

Obtain all concrete from a PennDOT approved source. Submit a concrete mix design for each supplier to the Game Commission for approval 3 days prior to placing concrete.

One set of four (4) standard test cylinders for each day's pour shall be taken and forwarded to an approved laboratory for testing. Two (2) cylinders shall be tested at the age of seven (7) days and two (2) cylinders tested at the age of twenty-eight (28) days. Three (3) copies of tabulated results of such tests shall be forwarded to the Game Commission for approval and distribution. All costs in connection with tests of concrete shall be borne by the Contractor.

Provide product information, and/or original certifications for the following items: cement, admixtures, aggregates, preformed expansion joint filler, epoxy bonding compound, joint seal material, and curing compound.

### **10.3 - COMPOSITION**

Concrete shall be composed of Portland cement, water, fine and coarse aggregates and approved admixtures, all well mixed and brought to the proper consistency.

1. ConcreteType(s):
  - a. Class AA and shall develop a minimum compressive strength of 3,500 psi in twenty-eight (28) days.
2. Concrete shall be obtained from a batch plant currently approved by the Pennsylvania Department of Transportation (PennDOT) or the Department.
3. Ready-mixed concrete shall be mixed and delivered in accordance with ASTM Designation C94.

### **10.4 - MATERIALS**

All materials shall be obtained from sources listed in PennDOT Bulletin 14 or PennDOT Bulletin 15 as applicable.

**A. Cement** - Cement shall be one of the following types:

- (1) Normal Strength Air-Entraining Portland Cement, Type IA or Type IIA, conforming to ASTM Designation C150. Synthetic fiber reinforcing should be added to the cement to meet ASTM C1609/C1609M. The fiber reinforcing shall meet ASTM C 1116/C 1116M for macro-chopped strands.
- (2) Normal Strength Air-Entraining Portland Blast Furnace Slag Cement, Type IS-A, conforming to ASTM Designation C595. Synthetic fiber reinforcing should be added to the cement to meet ASTM C1609/C1609M. The fiber reinforcing shall meet ASTM C 1116/C 1116M for macro-chopped strands.

**B. Admixtures** - Approved types of admixtures meeting ASTM Designation C260, increasing the plasticity and workability of the concrete may be used.

**C. Water** - Water for concrete shall be clean and free from injurious amounts of oil, acid, alkali, organic matter, or other deleterious substances.

**D. Aggregates** - Aggregates for concrete of normal weight shall conform to "Specifications for Concrete Aggregates" (ASTM C33).

**E. Preformed Expansion Joint Filler** - Preformed expansion joint filler shall be of the size shown on the Drawings, shall be gray in color, and shall conform with the requirements of AASHTO M153, Type 1, sponge rubber. Joint filler shall be solid sponge rubber, and no reprocessed material will be accepted. Joint filler made of numerous pieces of sponge rubber

which adhere to each other will not be acceptable. The material shall be stored as recommended by the manufacturer.

**F. Sealant (Isolation Joint)** -Joint sealant for top of isolation joint around precast trench drain and at all other joint locations as applicable to be high performance, self-leveling, 1- part polyurethane sealant with accelerated curing capacity to meet ASTM c-920, type S, Grade P, Class 25 by Sikaflex or approved equal. **(Gray)**.

**G. Curing Compound** - The curing compound shall be clear or translucent containing a red fugitive dye conforming to the requirements of AASHTO M148, Type 1-D, and must not affect water in any respect to injure fish life or impair or be detrimental to water for human consumption. The curing compound shall be stored as recommended by the manufacturer.

### **10.5 – PREPARATION OF AREAS TO RECEIVE CONCRETE**

For pole footings, excavate to the proper depth and grade. Remove any organic material from the areas to receive concrete.

For concrete slabs, place and compact #2A coarse aggregate as shown on the Drawings. Place rigid foam insulation panels and vapor barrier. Install the splash boards on the outside edges of the building to act as forms.

### **10.6 - JOINTS AND EMBEDDED ITEMS**

Place preformed expansion joint filler around the poles and in the expansion joint as shown on the Drawings. Place trench drains, drainage pipes and utility sweeps. All joint materials and embedded items shall be clean and free of dust, grit, mud, oil or grease, and shall be held firmly in place to avoid displacement during concreting.

### **10.7 - FORMWORK**

Forms shall conform to the shapes, lines, grades, and dimensions of the concrete as called for on the Drawings. They shall be sufficiently tight to prevent leakage of mortar and shall be properly braced or tied together to maintain the desired position and shape during and after placing concrete. Forms shall be removed in such a manner as to assure the complete safety of the structure.

### **10.8 - CONCRETE PLACEMENT**

**A. Depositing** - Concrete shall be deposited in the presence of a representative of the Game Commission.

In all cases, concrete shall be deposited as nearly as practicable in its final position and not allowed to flow in a manner to permit or cause segregation and loss of slump. Once concreting is started, the operation shall be carried on continuously until the placing of the panel or section

is completed. Concrete shall be placed in continuous, approximately horizontal layers, the depths of which generally shall not exceed twenty (20) inches.

All conveying equipment shall be of such size and design as to insure a practically continuous flow of concrete at the forms. Free falls of more than four (4) feet are not permitted.

Any concrete that has been contaminated by foreign matter or which has become so stiff that proper placing can not be assured, shall be wasted.

If unfavorable weather conditions exist, the Game Commission may order the work stopped, either before concreting has started or after it is in progress, until a suitable formwork or covering is set up on the site to protect fresh concrete from rain, hail, snow, or other unfavorable conditions.

**B. Consolidation** - Concrete shall be consolidated by vibration so that concrete is thoroughly worked around the reinforcement, around embedded items, and into corner of forms, eliminating all air or stone pockets which may cause honey-combing, pitting, or planes of weakness. Internal vibrators shall be of the largest size and the most powerful that can be properly used in the work, as described in Table 5.1.4 of ACI 309, and they shall be operated by competent workers. Vibrators shall not be used to transport concrete within the forms and shall not be attached to the reinforcing bars to consolidate concrete. Vibrators shall be inserted and withdrawn at points approximately eighteen (18) inches apart. At each insertion, the duration shall generally be between five (5) and fifteen (15) seconds, sufficient to consolidate concrete, but not sufficient to cause segregation. A spare vibrator shall be kept at the job site during all concrete placing operations. Before continuing the placement operations, any displacement of reinforcement, forms, or embedded items because of placement or vibration shall be corrected. Concrete which has been segregated by over vibration shall be removed and discarded. Proper care shall be used to ensure that the vibrators does not penetrate or disturb layers which have partially hardened. If directed by the Game Commission, exposed form surfaces shall be spaded in addition to vibration to minimize bubbles in concrete surface.

## **10.9 - REMOVAL OF FORMS AND REPAIR OF CONCRETE**

**A. Removal of Forms** - Forms shall be removed as soon as practicable to avoid delay in curing and to enable earliest repair of surface imperfections. The time of form removal shall be based on the effect on the concrete; there shall be no damage to the concrete, due either to the removal of support or to the form stripping operation. Forms shall be carefully removed to avoid injury to the concrete, and satisfactorily repair any concrete so damaged. Forms shall not be removed until twenty-four (24) hours has elapsed from concrete placement except when specifically authorized by the Game Commission. During cold weather, forms shall be kept in place for five (5) days, unless otherwise authorized by the Game Commission. The Contractor shall accept full responsibility for any damage to concrete incurred by stripping too early.

**B. Repair of Concrete** - Repair of concrete shall be performed by skilled workers and in the presence of a representative of the Game Commission. Repairs shall be completed within 48 hours after removal of forms. When directed by the Game Commission, the Contractor shall

repair or remove and replace any concrete that does not meet the requirements of any portion of this Technical Specification. Any concrete which is not satisfactorily repaired shall be removed and replaced.

**10.10 - TOLERANCES**

The concrete surfaces and reinforcing steel shall conform to the tolerance limits listed in the following tables. Permissible surface irregularities for the various classes of concrete surface finish as specified in "Finishing Concrete" section of these specifications are defined as "Finishes," and are to be distinguished from tolerances as described herein. The Contractor shall establish and maintain, in an undisturbed condition and until final completion and acceptance of the Project, sufficient control points and benchmarks to be used for reference purposes to check tolerances. Concrete work that exceeds the tolerance limits specified shall be satisfactorily remedied or removed and replaced by and at the expense of the Contractor.

<b>CONCRETE TOLERANCES</b>		
Variation from established lines	Change in 10 feet Maximum permissible	1/4 inch 1 inch
Variation from the plumb in lines and surfaces	In 10 feet In 20 feet In 40 feet	1/4 inch 3/8 inch 3/4 inch
Variation from the level or from the grades indicated on the Drawings for top of walls	In 10 feet In 20 feet In 40 feet	1/4 inch 3/8 inch 3/4 inch
Variation in thickness of slabs and walls	Minus Plus (Walls) Plus (Slabs)	1/4 inch 1/2 inch No limit
Footings:		
(1) Variation of dimensions in Plan	Minus Plus	1/2 inch 2 inches
(2) Misplacement or Eccentricity	Not more than	2 inches
(3) Reduction in thickness	Minus	5% of thickness

**NOTE:** No abrupt changes in line, grade or dimension will be permitted for any of the conditions listed above. Variations in thickness will be permitted only as "spot" conditions and shall not extend over large areas.

Reinforcement steel shall be fabricated in accordance with the fabricating tolerances given in ACI 315 and shall be placed conforming to the tolerance limits listed in the following table:

<b>REINFORCEMENT STEEL TOLERANCES</b>		
Variation for Protective Covering	With 2-inch cover	1/4 inch
	With 3-inch cover	1/2 inch
Variation from indicated spacing for individual bar		1/2 inch
Variation from lap	Minus	0 inch
	Plus	No limit

### **10.11 - FINISHING CONCRETE**

**A. General** - Allowable deviations from plumb or level and from alignment, grades, and dimensions shown on the Drawings and as specified in Section 7.10 are defined as "tolerances," and are to be distinguished from finishes as described herein. Finishing shall be completed immediately after removing the forms.

**B. Formed Surfaces** - All formed concrete surfaces shall be treated as described below by a skilled concrete finisher.

