MAINE BUREAU OF PARKS AND LANDS

PROJECT MANUAL

For

RICHMOND MAINTENANCE FACILITY BUILDINGS

AT

1009 BRUNSWICK ROAD (RTE. 201)

RICHMOND, MAINE

BGS #PT3204

Issued for Bid

May 17, 2022

PROJECT MANUAL

RICHMOND MAINTENANCE FACILITY BUILDINGS

Prepared for:

MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY

BUREAU OF PARKS AND LANDS

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00 11 13
Notice to Contractors

Richmond Maintenance Facility Buildings BGS 3204

Two buildings and a new entrance driveway at the Boating Facilities Program Maintenance Facility in Richmond, Maine. The Work includes: a new 50 ft x 80 ft Navigation Aids Storage Building for storage of boats, vehicles and equipment, a new 32 ft x 36 ft Carpentry Shop, and a new driveway entrance on Rte 201, and associated sitework.

The cost of the work is approximately $ 500,000. The work to be performed under this contract shall be completed on or before the Substantial Completion date of 15 December 2022.

1. Submit bids on a completed Contractor Bid Form, plus bid security when required, all scanned and included as an attachment to an email with the subject line marked "***Bid for Richmond Maintenance Facility Buildings***" and addressed to the Bid Administrator at: BGS.Architect@Maine.gov, so as to be received no later than **2:00:00 p.m.** on ***07 June 2022***.

   Bid submissions will be opened and read aloud at the time and date noted above at the Bureau of General Services office, accessible as a video conference call. Those who wish to participate in the call must submit a request for access to BGS.Architect@Maine.gov.

   Any bid received after the noted time will not be considered a valid bid and will remain unopened. Any bid submitted by any other means will not be considered a valid bid. The Bid Administrator may require the Bidder to surrender a valid paper copy of the bid form or the bid security document in certain circumstances.

   Questions on the bid opening process shall be addressed to the Bid Administrator: David Schoenherr, Director, Division of Planning, Design & Construction, Bureau of General Services, 77 State House Station, Augusta, Maine 04333-0077, BGS.Architect@Maine.gov.

2. The bid shall be submitted on the Contractor Bid Form (section 00 41 13) provided in the Bid Documents. The Owner reserves the right to accept or reject any or all bids as may best serve the interest of the Owner.

3. Bid security is required on this project. The Bidder shall include a satisfactory Bid Bond (section 00 43 13) or a certified or cashier's check for 5% of the bid amount with the completed bid form submitted to the Owner. The Bid Bond form is available on the BGS website.

4. Performance and Payment Bonds are required on this project.
   The selected Contractor shall furnish a 100% contract Performance Bond (section 00 61 13.13) and a 100% contract Payment Bond (section 00 61 13.16) in the contract amount to cover the execution of the Work. Bond forms are available on the BGS website.

5. Filed Sub-bids *are not required* on this project.

6. There are no Pre-qualified General Contractors on this project.

7. An on-site pre-bid conference be conducted for this project.
   If a pre-bid conference is scheduled, it is for General Contractors and optional for Subcontractors and suppliers. Contractors who arrive late or leave early for a mandatory meeting may be prohibited from participating in this meeting and bidding. ***The pre-bid conference will be at 10:00 a.m. 31 May 2022, at the project site.***