Holes shall be filled, and defective areas repaired immediately after form removal. Fins and irregularities shall be removed or corrected. There shall be no conspicuous offsets, bulges or misalignment of concrete.

**C. Unformed Surfaces** - All unformed surfaces shall be finished in accordance with the following requirements by a skilled concrete finisher:

Immediately after vibration is completed, the surface shall be leveled and screeded sufficiently to produce an even, uniform texture.

Floating shall be done by hand or power-driven equipment. Floating shall not start until some stiffening has taken place in the surface concrete and the moisture film or "shine" has disappeared. The floating should work the concrete no more than necessary to produce a surface that is uniform in texture and free of screed marks. Any necessary cutting or filling of surface to prevent irregularities should be done during the floating operations. Joints and edges shall be finished with edging tools at this time.

After floating is completed, apply a light steel trowel finish to the top surface of the floor slab concrete. Light surface pitting and light trowel marks are not objectionable. For the doorway ramps and front apron slab; apply a light broom finish for traction.

## **10.12 - CURING AND PROTECTION**

**A. General** - After finishing operations are completed, the concrete shall be membrane cured. A minimum of seven (7) consecutive days of curing and protection shall be required. The following definitions of air temperature and curing temperature are specified below, as they will be mentioned frequently in this section:

**Air Temperature** - The measured temperature in the shade, not in the direct rays of the sun, and away from artificial heat.

**Curing Temperature** - The temperature of the air immediately adjacent to concrete. Where concrete is not covered by forms or other protective coverings, or where protective coverings are considered inadequate, the curing temperature will be considered as being not more than the air temperature. During cold weather, the curing temperature is the temperature inside the forms, protective coverings or housings. The curing temperature for the first 24-hour period after placing concrete will be considered as not more than the temperature of the concrete at the time of its placement in the forms.

**B. Insulation** - High-low thermometers shall be provided and an accurate daily record of air and curing temperatures maintained during cold weather. These temperatures shall be submitted daily to the Game Commission. Curing temperatures shall be taken on the surface of the concrete and at representative locations on structures.

Adequate care shall be provided so that at any time during the curing period the curing temperature does not fall below 50°F. Any day during which the curing temperature drops below 50°F but remains above 35°F, will not be considered as day as a curing day and the duration of the curing period shall be extended accordingly. If at any time during the curing period, the curing temperature falls below 35°F, the contractor shall core and test the concrete at his own expense. The concrete shall be considered satisfactory and acceptable if the strength and durability requirements of Section 7.3.1 are met.

In moderate weather, when the forecasted air temperature is expected to be between 35°F and 50°F, in addition to membrane curing, insulated blankets shall be furnished and placed over concrete and forms.

During cold weather, when the forecasted air temperature is expected to be 35°F or lower, cure shall be by the methods prescribed for curing in moderate weather, and in addition, furnish and install canvas covered frames or some type of approved housing that will completely enclose the fresh concrete and forms. Also, sufficient approved heating apparatus (preferably steam equipment) shall be furnished to maintain the temperature of air surrounding the fresh concrete between 50°F and 80°F, for seven (7) days. Concrete covers shall be kept moist during the curing period. After seven (7) days, the temperature shall gradually be lowered within the housing to the outside temperature over a period of 72 hours. When heating apparatus is required, special care shall be provided to prevent the concrete from drying. Combustion heaters shall not be used during the first 24 hours unless adequate precautions are taken to prevent exposure of the concrete to exhaust gases which contain carbon dioxide. Arrangements shall be made for



heating, covering, insulating, or housing the concrete work, in advance of placement, and they shall be adequate to maintain the required temperature without injury to the concrete due to concentration of heat.

Changes in air temperature immediately adjacent to the concrete during and immediately following the curing period shall be kept as uniform as possible, not exceeding five (5) degrees Fahrenheit in any one (1) hour or 50°F in any 24-hour period.

**C. Membrane Curing** - Finishing of the concrete surfaces shall be completed prior to the application of curing compound.

Curing compound shall be applied in two (2) coats, each coat covering 300 square feet of concrete surface per gallon. A pressure tank type spraying equipment shall be used, which shall provide continuous agitation of the compound during coating operations. Do not use ordinary orchard-type hand sprays. In order to insure thorough and complete coverage of the concrete surfaces, the first coat shall be applied by moving the spray gun back and forth in one direction, and the second coat immediately thereafter by moving the spray gun at right angles to the direction of the first coat.

The first coat shall be applied immediately after finishing operations are completed. The second coat shall be applied immediately after the first coat has set.

**D. Protection** - All concrete shall be protected against injury until final inspection and acceptance by the Game Commission.

During the curing period, the concrete shall be protected from damaging mechanical disturbances, such as load stresses, heavy shock, and excessive vibration. All finished concrete surfaces shall be protected from damage by construction equipment, materials or methods, by application of curing procedures, and by rain or running water.

Until final inspection and acceptance by the Game Commission, the Contractor shall repair, or remove and replace any damaged concrete at no additional cost to the Game Commission.

### **10.13 - MEASUREMENT AND PAYMENT**

This price and payment shall constitute full compensation for all cast in place concrete including furnishing of concrete, forms, all labor, and equipment for mixing, placing, curing, finishing, repairing and forming and all laboratory and field tests as specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work.

A. Unit of Measurement: Cubic Yards, measured by the average end area method or by the three-dimensional volume method, as applicable.

**TECHNICAL SPECIFICATION SECTION No. 11 – FRAMING LUMBER AND  
CARPENTRY**

**11.1 - SCOPE**

This work is providing and installing the lumber and fasteners necessary to frame the building.

**11.2 - MATERIALS**

**A. Dimension Lumber** – The lumber used to frame the building should be of the sizes, spacing and arrangement shown on the Drawings. The lumber should conform to the following requirements.

1. Grading Agency – Southern Pine Inspection Bureau, Inc. (SPIB)
2. Nominal sizes – as indicated on the Drawings, S4S.
3. Moisture content – S-dry or MC19
4. Structural Grade – No. 2 or better

**B. Engineered Lumber** – The engineered lumber including laminated veneer wood lumber (LVL), laminated wood strand lumber, and engineered lumber connectors should be of the sizes, spacing and arrangement shown on the Drawings.

**C. Treated Lumber** – Same as dimension lumber plus treatment by MCA (waterborne preservative), 0.4 pcf retention in conformance with the American Wood Preservers Association (AWPA). Use category UC2 for interior construction not in contact with the ground, use category UC3b for exterior construction not in contact with the ground and use category UC4a for items in contact with the ground.

**D. Plywood** – Structural composite lumber made from wood veneers with grain primarily parallel to member lengths, evaluated and monitored according to ASTM D5456 and manufactured with an exterior-type adhesive complying with ASTM D2559. The plywood shall have at least 2,600 psi extreme fiber stress in bending. Plywood for the heated/unheated wall to be good one side.

**E. Wood Posts** – The wood posts to be glue laminated columns manufactured from #1 Southern Yellow Pine with the lower portions pressure treated to 0.60 pcf with CCA in compliance with AWPA C28. The pressure treated portion of the wood posts shall extend at least one foot above the finished concrete floor elevation.

**F. Fasteners** – Of the sizes and type suited for the applications. Where rough carpentry is exposed to weather, in ground contact, in pressure-treated lumber, or in the area of high relative high humidity, provide fasteners of Type 304 stainless steel.

1. Nails, Brads and Staples: ASTM F1667
2. Power-Driven Fasteners: NES NER-272

3. Wood Screws: ASME B18.6.1
4. Lag Bolts: ASME B18.2.1(ASME B18.2.3.8M)
5. Bolts: Steel bolts complying with ASTM A307, Grade A (ASTM F568M, Property Class 4.6); with ASTM A563 hex nuts /washers where indicated.
6. Expansion Anchors: Anchor bolt and sleeve assembly made with carbon-steel components, zinc plated to comply with ASTM B633, Class FE/Zn 5.

### **11.3 - PROCEDURE**

Construct the building frame according to the dimensions and layout shown on the Drawings. Excavate holes for the wood posts and place concrete in the bottom of the holes as shown on the Drawings to prepare for post installation. Install truss seats, girts and corner braces as shown. Provide extra framing lumber around doors and windows to provide the support necessary to install these items. All exterior wall sections that will be finished with OSB board and FRP panels are to be framed with 2' x 6' studs on 16-inch centers. Base plates for these walls must be pressure treated. Provide temporary bracing for the building frame to maintain the integrity of the building as construction progresses.

Frame interior wall sections with 2"x 4" and 2"x 6" studs were shown on 16-inch centers to receive the OSB board and FRP panels. The base plates for interior walls must be pressure treated. Drill holes in the wall base plates (treated) for expansion anchors or use power actuated gun to secure completed wall panels to the concrete floor.

After construction is complete, remove all temporary bracing and waste lumber from the site.

### **11.4 - MEASUREMENT AND PAYMENT**

This price and payment shall constitute full compensation for all framing lumber and carpentry including furnishing and erection of wood framing members, wood framing connectors and clips, anchors, fasteners as specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work.

A. Unit of Measurement: Lump Sum.

## **TECHNICAL SPECIFICATION SECTION No. 12 – ROOF TRUSSES**

### **12.1 - SCOPE**

This work is providing and installing the wooden roof trusses for the new building as shown on the Drawings.

### **12.2 – TRUSS DESIGN**

**A. General Dimensions and Features** – The trusses have a 4:12 pitch and 2-foot overhangs @ the eaves and 1-foot on the gable ends. The trusses shall have a 40-foot span and are spaced on 4-foot centers. *Trusses must include an 8-inch energy heel in the truss design.*

**B. Design Loading** – The roof trusses must have a roof load rating of 42.5 lbs/ SF ground snow load (snow load factor of 0.7) and a (*Risk Category II*) wind load rating of 25 lbs/SF and wind speed rating of 115 MPH minimum.

**C. Design Drawings and Calculations** – The design drawings and calculations for the trusses must be sealed and certified by a licensed professional engineer (valid Pennsylvania license). The drawings must be submitted for review by the PGC. The truss design shall conform with the applicable provisions of “National Design Specification for Stress-Grade Lumber and Its Fastenings” (National Forest Products Association) and “Design Specifications for Light Metal Plate Connected Wood Trusses” (TPI).

### **12.3 - PROCEDURE**

Conform to the manufacturer’s recommendations for storing, handling, installing and bracing of the trusses. Provide adequate temporary bracing of the trusses during installation.

Provide adequate permanent bracing of the top chords, bottom chords and web members of the trusses according to the manufacturer’s recommendations. Install purlins for the roof panels on the top chord of the trusses. Secure the roof trusses to the building frame with galvanized steel hurricane ties or dimensional blocking.

After construction is complete, *provide all bracing for the roof trusses as required by the truss manufacturer.*

### **12.4 - MEASUREMENT AND PAYMENT**

This price and payment shall constitute full compensation for all wood roof trusses including engineering design, manufacture, erection, and bracing as specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work.

A. Unit of Measurement: Lump Sum.

**TECHNICAL SPECIFICATION SECTION No. 13 – METAL SIDING AND ROOF  
PANELS WITH SNOW GUARDS**

**13.1 – SCOPE**

This work is providing and installing the metal siding and roof panels w/snow guards on the new building frame and roof trusses as shown on the Drawings. Snow guards may/may not be shown but must be installed in two rows staggered on the front and rear of the building. Colors to be verified before ordering.

**13.2 – MATERIALS**

**A. Siding and Roof Panels** – The siding and roof panels shall be fabricated from galvanized steel sheet with a minimum coating of 0.90 oz/SF. The roof panels shall be minimum **26-gauge** steel sheet stock capable of supporting the design roof loading. The roof panels shall be full length from ridge to eave. The ridge and eaves shall be fitted with continuous gaskets. The finish color of the roof panels and wainscoting is GREEN. The siding panels shall be minimum **26-gauge** steel stock with the same configuration and finish as the roofing panels except the finish color is STONE/TAN/BEIGE. The interior ceiling, wall and canopy ceiling panels shall be minimum **28-gauge** and WHITE.

**B. Trim** – Steel sheet stock pre-fabricated into ridge cap, end wall flashing, gable end trim, corners, dew drip caps, door jambs trim, cut edge trim and side wall flashing. The finish color will match the application it is associated with. The window and door jambs are TAN w/J channel to match siding. Fascia and soffit trim shall be GREEN.

**C. Sealants and Fasteners** – Manufacturer’s standard type exterior sealants and gaskets, ring shank nail fasteners w/neoprene washers, galvanized to ASTM A153, finished to match exposed siding. Screw fasteners, cadmium plated self-tapping, hex head with washer and soft neoprene sealing ring finished to match metal roof surface.

**D. Snow Guards** – The snow guards are to be “Snow Defender 4500” w/16-gauge Type 304 Stainless Steel and EPDM Rubber Sealer. Color shall be GREEN to match roof panels.

**13.3 - PROCEDURE**

The roofing and siding panels are to be sized to the proper dimensions for installation. Install the roofing and siding panels with the recommended spacing and type of fasteners. The Contractor is responsible for the correct spacing of the purlins and girts to support the roof and siding panels. Siding panels are to be installed with the corrugations running vertically. Cut “custom” panels at the site for gable ends if necessary. The Contractor should shear or use snips to cut siding and roof panels to minimize the potential to damage the protective coatings on the panels.

Install the wainscoting and flashing for the building followed by the siding panels.

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Install finish trim sections where needed on the siding and roof panels. Make sure all edges and ends are properly sealed with gaskets or sealants.

After construction is complete, remove all waste pieces of roof and siding panels, trim, and fasteners from the site.

**13.4 - MEASUREMENT AND PAYMENT**

This price and payment shall constitute full compensation for metal panel roofing and siding systems including, flashings, transitions, moldings, snow guards, fasteners, and sealants as specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work.

A. Unit of Measurement: Lump Sum. No separate measurement or payment for the snow guards.

**TECHNICAL SPECIFICATION SECTION No. 14 – SOFFITS AND FASCIA**

**14.1 - SCOPE**

This work is providing and installing the soffits and fascia at the roof overhangs for the new building as shown on the Drawings.

**14.2 – MATERIALS**

**A. Soffits** – The soffits shall be preformed and perforated (minimum 29 gauge steel sheet stock) formed to a V-groove section at roof eaves and roof rakes shall have finish color is GREEN.

**B. Fascia** – Fascia shall be preformed, prepainted aluminum alloy (minimum 0.019 inch thick sheet stock) with plain surface and the finish color is GREEN.

**C. Nails** – Aluminum; use prefinished GREEN nails for soffits and fascia.

**D. Trim** – Trim to match the same color as the material being finished.

**E. Sealant** – Silicone, single component, solvent curing, clear in color.

**14.3 - PROCEDURE**

Install F&J-channel to receive soffit sections in conjunction with siding panel and nail to fascia to secure. Install fascia and trim sections with sealant as needed.

**14.4 - MEASUREMENT AND PAYMENT**

This price and payment shall constitute full compensation for aluminum soffits and fascia at roof overhangs, including trims, fasteners and sealant as specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work.

A. Unit of Measurement: Lump Sum.

**TECHNICAL SPECIFICATION SECTION No. 15 – GUTTERS AND DOWNSPOUTS**

**15.1 - SCOPE**

This work is providing and installing gutters and downspouts for the new building.

**15.2 – MATERIALS**

**A. Gutters** – Aluminum with baked on GREEN finish. Gutter shall be seamless for the length of the roof. Gutter shall be standard 6-inch width, .032 gauge minimum.

**B. Downspouts** – Aluminum with baked on GREEN finish and 3-inch by 4-inch cross section.

**C. Fittings, Hangers and Brackets** – Aluminum fittings and brackets as recommended by gutter and downspout manufacturer with hidden hangers at 2'-0" on center maximum.

**D. Rain Water Leaders**-PVC SDR 35 PSM 4" diameter x 10' long pipe shall be manufactured from virgin rigid PVC (polyvinyl chloride) vinyl compounds with cell class of 12364 as identified in ASTM D 1784, ASTM D 2321 and ASTM F 1668.

**15.3 - PROCEDURE**

Submit a catalog cut or other information for the gutter and downspout from the manufacturer to the PGC for review and approval before ordering any materials.

Install gutters on the roof eaves of the new building. Secure the gutters to the fascia with hidden hangers. Install downspout drop sections and end caps at the ends of the roof eaves as shown on the drawings. Connect downspout sections to the gutters and run the downspout along the edge of the building to the ground level and onto splash blocks or tie into PVC rainwater boots and leaders. Make sure the water drains away from the building properly. Route the downspouts to prevent any potential discharge from egress areas.

**15.4 - MEASUREMENT AND PAYMENT**

This price and payment shall constitute full compensation for aluminum rain gutter and downspout system, hangers, fasteners, and sealants as specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work.

A. Unit of Measurement: Lump Sum.



## **TECHNICAL SPECIFICATION SECTION No. 16 – INSULATION**

### **16.1 - SCOPE**

This work is providing and installing the insulation in the walls and ceiling of the new building and under the edges of the floor slab as shown on the Drawings.

### **16.2 – MATERIALS**

**A. Fiberglass Blankets** - The insulation for the walls and the ceiling (heated spaces) shall be Kraft-faced formaldehyde-free, fiber glass insulation conforming to ASTM C665, Type II (non-reflective faced), Class C, Category 1. Walls and between bottom chord of trusses shall have R-19 insulation. The insulation for the ceiling above the faced insulation (between trusses) shall be R-30, formaldehyde-free, fiberglass insulation conforming to ASTM C665, Type I (unfaced). Insulation can be in batts or rolls.

**B. Rigid Foam Panels** – The insulation panels to be installed under the floor slab, shall be rigid foam (extruded polystyrene) panels conforming to ICC ES 96-24 and ASTM C578. The panels to be installed under the edges of the floor slab shall be 2 inches thick R-10.

**C. Building Envelope Insulation** – The insulation to be installed on the exterior envelope of the building shall be White Prodex Total 5m Plus 48-inch insulation or an approved equal conforming to the following characteristics:

1. Blanket structure – Closed cell polyethylene foam with reflective reinforced foil facing on exterior side and UV resistant plastic white finish film on inside.
2. Nominal thickness – .20” (5mm)
3. Perm Rating – Less than 0.09 according to ASTM E9
4. Fungi Resistance – No Growth (ASTM C-1338)
5. Flame Spread Index – 0 (ASTM E84-10)
6. Smoke Developed Index – 10 (ASTM E84-10)
7. Insulating Value – R-15.3 (roof) R-10 (wall)

**D. Attic Rafter Vents** – The attic rafter vents shall be extruded pre-formed polystyrene designed to fit between the roof framing members to provide cross ventilation between insulated attic spaces and vented eaves in the heated areas.

### **16.3 - PROCEDURE**

Fiberglass insulation is to be installed in the walls and ceilings of the heated areas only. Store insulation materials indoors before installation. Keep insulation clean and dry. When transporting, cover with a waterproof tarpaulin as necessary.

Install attic rafter vents properly against the underside of the roof deck, between the roof trusses. Install insulation as directed by manufacturer.

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Open insulation packages and be careful to avoid cutting the product or facing. Gently push the insulation into the wall and ceiling cavities. Install the insulation so that the Kraft-facing is toward the interior of the building. Secure the flanges of the facing to the studs or roof truss chords. Take care not to stretch the insulation which could cause the material to compress or tear. Space the staples at least six inches from each end of the batt and 12" to 24" apart. Cut insulation as necessary to fit around framing for doors, vents and fans.

Install the R-19 ceiling insulation between the bottom chord of the trusses with the vapor barrier facing down. Install the R-30 unfaced insulation across (perpendicular) the R-19 insulation and truss chords.

Install the building envelope insulation (Prodex) over the outside face of the wood wall girts. Cut all materials neatly around doors and windows. Seal all seams and around doors and windows with a vapor retarder tape. Conform to the manufacturer's recommendations for installation to avoid damage to the material. The building envelope insulation Prodex shall also be installed in the building on top of the roof purlins and below the metal roofing of the building.