8. Bid Documents - full sets only - will be available on or about *17 May 2022* and may be obtained *at no cost* from:

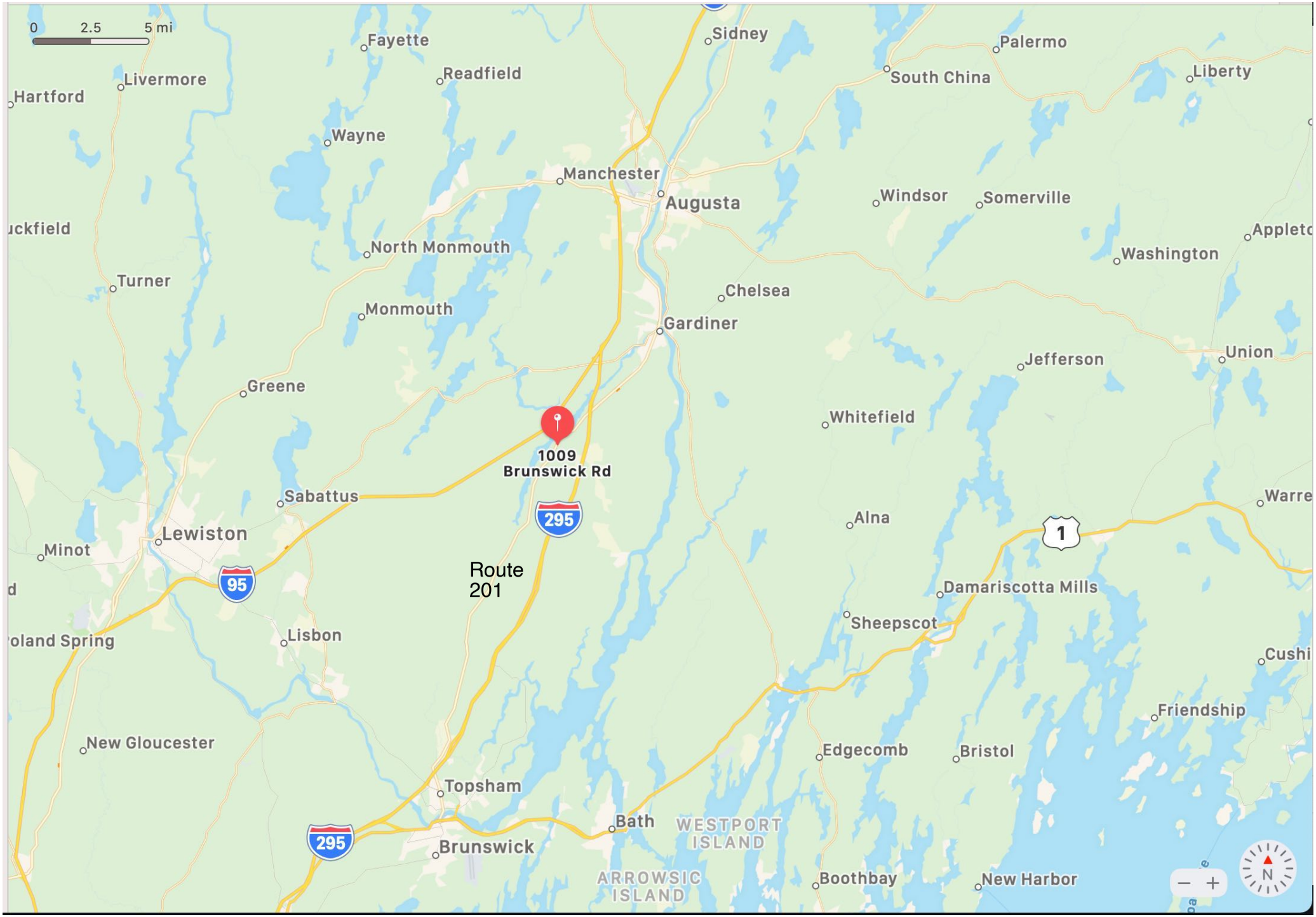
Bureau of General Service website

https://www.maine.gov/dafs/bgs/business-opportunities

9. Bid Documents may be examined at:

AGC Maine
188 Whitten Road
Augusta, ME 04330
Phone 207-622-4741 Fax 207-622-1625

Construction Summary
734 Chestnut Street
Manchester, NH 03104
Phone 603-627-8856 Fax 603-627-4524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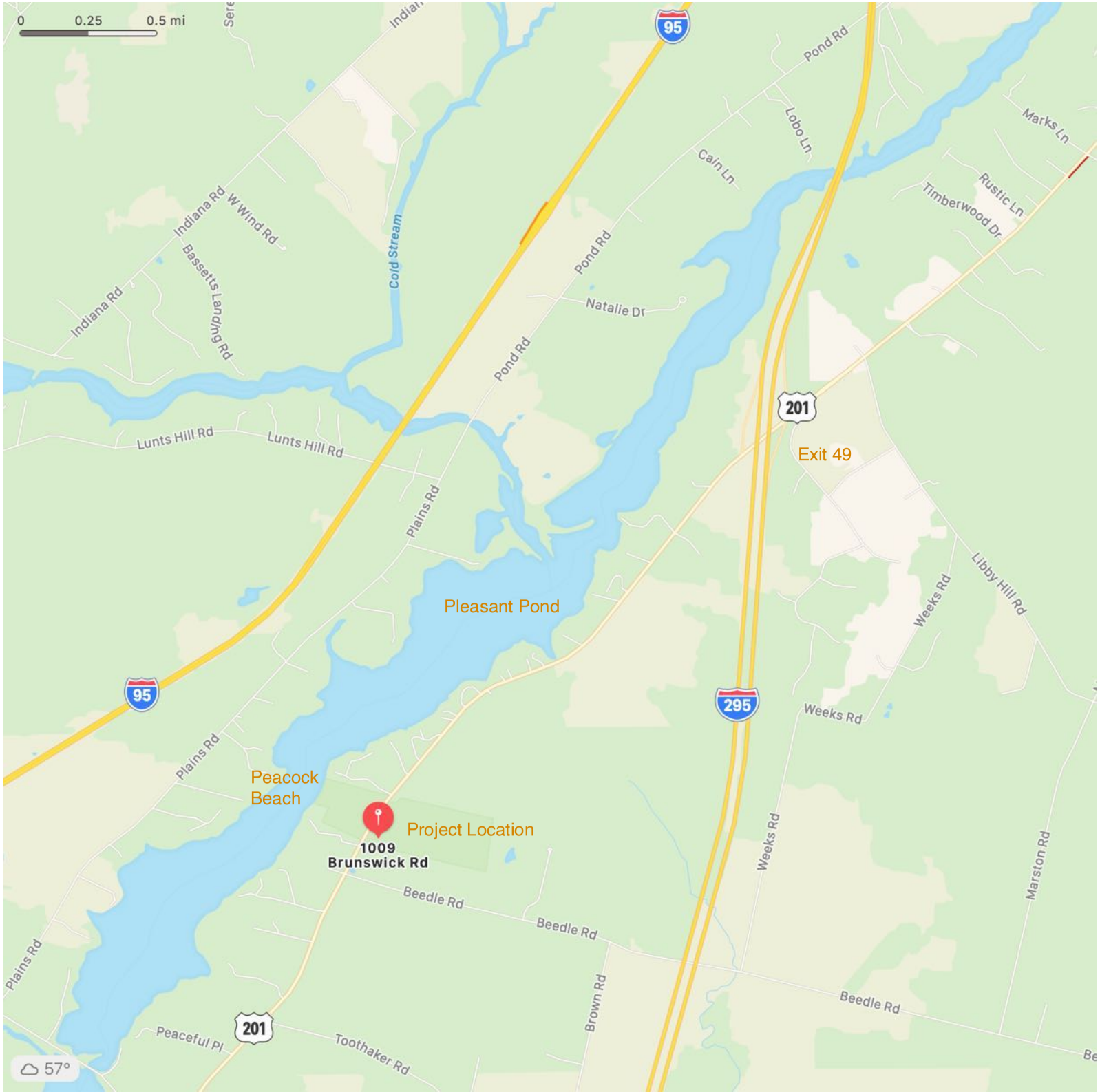
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W Wind Rd
Bassetts Landing Rd
Cold Stream
Natalie Dr
Lunts Hill Rd
Plains Rd
201
Exit 49
Libby Hill Rd
Weeks Rd
Pleasant Pond
295
Peacock Beach
Project Location
1009
Brunswick Rd
Beedle Rd
Brown Rd
Marston Rd
Peaceful Pl
Toothaker Rd
57°

00 21 13
Instructions to Bidders

1. Bidder Requirements

1.1 A bidder is a Contractor who is qualified, or has been specifically pre-qualified by the Bureau of General Services, to bid on the proposed project described in the Bid Documents.

1.2 Contractors and Subcontractors bidding on projects that utilize Filed Sub-bids shall follow the requirements outlined in these Bid Documents for such projects. See Section 00 22 13 for additional information.

1.3 Contractors and Subcontractors are not eligible to bid on the project when their access to project design documents prior to the bid period distribution of documents creates an unfair bidding advantage. Prohibited access includes consultation with the Owner or with design professionals engaged by the Owner regarding cost estimating, constructability review, or project scheduling. This prohibition to bid applies to open, competitive bidding or pre-qualified contractor bidding or Filed Sub-bidding. The Bureau may require additional information to determine if the activities of a Contractor constitute an unfair bidding advantage.

1.4 Each bidder is responsible for becoming thoroughly familiar with the Bid Documents prior to submitting a bid. The failure of a bidder to review evident site conditions, to attend available pre-bid conferences, or to receive, examine, or act on addenda to the Bid Documents shall not relieve that bidder from any obligation with respect to their bid or the execution of the work as a Contractor.

1.5 Prior to the award of the contract, General Contractor bidders or Filed Sub-bidders may be required to provide documented evidence to the Owner or the Bureau showing compliance with the provisions of this section, their business experience, financial capability, or performance on previous projects.

1.6 The selected General Contractor bidder will be required to provide proof of insurance before a contract can be executed.

1.7 Contracts developed from this bid shall not be assigned, sublet or transferred without the written consent of the Owner.