Place rigid foam panels under the edges of the floor slab as shown on the drawings. The panels should extend 4-feet in from the perimeter of the building. Install ½-inch thick panels vertically at the splashboards on the edges of the concrete floor along the perimeter of the building.

#### **16.4 - MEASUREMENT AND PAYMENT**

This price and payment shall constitute full compensation for all building envelope thermal insulation systems including fiberglass batt cavity insulation, vent baffles, rigid foundation insulation, insulation supports, fasteners, and sealants as specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work.

A. Unit of Measurement: Lump Sum.

**TECHNICAL SPECIFICATION SECTION No. 17 – SUSPENDED CEILING SYSTEM**

**157.1 - SCOPE**

This work is to furnish and install acoustical panels and metal suspension system to form a suspended ceiling system in the new building as shown on the Drawings. A suspended ceiling system is to be installed in the office, bathroom, and mechanical room only. The heated shop area is to have a metal panel ceiling.

**17.2 – MATERIALS**

**A. Acoustical Panels** – The acoustical panels shall have a Class A fire rating and shall be white with a random medium or fine texture (Fissure). Provide a 24 inches x 48 inches x 5/8-inch-thick panel from Armstrong World Industries, or a comparable equal product. The edge detail of the panels is square. The panels must be mold, mildew and bacteria resistant.

**B. Hanger Rods** – Mild steel, zinc coated or protected with rust-inhibitive paint.

**C. Metal Suspension System** – Armstrong World Industries standard 15/16-inch metal suspension system or comparable product from USG Interiors, Inc. or Chicago Metallic Corporation. The finish color of the metal suspension system is white.

**D. Metal Edge Moldings and Trim** – Armstrong World Industries or comparable product by USG Interiors, inc. or Chicago Metallic Corporation.

**17.3 - PROCEDURE**

Examine the substrates, areas and conditions to which the drop ceiling components will attach or abut to see if there are problems with installing the drop ceiling. Correct those problems before installing the drop ceiling components. Examine acoustical panels before installation. Reject acoustical tiles that are wet, moisture damaged or mold damaged.

Measure each ceiling area and establish layout of acoustical panels to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width panels at borders and comply with the layout shown on the Drawings.

Install acoustical panels in compliance ASTM C636 and according to the manufacturer's recommendations.

Install hangers where required plumb and free from contact of other objects within the ceiling plenum. Install supplemental suspension members or hangers in the form of trapezes or equivalent devices. Secure wire hangers to ceiling suspension members and to supports above. Connect hangers directly to structures or to inserts, eye screws, or other devices that are secure and appropriate for each substrate and that will not deteriorate or otherwise fail due to age, corrosion or elevated temperatures. Space hangers not more than 48 inches on

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center along each member supported directly from hangers and not more than 8 inches from the ends of each member. Install edge moldings and trim of type indicated at the perimeter of the drop ceiling areas and where necessary to conceal edges of the acoustical panels. Attach moldings to substrates at intervals not more than 16 inches on center and not more than 3 inches from the ends. Level the ceiling suspension system to a tolerance of 1/8 inch in 12 feet. Miter corners accurately and connect securely. Do not expose fasteners, including pop rivets on moldings or trim.

Install suspension system runners so that they are securely interlocked with one another. Remove and replace dented, bent or kinked members.

Clean exposed surfaces of acoustical panels, trim and edge moldings. Comply with the manufacturer's recommendations for cleaning and touchup of minor finish damage. Remove and replace panels and other ceiling components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

#### **15.4 - MEASUREMENT AND PAYMENT**

This price and payment shall constitute full compensation for all suspended ceiling systems including suspending grid, wall angle, hanger rods and hardware, and acoustic panels, as specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work.

A. Unit of Measurement: Lump Sum.

## **TECHNICAL SPECIFICATION SECTION No. 18- WINDOWS**

### **18.1 - SCOPE**

This work is providing and installing the windows in the building.

### **18.2 – MATERIALS**

The windows shall be American Craftsman Series 3000 double-hung vinyl windows. Other manufacturers are acceptable provided that the windows have the following features and requirements. The windows shall be nominal size 2'-6" wide x 3'-0" high with double pane LowE3 insulated glass with argon gas.

1. Energy Star compliant.
2. Top and bottom sash tilt in for easy cleaning.
3. Fusion welded vinyl frame and sashes.
4. Dual weather stripping.
5. Insect screen.
6. Frame finish is white vinyl or metal.
7. Standard 6-lite colonial style white grilles, between glass.
8. Integral exterior "J" trim around perimeter of window frame.

### **18.3 – SUBMITTALS**

Submit a catalog cut or other information for each type of window and the shutters from the manufacturers to the PGC for review and approval before ordering any materials.

### **18.4 - PROCEDURE**

Install the windows according to the manufacturer's instructions. Install additional framing lumber and construct window rough opening as required to safely support the window opening within building walls. Install the windows in the blocked and framed openings and secure them according to the manufacturer's instructions. Caulk or insulate around the installed windows to provide a weather-tight seal. Install any trim pieces on the interior or exterior as required, including the interior sill. Test the operation of the windows and make any adjustments if necessary.

### **18.5 - MEASUREMENT AND PAYMENT**

This price and payment shall constitute full compensation for all new windows as specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work.

A. Unit of Measurement: Each. No separate measurement or payment for additional framing lumber and carpentry, caulking, or trim as required to install and finish the windows.

**TECHNICAL SPECIFICATION SECTION No. 19 – DOORS**

**19.1 - SCOPE**

This work is providing and installing the man doors and garage doors in the new building as shown on the Drawings. Doors and frames shall include to have the necessary thresholds and/or weather-stripping/caulk as needed to provide for a tight seal.

**19.2– MATERIALS**

**A. General** – Refer to the door schedule on the drawings for details of hinge and swing requirements, sizes and lockset hardware. All locks (interior and exterior) are to be keyed alike. Manufacturers are quoted for hardware, locksets, gaskets, closers, etc. for the doors to set standards for performance and finish; other manufacturers are acceptable provided that their products are the same level of quality.

**B. Insulated Doors** - The insulated doors in the new building shall have the following features and characteristics. These doors are listed on the door schedule. The insulated doors shall be supplied with vertical narrow lights. Ceco Door Products Medallion Series conform to the following specifications but other manufacturers are acceptable.

1. Entry doors are galvanized 18 gage (minimum) steel 3'-0"x 7'-0" flush panel w/insulated core conforming to ANSI A250.8-03
2. Entry door frames with galvanized 16 gage (minimum) steel double rabbet frame (knock down)
3. Factory applied baked on primer with a factory or field applied white enamel finish coat on door and frame applied according to the manufacturer's instructions
4. Doors are 1-3/4" thick
5. Equipped with Precision 2108 x 4908A panic exit device trim and lever handle with 630 satin stainless-steel finish
6. Satin finish stainless steel hinges
7. Equipped with Best HD800 series door closer.
8. Equipped with Rockwood K1050 (10"x34") kick plates (one side) with 630 satin stainless-steel finish
9. Equipped with weather tight gaskets
10. Equipped with aluminum mill finish threshold
11. Equipped with National Guard Products C607DKB nylon brush seal.
12. Dormakaba Best Access products 12E72 rim cylinder with 626 satin chrome finish. Permanent cores to be Cormax Patented.
13. Cores and keys delivered directly to PA Game Commission.

**C. Non-insulated Doors** – The non-insulated interior doors in the new building shall have the following features and characteristics. These doors are listed on the door schedule. These doors shall be flush panel. Ceco Door Products Regent Series conforming to the following specifications, but other manufacturers are acceptable.

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1. Passage doors are galvanized 20 gage steel flush 3'-0" x 7'-0" panel 1-3/4" thick full flush with honeycomb core
2. Passage doors frames w/galvanized 16 gage (minimum) steel double rabbet frame
3. Impact resistant, full honeycomb core with a min. crush strength of 45 psi
4. Seamless edges with 7 gage steel hinge reinforcement.
5. Satin finish stainless steel hinges
6. Dormakaba Best Access Systems 9K30L14C S3 privacy with 626 satin chrome finish for the bathroom door.
7. Dormakaba Best Access Systems 9K37AB14C S3 entry set with 626 satin chrome finish for offices and mechanical room doors. Keying Best Cormax to existing PGC System.
8. Equipped with kick plates (one side) and concave wall stop with 630 satin stainless-steel finish.

**D. Garage Doors** – The garage doors in the new building shall have the following features and characteristics (or equal to).

1. "Wayne Dalton" Commercial 12'x 12' or 14' doors w/R17.5 insulated core
2. Model 200 Thermospan or approved equal
3. Factory applied primer with white finish coat on door
4. Torsion spring
5. Lock included
6. Equipped with three 26' x 13" (or TYP) double insulated acrylic windows with black frames

**E. Padlocks** – Two (2) 11B772 x Cormax padlocks with cores (match others). For a quote on all hardware, you may contact Delbert Hiestand by calling 717-413-1328 or by his email [delbert.hiestand@dormakaba.com](mailto:delbert.hiestand@dormakaba.com)

### **19.3 – SUBMITTALS**

Submit a catalog cut and other information for the man doors, garage doors and accessories from the manufacturers to the PGC for review and approval before ordering any materials.

### **19.4 - PROCEDURE**

Install the steel entry doors and frames according to the manufacturer's instructions. All steel surfaces of the doors and frames are to be factory primed and a factory or field painted finish. The finish coat of the steel doors and frames shall be a white outdoor grade enamel. The garage door tracks, torsion springs and garage doors are to be installed by a manufacturer's representative.

**17.5 - MEASUREMENT AND PAYMENT**

This price and payment shall constitute full compensation for all new doors, door frames, door hardware, and keying as specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work.

A. Unit of Measurement: Each according to the type of door as listed on the Proposal Form. No separate measurement or payment for the frames, accessories, door hardware and keys.



**TECHNICAL SPECIFICATION SECTION No. 20 – ARCHITECTURAL CASE  
WORK**

**20.1 - SCOPE**

- A. Work of this Section includes all labor, materials, equipment, and services necessary to furnish and install all architectural casework as shown on the drawings and/or specified herein, including, but not limited to, the following:
1. Pre-finished architectural base and wall cabinets as shown on drawings.
  2. Heavy duty solid composite counter tops.
  3. Wood grounds, blocking, nailers, furring as required for work of this Section.
  4. All hardware, finish fasteners, and sealants for work of this Section.

**20.2 – MATERIALS**

- A. **Quality Standards** - The quality standards of the Architectural Woodwork Institute, "Architectural Woodwork Standards," 1st Edition, latest edition, shall apply to all workmanship, including materials and installation, for architectural casework, and by reference are made a part of this specification. All work shall conform to "Premium" grade requirements of the AWI "Architectural Woodwork Standards," unless otherwise modified herein.
- B. **Basic Requirements** - Before proceeding with casework required to be fitted to other construction, obtain field measurements, and verify all dimensions of shop drawing details as required for accurate fit.
1. Compatibility of Grain and Color: The Department reserves the right to select materials for best compatibility between visually related members and veneers.
  2. Inspect each piece of casework; do not use twisted, warped, bowed, or otherwise damaged or defective wood.
- C. **Utility Cabinets** – Kitchen Classics Hickory base and wall cabinets or approved equal w/Satin finish hardware (knobs) and adjustable shelves and meeting the following requirements and nominal sizes.
1. Base cabinets (2) - 24" W and 34 1/2"H with single door and drawer
  2. Wall cabinets (2) 21" W and 30"H with single door
- D. **Fasteners** –
1. Wood Screws: FS FF-S-111, type, size, material and finish as required for the condition of use.
  2. Nails: FS FF-N-105, type, size, material and finish as required for the condition of use.
  3. Anchors: Type, size, material and finish as required for the condition of use.

## **20.3 – SUBMITTALS**

Submit catalog cuts and other manufacturers information for all architectural casework with hardware and countertops to the PGC for review and approval before ordering any materials. Refer to submittal specification section for submission requirements.

### **A. Shop Drawings (Casework & Countertops.)**

1. Shop drawings shall indicate all materials, thicknesses and finishes.
2. Shop drawings shall show all finish hardware, anchors, fastenings and accessories.
3. Shop drawings shall show all jointing, joint treatment and butt jointing in veneers.
4. Shop drawings for wood paneling must show complete elevations of units as well as panel matching required.

### **B. Samples: Submit samples of each of the following items:**

1. Transparent finish for each species of wood veneer laminate plywood panels, twelve (12) inches square, for each finish specified or shown.

## **20.4 - PROCEDURE**

### **A. Fabrication General**

1. Install the work plumb, level, true and straight with no distortions. Shim as required using concealed shims. Install to a tolerance of 1/8" in 8'-0" for plumb and level (including countertops), and with 1/16" maximum offset in flush adjoining surfaces, 1/8" maximum offset in revealed adjoining surfaces.
2. Scribe and cut work to fit adjoining work and refinish cut surfaces or repair damaged finish at cuts.
3. Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure to grounds, stripping and blocking with countersunk, concealed fasteners and blind nailing as required for a complete installation.

### **B. Wood Trim**

1. Install with minimum number of joints possible, using full-length pieces for each run. Stagger joints in adjacent and related members. Cope at returns, miter corner.
2. Joints of all trim and/or moldings shall be set tight, miter exterior angles and cope interior angles. Joints, except end joints less than twelve (12) feet apart, will not be permitted in straight runs of trim and/or moldings and rails.
3. Secure all trim and/or moldings with glue and blind nail with finishing nails. Set exposed nail heads in finished work and putty. Sand all work to remove any tool marks and irregularities.

**C. Finishing**

1. General: All finishing work of this Section shall be shop applied, unless otherwise noted, as specified below. All finishing shall match approved samples.
2. Field Touch-Up: Provide field touch-up as required, including the filling and touch-up of exposed job made nail or screw holes, refinishing of raw surfaces resulting from job fitting, repair of job inflicted scratches and mars, and final cleaning up of the finished surfaces.

**D. Clean Up and Protection**

1. Clean Up: At regular intervals during the course of the work, all debris and excess material shall be cleaned up and removed from the site. Upon completion of installation, clean all spaces of debris caused by woodwork installation.
2. Protection: Protect all casework from marring, defacement of other damage until final completion and acceptance of the project by the Owner. Repair or replace all defective units prior to final inspection. Any units that cannot be satisfactorily repaired shall be replaced with new units of same original design, at no additional cost to the Owner.

**20.5 - MEASUREMENT AND PAYMENT**

This price and payment shall constitute full compensation for all architectural casework, hardware (pulls), countertops, and finishing as specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work.

A. Unit of Measurement: Lump Sum.

**TECHNICAL SPECIFICATION SECTION No. 21 – INCIDENTALS**

**21.1 - SCOPE**

This work is to furnish and install toilet accessories, fiberglass reinforced wall panel system, fire extinguishers and bollards, as shown on the Drawings.

**21.2 - MATERIALS**

**A. Toilet Accessories:**

1. Toilet Paper Dispenser: Palmer Fixture Twin 9” Model RD0027 with 2-1/4” core. Include 3-3/8” adaptor and translucent cover or approved equal.
2. Paper Towel Dispenser: Bradley Model No. 250-15, stain finish stainless steel, surface mounted, Capacity: 525 multi-fold or 400 C-fold paper towels, tumbler lock and refill indicator or approved equal.
2. Liquid-Soap Dispenser: Provon TFX Model GOJ2745-12 with a 1200 ml capacity or approved equal. Provide two refills per unit.
3. Grab Bars: Bradley 812 Series, 1-1/2” outside diameter heavy-duty stainless-steel ADA compliant grab bars with concealed mounting or approved equal. Grab bars shall include No.4 satin finish that resist scratches.
4. Mirror: Bradley Model 740-1836 ADA compliant, fixed angle, tilt frame, satin finish 20-gauge stainless steel frame with welded corners, 18 inches by 36 inches or approved equal. Surface mount mirror with 3/4" by 3/4" frame, frame projects 4 inches at the top and tapers to 1 inch at the bottom. Provide 1/4" thick tempered glass mirror.

**B. Fire Extinguishers:** 20 lbs. ABC fire extinguishers fully charged and tested shall be furnished and installed by the PGC, not in contract.

**C. Fiberglass Reinforced Wall Panel System:**

1. Furnish and install Fiberglass reinforced thermosetting polyester resin panel sheets complying with ASTM 5319 at all locations as indicated on drawings. Fiberglass reinforced panels (FRP) shall have a **Class A fire rating**. Color White.
2. Dimensions: Thickness – 0.090” nominal, Width – 4’-0” nominal, Length – 10’-0” or as indicated on drawings.
3. Properties: Resistant to rot, corrosion, staining, denting, peeling and splintering. Conforms to ASTM D 790 for flexural strength and ASTM D 638 for tensile strength. Impact strength of 72 ft. lbs./in ASTM 256.
4. Moldings: PCV trim thin wall semi-rigid extruded PVC. Provide inside and outside corners, meeting and edge trims as required for installation in accordance with the manufacturer’s product specifications.

5. Base: FRP Base molding, 10' lengths complete with inside and outside corners and end caps. Color Black.
6. Accessories: White non-staining nylon drive rivets and adhesives complying with ASTM C 557. Adhesive to be manufactured and recommended by (FRP) manufacture or Titebond advanced polymer/panel adhesive in accordance with installation of Class A fire rated (FRP) panel . Install white silicone sealant.
7. Installation: Comply with manufacturers recommended procedures and installation sequence. Comply with all recommended preparation of back up surfaces.

**D. Pipe Bollard:**

1. The metal pipe bollards installed along the front elevation of the building as indicated on Floor Plan shall be 6" diameter x 5'0" long (top of bollard to extend min. 36" above concrete) galvanized steel pipe filled with concrete. Mound concrete fill at top and slope concrete at base of bollard as required to prevent standing water. Apply (2) coats of acrylic enamel paint, **YELLOW**.

**F. Coat Shelf/Rod:**

1. ¾" edge-banded painted plywood shelf or white melamine laminated shelf complete with 1" diameter heavy duty chrome closet rod.

**G. Dryer Venting:**

1. Furnish and install recessed dryer vent box, by DryerBox, Model 425THD, aluminized steel to meet UL Classified one hour wall assembly complete with upward exhaust direction to fit in 2" x 6" stud wall.
2. Dryer vent piping material to be in accordance with Section 504.8.1 of the 2018 International Mechanical Code and have a smooth interior finish, constructed of metal not less than .016 in thickness and be 4" nominal in diameter.
3. Install exterior thru wall metal dryer vent cap complete with metal hood to match existing siding finish and screen guard.

**21.3- SUBMITTALS**

Submit a catalog cut and other manufacturers information for all toilet accessories, fiberglass reinforced wall panel system, and ceiling hatch to the PGC for review and approval before ordering any materials. Refer to submittal specification section for submission requirements

**21.4 – PROCEDURE**

Install all incidentals and building components in accordance with the manufacture's product specifications, applicable 2018 International Building Code provisions, and shop drawings. Comply with ICC/ANSI A117.1 guideline for mounting heights and locations of all toilet accessories and grab bars.

**21.5 – MEASUREMENT AND PAYMENT**

This price and payment shall constitute full compensation for all incidental building systems and components including toilet accessories, Fiberglass reinforced wall panel system, and ceiling hatch as specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work.

A. Unit of Measurement: Lump Sum.

**TECHNICAL SPECIFICATION SECTION No. 22 - SEEDING**

**22.1 - SCOPE**

This work is securing a satisfactory stand of grass at all disturbed earth areas and includes preparation of the seed bed, furnishing and placing lime and fertilizer, furnishing and sowing of seed, mulching, and maintaining and tending the seeded areas. Do not seed areas (parking area and driveways) that are shown to be surfaced by stone by the PGC. The limits of the parking area and driveways will be staked out by the PGC during building construction.

**22.2 - APPLICABLE ACTS AND PUBLICATIONS**

Bulletin 15 - Approved Construction Materials, Pennsylvania Department of Transportation.

Pub 408. - Specifications, Pennsylvania Department of Transportation.

**22.3 - MATERIALS**

**A - Grass Seed** - Use grass seed conforming to section 804.2(b) of Pub. 408 and consisting of the following seeds and application rates.

<b><u>Formula L</u></b>	<b>Max. % Weed</b>	<b>Purity% (Min.)</b>	<b>Germination % (Min.)</b>	<b>Seed Rate (Lbs./Acre)</b>
Hard Fescue mixture (Festuca longifolia) A combination of improved certified varieties with no one variety exceeding 50%.	0.15	98	85	63
Creeping Red Fescue	0.15	98	85	41
Annual Ryegrass (Lolium Multiflorum)	0.15	98	90	12
Total Lbs./Acre				116

\* No seed shall contain Canada Thistle, Field Bindweed, Johnson Grass, Perennial Sowthistle, Quackgrass, Horse Nettle, Bedstraw, Corncockle, Brassica Kaber, Brassica Nigra, Wild Onion, or Wild Garlic.

With the approval of and at no additional cost to the Game Commission, you may add annual ryegrass seed to the mixture to secure a cover crop.

Seed shall be furnished fully tagged and delivered by separate varieties, separately packaged or bagged. Mix seed in the presence of a representative of the Game Commission.

Deliver premixed seed in bags or other suitable containers, each fully labeled with the name, trademark, and warranty of the producer and with the mixture type, weedseed percentage, purity percentage, germination percentage, and mix formula or composition. Do not use seed which has become wet, moldy, or otherwise damaged in transit or storage, has a mix date older than 9 months prior to seeding, or has a test date older than 6 months prior to seeding.

**B - Fertilizer** - Fertilizer shall conform to the applicable act specified in Section 31.2 of these Technical Specifications. Use dry formulation of 10-20-20-analysis.

Fertilizers shall be delivered in bags or other suitable containers, each fully labeled and bearing the name, trademark, and warranty of the producer.

**C - Lime** - Conform to section 804.2.(a).1 of Pub.408.

**D - Mulches** - Mulches shall be free from mature seedbearing stalks or roots of prohibited or noxious weeds as defined by law. Do not use mulches which are cut into lengths of less than 6 inches.

Mulches shall be either one or a combination of the following, shall contain no stems of tobacco, soybeans, or other coarse or woody materials.

1. **Straw** - Either wheat or oat straw, and reasonably free of viable seeds, well-cured to less than 20 percent moisture content by weight.
2. **Wood Fiber** - Use wood fiber meeting the requirements of Section 805.2(a).1.c of Pub. 408.

**E - Mulch Binders** - Use one of the following mulch binders in accordance with section 805.2(b) of Pub. 408: Recycled Cellulose Fiber, Wood Fiber, Nonasphaltic Emulsion, Polyvinyl Acetate, or a Mixture of Recycled Cellulose Wood Fiber and Wood Fiber Obtain binders from a producer listed in Bulletin 15.

**F - Water** - Water shall be fresh and free from injurious amounts of oil, acid, alkali, salts, or other materials harmful to the growth of grass.

## **22.4 - PROCEDURE**

Follow the procedures specified below. The amounts of seed, lime, fertilizer and mulch specified are the minimum acceptable. The Game Commission may, at its own expense,



test the soils to determine if any modifications to the seed and soil requirements are necessary. Employ such modifications if they are deemed necessary, at no additional cost to the Game Commission, and accept full responsibility for obtaining a satisfactory stand of grass.

**A - Preparation of Seed Bed by Shallow Tilling** - After the areas to be seeded have been graded and approved by the Game Commission, thoroughly till the surfaces to a depth of 3 inches by raking, harrowing, or other approved means. Apply fertilizer and lime at a rate of 680 Lbs. and 4,000 Lbs. per acre respectively, and make sure that they are worked thoroughly into the soil to a depth of 3 inches and the tillage operations are sufficient to insure that the soil conditions are satisfactory for seeding. Smooth and bring the area to grade. Immediately prior to sowing, rake the soil to a depth of 3/4 inch. Rake in a direction parallel to the contour lines on the slope, and not uphill or downhill. Remove all sticks, stones, weeds, roots, and other objectionable materials appearing on the surface. Maintain the surface in a true and even condition during sowing of seed.

**B - Sowing** - Sow the seed mixture on a still day at a rate specified in Section 31.3 of these Technical Specifications. Sow by hand or by approved sowing equipment in 2 applications, one-half the seed while the seeder is traveling in one direction and the other half while the seeder is traveling at right angle to the first direction. After sowing, rake, cultipack, or brush drag the surface very lightly, just deep enough to cover the seeds. Rake only in a direction parallel to the contour lines.

You may use hydroseeding or grain drilling, provided all methods and equipment are approved by the Game Commission. In case of hydroseeding, you may apply fertilizer and limestone at the time of sowing. In case of grain drilling, you may apply fertilizer at the time of sowing, provided the fertilizer does not come in contact with the seed. Drill only in a direction parallel to the contour lines.

Do not sow seed on frozen or partially frozen ground.

**C - Mulching** - After sowing is completed, spread mulch uniformly over the entire seeded area at a rate of 3 tons (dry weight) per acre. The mulch shall be moist at the time of placement.

Apply wood fiber mulch hydraulically in accordance with the manufacturer's tank-mixing instructions. Wood fiber mulch may be incorporated into the slurry after the seed and soil supplements have been thoroughly mixed. Apply wood fiber mulch at a rate of 800 Lbs. per acre unless otherwise indicated by the manufacturer.

On slopes 6:1 or flatter, apply pellet mulch by hand or using a mechanical spreader immediately after seeding, at a rate of 2,615 Lbs. per acre. Thoroughly wet pellet mulch with water without dislodging mulch.

To prevent loss or bunching by wind and to form a soil-binding mulch, anchor the moist mulch to the soil with a mulch binder. Use mulch binders at the following rates:

Recycled Cellulose Fiber - 775 Lbs./Acre  
Wood Fiber - 775 Lbs./Acre  
Mixture of Recycled Cellulose Fiber and Wood Fiber - 775 Lbs./Acre  
Nonasphaltic Emulsion - Manufacturer's Recommended Rate  
Polyvinyl Acetate - Manufacturer's Recommended Rate

On slopes where machinery cannot be used, retain the mulch in place by some suitable means which will not be detrimental to subsequent operations.

## **22.5 - MAINTENANCE**

At no additional cost to the Game Commission, maintain the seeded areas until all work under the Contract has been completed and accepted by the Game Commission. Maintenance shall include refilling rain-washed gullies, reseeding, reapplying fertilizer, lime and mulch, and removal of large and noxious weeds, as directed by the Game Commission.

## **22.6 - MEASUREMENT AND PAYMENT**

This price and payment shall constitute full compensation for all seeding including soil amendments and stabilization of all distributed soils on site as specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work.

A. Unit of Measurement: Lump Sum.

**TECHNICAL SPECIFICATION SECTION No. 23 – HEATING SYSTEM AND DUCTWORK** *Separation of Contract, to be awarded separate with “Contract 2”.*

**23.1 – SCOPE**

This work is providing and installing the heat pump, condenser unit, furnace, case coil, ductwork, registers, and grilles that make up the new building’s heating and air-conditioning system. The Mechanical contractor is also responsible for the installation of all natural gas supply lines including connections for equipment and regulators as required. Mechanical work shall also include the installation of (2) suspended Natural Gas gas fired heating unit within the work and shop areas for a secondary heat source to assist with energy recovery when overhead door is operated.

**23.2 – MATERIALS**

**A. Heat Pump and Air Handler** – Bosch Heat Pump BOVA - 060-HDN1- M18M outside condenser unit w/BGH96M100C5B furnace and BMAC4860CNTF case coil. or an approved equal with the following characteristics.

1. 5-ton, Inverter Ducted System
2. All materials and workmanship to be guaranteed for one year from date of installation. Manufacturer’s 5-year warranty on functional parts & compressor.
3. Minimum 17 SEER and 8.0 HSPF
4. Variable speed blower.
5. Outdoor unit is to be equipped with snow legs
6. Outdoor unit is to be installed on concrete pad.

**B. Thermostat** – Bosch BCC100 Wi-Fi Thermostat or an approved equal.

**C. Ductwork** – To be sized and installed from the requirements and procedures of SMACNA. Metal ductwork to meet or exceed UCC code requirements. All supply ducts to be insulated as per code. Supply duct take-offs to be equipped with integrated dampeners capable of balancing the system.

**D. Hanger Rods and Supports** – Cadmium plated steel rods and nuts with Unistrut cross bar members.

**E. Grills and Registers** – Steel with baked white enamel finish.

**F. Natural Gas Fired Unit Heater** – Reznor UDX75 natural gas fired suspended unit heater or approved equal, certified for commercial/industrial heating applications with single burner combustion system including one-piece burner assembly including the following features.

1. Input Heating Capacity - 75,000 BTUH
2. Thermal Efficiency - 83 %

3. Output Heating Capacity – 62,250 BTUH
4. Gas Connection - ½ inch natural gas
5. Direct Vent Connection Size – 4 inches diameter
6. Vibration/noise isolated fan and venter motors – designed for low noise operation
7. Option Features shall include single-stage gas valve, vent cap, thermostat, gas conversion kit, ceiling suspension kit, manual shutoff valves and all materials required for proper installation in accordance with the UCC Fuel and Gas Code and manufacturers product specifications.

**G. Natural Gas** - The Mechanical Contractor shall furnish and install new rigid natural gas piping system throughout the building envelope then continue with CSST flexible gas piping, valves, Pipe hangers, and all mechanical materials required to connect to propane tanks to new suspended unit heater.

### **23.3 - PROCEDURE**

Conform to the manufacturer's requirements when installing the heat pump, air handler and other components of the heating system. The drawings show the suggested size, location and layout of the ductwork and grilles/registers for each room in the building. Layout can be modified if air flows and system performance can be maintained. Mount ductwork with the applicable hardware.

Install the thermostat in the break room/office. Make the required electrical connections to operate the system. Test the HVAC system and make any necessary balance adjustments in the ductwork. Demonstrate system to PGC on site staff.

Discharge the condensate line outside the exterior of the wall and properly seal the penetration with a weather-tight sealant.

### **23.4 - MEASUREMENT AND PAYMENT**

This price and payment shall constitute full compensation for HVAC systems, ductwork, duct insulation and all related accessories including a thermostat as specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work.

A. Unit of Measurement: Lump Sum.

**TECHNICAL SPECIFICATION SECTION No. 24 – PLUMBING**

*Separation of Contract, to be awarded separate with “Contract 3”.*

**24.1 - SCOPE**

This work is providing and installing the components of the water supply and sanitary sewer systems inside the building. Connections to the water supply line, existing on-site septic lateral, trench drains, mechanical room floor drain, piping for these drains and fittings are part of this contract.

**24.2 – MATERIALS, WATER SUPPLY & FITTINGS**

**A. Water Supply Pipe** - The water supply (hot and cold) pipes shall be non-oxygen barrier PEX-A (cross-linked polyethylene) conforming to ASTM F876, ASTM F877 and NSF 14 & 61 or type “L” copper. Provide type “L” copper leads to connect water heater to PEX plumbing systems, 18” minimum from water heater.

**B. Water Supply Fittings and Valves** – Install fittings and clamps conforming to the PEX manufacturers product specifications. All fittings and valves shall be brass body per manufacturer. Hose bibbs to be brass anti-siphon frost proof with shut off valve mounted above.

**C. Waste and Vent Pipe and Fittings** – Schedule 40 PVC conforming with ASTM D1784, D1785 and D2665.

**D. Pipe Cements** – The solvent cement for making connections in PVC pipes and fittings shall conform to ASTM D2564. The primer for making connections in PVC pipes and fittings shall conform to ASTM F656.

**E. Pipe Insulation** – Self sealing elastomeric sleeves conforming to ASTM C534.

**F. Supply Lines to Faucets and Toilets** – Flexible braided stainless steel.

**G. Trench Drain System –**

1. System requirements: Provide a trench drain system of prefabricated modular pre-sloped components. The system shall incorporate a frame when required to carry the specified load. Gratings shall comply with the load requirements of AASHTO or DIN/EN loading. Integral frames which extend onto the concrete slab shall include consolidation vent ports which help minimize air entrapment under the frame when proper vibration techniques are used. Frames which extend onto the concrete slab shall include anchoring studs which secure the frame into the surrounding concrete. Anchoring studs shall be a minimum of 0.5 inch in diameter and shall extend at least 3 inches from the frame. The anchor studs shall be Fiberglass systems shall either include surface veil or gel coat on the media bearing surface with a UV inhibitor package.

2. Provide Polycast 600 trench drain systems manufactured by Hubbell Power Systems, Inc., 3621 Industrial Park Drive, Lenoir City, TN 37771, Website [www.polycastdrain.com](http://www.polycastdrain.com), or approved equal. Install in accordance with the manufacturer's installation guide.
3. Top of trench drain grating shall be minimum of 3 inches lower than perimeter elevation of floor slab.

**I. Floor Drain** – The floor drain in the mechanical room shall be a 3-inch PVC general purpose floor drain equipped with a removable stainless-steel strainer such as an Oatey Model #43579.

### **24.3 – MATERIALS, PLUMBING FIXTURES**

**A. General** – Refer to the elevations and fixture legend on the drawings for the layout of the bathroom and fixture installation location. Manufacturers and model numbers of fixtures are listed below to set a standard for performance, size and finish. Other manufacturers are acceptable provided that their products are the same or better level of quality.

**B. Toilet** – KOHLER Highline 2-piece Comfort Height Elongated Toilet (MFG# K-3493-RA-0) or approved equal meeting the following requirements.

1. White vitreous china construction
2. Elongated bowl and min. bowl rim height of 17" (ADA compliant)
3. Include or supply tank hardware, wax ring and elongated polypropylene finish white toilet seat
4. Pressure assist flushing system (1.4-gallon flush)
5. 12-inch rough-in

### **24.4 – MATERIALS, PLUMBING SINKS, AND FAUCETS**

**A. General** – Refer to the elevations and fixture legend on the drawings for the layout of the utility sink and cabinets. Manufacturers and model numbers of fixtures are listed below to set a standard for performance, size and finish. Other manufacturers are acceptable provided that their products are the same or better level of quality.

**B. Bathroom Sink** – American Standard Comrade Wall Mount Bathroom Sink (MFG# 0124.024.020) or approved equal meeting the following requirements.

1. White, vitreous china construction
2. Pre-drilled 4" center faucet holes for center set faucet applications
3. Wall hanger for mounting included
4. ADA compliant
5. Rectangular shape, min. width 21", min. depth 18"

**C. Bathroom Sink Faucet** – American Standard Monterrey Gooseneck Spout Bathroom faucet (MFG# 7502.170.002) or approved equal meeting the following requirements.

1. Polished chrome finish
2. 4” centerset design
3. 2 handle lever design
4. Gooseneck spout (10” min. height)
5. ADA compliant

**D. Utility Sink** – Swan 23” x 23” Veritek Single Bowl Laundry Tub (MFG# MF-1F) or approved equal meeting the following requirements.

1. White, 22-gallon capacity
2. Angular steel legs

**E. Utility Sink Faucet** – American Standard Cadet 2-Handle Laundry Faucet (MFG# 7573.140.002) or approved equal meeting the following requirements.

1. Solid brass construction with Satin finish
2. Ceramic disk valves
3. Brass swivel spout with hose end
4. 2.2 GPM flow rate
5. ADA compliant

**F. Utility Sink(s)** – Elkay 58 ½” x 29 13/16” x 43 3/4” Two Compartment Sink w/ 18” left Drainboard and Stainless Steel Legs (MFG # 14-2C18x24-l-18X or approved equal meeting the following requirements.

1. 300 Series Stainless Steel
2. #4 Finish
3. 16 Gauge
4. (2) 18”x 24”x 14” bowl dimensions complete with center drain
2. Angular steel legs

**G. Utility Sink Faucet (s)** – Elkay 8” Centerset wall mount faucet, 44”Flexible Hose w/1.2 GPM Spray Head, 2” Lever Handles.American Standard Cadet 2-Handle Laundry Faucet (MFG# LK943LC) or approved equal meeting the following requirements.

1. Low Flow, Solid Brass Construction and Spout Swing Restriction Pin
2. Chrome Finish(Chrome Plated Brass)
3. Quarter turn ceramic Disc valve with ½” – 14 NPT valve connection
3. Flexible spout with 30” reach and 41” height.
4. 1.2 GPM flow rate

## **24.5 – MATERIALS, WATER HEATER**

**A. Water Heater** – The water heater shall be an electric water heater with the following features and characteristics:

1. AO Smith 40-gallon tank, short and 240 volts
2. Dual 5,500-watt copper, stainless or titanium elements

3. Minimum 9-year warranty on the tank
4. Minimum 25 GPH recovery @ 90°F
5. Factory installed temperature/pressure relief valve
6. Adjustable thermostat

**B. Drip Pan** – Black plastic (polyethylene) with pre-cut side opening for 1-inch drain fitting. The diameter of the drip pan shall be at least 2-inches greater than the outside diameter of the water heater. Raise drip pan and heater with suitable blocking to aid in draining the tank.

**C. Thermal Expansion Tank** – Proflo PFXT51, 2.1 gallon thermal pre-pressurized expansion tank.

#### **24.6 - SUBMITTALS**

Submit a catalog cut or other information for the utility sink, faucet, cabinets, light and countertops from the manufacturers to the PGC for review and approval before ordering any materials.

#### **24.7 - PROCEDURE**

Conform to the requirements of the International Plumbing Code for all work conducted under this section. Lay out supply, waste and vent pipes so that structural supports do not have to be cut or drilled through. Use applicable hangers/supports for all pipes where needed.

Provide pressure tank and all fixtures to make the water supply completely functional. Assemble the tank and features so that the system operates on a 40/60PSI range. Circuit breakers in panel box are provided by the electrical contract. Verify and coordinate exact tank location in field with other utilities.

Install ¾-inch pipe from well shut off as a branch line to the water heater and ½-inch connection for the faucets, shower and toilet. Install shut-off valves in the supply piping at the sinks and at the toilet. Install flexible stainless-steel supply pipe from the shut-off valves to the faucets and toilet. Cover the hot water supply pipes with sleeve insulation.

Waste and vent pipes shall be PVC. Use 1½-inch PVC for sink drains. Use 2-inch and 3-inch pipe for vents as shown on the sewage schematic. Use 3-inch PVC for the toilet drain and 4-inch PVC for the sewer lateral drainpipe that exits from the building. Install the applicable traps, toilet flanges and other fittings connections under plumbing fixtures. Excavate outside the building to run the sewer pipe and provide a conduit for the water supply to enter under the building slab. Excavate the trench as shown on the Drawings. The trench depth will vary with the existing ground level and the slope of the pipe. The pipes shall be sloped at a minimum ¼-inch per foot. Install the solid drainage pipe in the trench and backfill with AASHTO #10 stone. Complete backfilling of the trench with excavated material outside the building and #2A coarse aggregate under the floor of the building.



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Excavate the trench drain areas as recommended by the manufacturer so the units can be surrounded by at least 6-inches of concrete. The top of the trench drains is to be below the finished elevation of the concrete floor to properly drain. Protect the trench drains during concrete placement so that concrete does not enter the units. Secure the trench drains so that they are not displaced during concrete operations. Use essentially the same procedure for installing the floor drain in the mechanical room.

**24.8 - MEASUREMENT AND PAYMENT**

This price and payment shall constitute full compensation to furnish and install new plumbing fixtures, sinks, shower cabinet, water closet, well pump and tank, domestic water and sanitary sewer branch plumbing piping systems, hot water heater, hose bids, trench and floor drains specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work.

A. Unit of Measurement: Lump Sum.

**TECHNICAL SPECIFICATION SECTION No. 25 – LIGHTING AND ELECTRIC  
POWER DISTRIBUTION**

*Separation of Contract, to be awarded separate with “Contract 4”.*

**25.1 – SCOPE**

This work is furnishing and installing all the normal and emergency power lighting fixtures with controls, electric power distribution systems wiring and devices for the new building as shown on the Drawings. This work includes installing all over-current protectors within the 200-amp electrical service panel and installation of the telephone and data lines from the office to the mechanical room and office.

**25.2 – GENERAL**

The drawings are indicative of the character and scope of the electrical work and are not intended to show all the details. The actual location of all wiring, outlets and equipment shall be determined at the site. The Contractor may install flush mount or recessed boxes in the heated bay on the FRP walls.

All work shall be manufactured, tested and installed accordance with the National Electric Code (NEC) 2017, the International Building Code (IBC) 2018 and all applicable local codes. The Contractor shall furnish a fire underwriter’s certificate of inspection covering the work installed under this specification.

**25.3 – MATERIALS**

**A. Circuit Panel Box** – The circuit panel box shall be dead front design complying with NEMA PB 1 and be circuit breaker type. Panel-board bus shall be copper with copper ground bus. The enclosure shall be NEMA PB 1, Type 1 with a surface type cabinet front, screw fastened cover with hinged door and flush lock. Finish color is standard gray enamel. Provide a 42-space minimum panel box (200-amp service) for the new building. Acceptable manufacturers are Siemens, Cutler-Hammer, Square-D or General Electric. No Homeline will be accepted.

**B. Disconnect Switch** - Wall disconnect switches shall be type HD Nema-1 safety switches with fuses or non-fused as noted on the drawings. Provide nema-3r enclosures for wet locations. Acceptable manufacturers are ge, square d, cutler-hammer or siemens.

**C. Circuit Breakers** – The circuit breakers are molded case circuit breakers conforming to NEMA AB 1, stab lock design. Circuit breakers must be equipped with integral thermal and instantaneous magnetic trip in each pole. Provide circuit breakers UL listed as Type SWD for lighting circuits. Do not use tandem circuit breakers. Acceptable manufacturers shall be Siemens, Cutler-Hammer, Square-D or General Electric. No Homeline will be accepted.

**D. Wire** – Metal Clad type MC AWG #6 through #12 wire with ground.

**E. Outlet and Junction Boxes** – Metal or PVC for surface or recessed mounting only in the heated bay and outside of the building. Provide closures for unused ports and waterproof covers for outside receptacle boxes. PVC “New Work” boxes can be used in walls.

**F. Outlets and Switches** – Rated for 20 amps (or more if required by equipment manufacturer), 120/277 and as manufactured by Hubbell, Bryant, Arrow-Hart, GE, P&S or Leviton. Light switches in the “break room, restroom and utility room” are to fitted with motion sensing switches. Where 3-way switches are found, install the motion sensing switch in the location that best scans the area.

**G. Lighting Fixtures** – The lighting fixture schedule is shown on the drawings.

**H. Bulbs** – Install the maximum wattage as recommended by the lighting fixture manufacturer.

**I. Conduit** – **All non-MC exposed wiring shall be in conduit.** Conduit shall be Schedule 40 PVC rigid non-metallic conduit conforming to NEMA TC-2 and UL651. Conduit fittings shall conform to NEMA TC-3 and UL514b. MC cable may be used in unheated storage bay area if desired.

**J. Exhaust Fan** – Broan Model # AER110K Flex Series Fan/Light Combo, 110 CFM exhaust fan or approved equal with the following characteristics. Furnish and install 4” dia. metal flexible duct with 90-degree metal elbow including wall cap with connector duct for side wall discharge. Provide stainless steel anchors, silicone sealants, foil duct tape, and all hardware required for installation in accordance with product specifications.

1. Permanently lubricated motor, resilient motor mount to isolate vibration
2. Steel with white finish
3. LED Module shall be 11-Watt with 3500K color temperature and 800 lumen output.
4. UL listed and HVI certified for safe use over showers
5. UL listed for use in insulated ceilings
6. Ceiling mount with galvanized steel housing.
7. Match the ductwork and louvered end cap to the exhaust fan capacities.

## **25.4 - PROCEDURE**

The installation of every component in the electrical system must be performed according to the National Electric Code (NEC).

Mount the circuit panel box and outlet boxes for the lighting fixtures, equipment power supplies and receptacles in the locations as shown on the Drawings.

Drill holes in the lumber wall framing to run wiring as necessary to all fixtures, equipment, and outlet locations. Use conduit in the heated and not heated bay areas of the building where wiring would be exposed. Secure the conduit with clamps approved by the manufacturer. Conduit must be extended and connected to all the outlet boxes. Use solvent cement for all conduit joints and connections. Pull wire through conduit without stripping insulation from the wires.

Install the light fixtures, switches and receptacles in the outlet boxes. Make the required conductor and ground connections. Install the light bulbs in the fixtures.

Trench for the electrical service from the existing service pole to the new building. Telephone and data lines to be installed from the office to the mechanical room. The tele/data lines from the pole will be installed by others in contractor provided conduit. Contractor may use same trench if maintain required separation.

### **25.5 - MEASUREMENT AND PAYMENT**

This price and payment shall constitute full compensation for the installation of a new lighting fixtures and controls and electrical power distribution systems wiring and devices as specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work.

A. Unit of Measurement: Lump Sum.

**TECHNICAL SPECIFICATION SECTION No. 26 – ELECTRIC POWER SUPPLY CONNECTION**

*Separation of Contract, to be awarded separate with “Contract 4”.*

**26.1 - SCOPE**

This work is furnishing and installing a new underground electrical service feed from the existing headquarters main electrical service. This work includes the installation of (2) 225 amp main breakers in existing headquarters electrical service main panel feeding 200-amp Panel ‘A’ and 200-amp service disconnect which feeds 200-amp Panel ‘B’. The work also includes the installation of an underground utility vault complete with cover.

Furnish and install new electrical conductors in conduit with expansion joints including all electrical accessories for new underground electrical feeds electrical circuitry from the existing Headquarters Main Electrical Service to the new storage building. All underground electrical circuits shall be installed in full compliance with the NEC. This work shall include all rough and final wiring required for connection of new circuitry to existing electrical sub-panel and fuel dispensing and monitoring equipment.

**26.2 – MATERIALS**

**A. Conduit** – Conduit shall be 4”, 2½”, 2” or 1¼”-inch minimum Schedule 40 PVC w/expansion joint and securing straps where needed. Any sweep elbows to be 36” minimum. Refer to drawing CS-1 and E-1 for approximate locations of conduit, sizes and lengths

**B. Service Feed Line** – (250kcmil) THHN 250 MCM Stranded Copper Black Wire , to meet UL Style MTW/1063/83/758 (Resistant to flame, moisture, and sunlight), and ASTM B3 and B8 conductor.

**C. Underground Utility Vault** – 24”x 36” PG Polymer Concrete underground enclosure complete with standard open bottom, model# PG2436BA24 complete with 2-piece cover and bolts #PG2436HS44 by Quazite to meet UL listed to ANSI/SCTE 77 2007 Tier 22 and achieve 22,00 lb load rating or approved equal.

**D. Grounding Rods** – 8-foot long grounding rod(s) and connecting cable

**E. Warning Tape** – Complies to NEC 300.5(D)3.

**F. Conduit Bedding** – AASHTO #10 stone; refer to section 5 of the Technical Specifications.

### **26.3 - PROCEDURE**

The Contractor is responsible for installing electrical components for the new overhead electrical service including, service entrance conductors, grounding rod(s), meter socket, mask, and the accessories associated with this work from the pole. In certain circumstances, the electric company mandates the conductors to be installed by their service technicians at no cost or a varying cost based on linear feet of wire.

The contractor is responsible for providing a conduit and conductors from the panel box, through the building envelope into the adjacent storage building to a previously installed subpanel. The contractor is responsible for making all electrical connections.

All conduit is to be trenched to meet building code depth to a minimum of 3' deep and bedded in AASHTO #10 aggregate.

### **26.4 - MEASUREMENT AND PAYMENT**

This price and payment shall constitute full compensation for the installation of a new overhead electrical service connection and supporting electrical service electrical gear and components to the building, including all new underground electrical circuitry supporting site electrical requirements as specified and shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work.

A. Unit of Measurement: Lump Sum.

**TECHNICAL SPECIFICATION SECTION NO. 27 – EMERGENCY GENERATORS**

**27.1 - SCOPE**

This work is to furnish and install new natural gas-powered emergency generator, automatic transfer switches and electrical circuitry at new building as shown on the Drawing.

**27.2 – GENERAL**

The drawing is indicative of the character and scope of the work and is not intended to show all the details. The actual location of all wiring, electrical gear and equipment shall be determined at the site.

All work shall be manufactured, tested, and installed accordance with the National Electric Code (NEC) latest edition, the International Building Code (IBC) 2018 and all applicable local codes. The Contractor shall furnish a fire underwriter's certificate of inspection covering the work installed under this specification.

**27.3 – MATERIALS**

**A. Emergency Generators & Automatic Transfer Switch (ATS)** – The new emergency generators shall be Generac Model 7291 natural gas fired 26kW complete with 200 Amp Service rated load shedding smart switch package(ATS); no approved equals will be accepted.

**Wire and Conduits** – Conduit shall be Schedule 40 PVC rigid non-metallic conduit conforming to NEMA TC-2 and UL651. Conduit fittings shall conform to NEMA TC-3 and UL 514b. Wire shall be #4, #6 or #8 as required with THWN insulation. Conductors shall be solid with green jacket for ground, white for neutral and black for hot.

**27.4 – SUBMITTALS**

Submit a catalog cut and other manufacturers information for new emergency generators, and automatic transfer switches to the PGC for review and approval before ordering any materials. Refer to submittal specification section for submission requirements.

**27.5 - PROCEDURE**

The installation of every component in the electrical system must be performed according to the National Electric Code (NEC).

Natural Gas connections for the generators are **NOT IN CONTRACT**. Mechanical Contractor will provide service to the generators, including gas piping with valving to the generators.

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Coordinate with the electric company for all inspections, fees and related electric work as applicable.

Install the emergency generators on the exterior concrete pad adjacent to the South Elevation of the new Building. Secure the generators to the concrete as recommended by the manufacturer. Mount the automatic transfer switches inside the Mechanical Room as indicated on the electrical drawings.

**27.6 - MEASUREMENT AND PAYMENT**

This price and payment shall constitute full compensation for the installation of an emergency generator and automatic transfer switch as specified, shown and as directed by PGC staff including but not limited to all labor, materials, equipment, supervision, accessories, disposal of waste and related work.

A. Unit of Measurement: Lump Sum.