1.8 By submitting a bid the Contractor attests that it has not been declared ineligible to bid on State of Maine projects. The Director of the Bureau of General Services may disallow award of this contract to any Contractor if there is evidence that the Contractor or any of its Subcontractors, through their own fault, have been terminated, suspended for cause, debarred from bidding, agreed to refrain from bidding as part of a settlement, have defaulted on a contract, or had a contract completed by another party.

1.9 The Contractor attests that it is not presently indicted for or otherwise criminally or civilly charged by a Federal, State or local government entity with commission of any of the following offenses and has not within a three-year period preceding this bid been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction, or contract under a public transaction, violation of Federal or State anti-trust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property.

1.10 The Contractor shall not make any award or permit any award (subgrant or contract) at any tier to any party which is debarred or suspended or is otherwise excluded from or ineligible for participation in Federal assistance programs or State of Maine projects.

2. Authority of Owner

2.1 The Owner reserves the right to accept or reject any or all bids as may best serve the interest of the Owner.

2.2 Subject to the Owner's stated right to accept or reject any or all bids, the Contractor shall be selected on the basis of the lowest dollar value of an acceptable Base Bid, or any combination of Base Bid plus Alternate Bids, as well as other limited cost modifications the Owner determines may best serve the interests of the Owner. An acceptable bid is a duly submitted bid from a responsive and responsible bidder.

2.3 The Owner reserves the right to require Bid Bonds or Performance and Payment Bonds for any project of any contract value.

3. Submitting Bids and Bid Requirements

3.1 Each bid shall be submitted on the forms provided in the Bid Documents.

3.2 Each bid shall be valid for a period of thirty calendar days following the Project bid closing date and time. The bid expiration date may be extended in unusual circumstances by mutual consent of the Bidder and the Owner. The bid amount shall not be modified due to the bid expiration date extension.

3.3 Any provision contained in a bid which shows cost escalation, or any modification of schedule or other requirements shall not be accepted. Such a provision causes the bid to be invalid, or, at the discretion of the Owner and BGS, that element of the bid submission may be disregarded for the purpose of awarding the contract without that provision.

3.4 Bidders shall include a Bid Bond or other approved bid security with the bid form submitted to the Owner when the bid form indicates such bid security is required. The bond value shall be 5% of the bid amount. The form of bond is shown in section 00 43 13.

3.5 Bidders recognize that inclusion of contract bonds and the cost of those bonds is dependent on the awarded contract dollar value. Therefore, a Base Bid, or any combination of Base Bid plus Alternate Bids, as well as other limited cost modifications, resulting in a contract award shall include the cost of Performance and Payment Bonds in the submitted bid amount when the construction contract value is over $125,000.00. Similarly, the cost of Performance and Payment Bonds is excluded in the submitted bid amount when the construction contract value is $125,000.00 or less unless bonds are specifically required by the Bid Documents. When required for the project, the selected Contractor shall provide these bonds before a contract can be executed, pursuant to 14 M.R.S.A., Section 871, Public Works Contractors' Surety Bond Law of 1971, subsection 3. The form of bonds is shown in section 00 61 13.13 and 00 61 13.16.

3.6 Bidders may modify bids in writing, by the same means as the original bid submission, prior to the bid closing time. Such written amendments shall not disclose the amount of the initial bid. If so disclosed, the entire bid is considered invalid.

3.7 Bidders implicitly acknowledge all Addenda issued when they submit the bid form. By usual practice the Consultant shall not issue Addenda less than 72 hours prior to the bid closing time, to allow ample time for bidders to incorporate the information. However, some information, such as extending the bid due date and time, may be issued with shorter notice. Addenda shall be issued to all companies who are registered holders of Bid Documents.

3.8 A bid may be withdrawn without penalty if a written request by the bidder is presented to the Owner prior to the bid closing time. Such written withdrawal requests are subject to verification as required by the Bureau. After the bid closing time, such written withdrawal requests may be allowed in consideration of the bid bond or, without utilizing a bid bond, if the Contractor provides documented evidence to the satisfaction of the Bureau that factual errors had been made on the bid form.

3.9 In the event State of Maine Offices unexpectedly close on the published date of a public bid opening in the location of that bid opening, prior to the time of the scheduled deadline, the new deadline for the public bid opening will be the following business day at the originally scheduled hour of the day, at the original location. Official closings are posted on the State of Maine government website.

3.10 The Owner may require, in a Notice of Intent to Award letter to the apparent low bidder, a Schedule of Values, Project Schedule, and List of Subcontractors and Suppliers as both a demonstration of capability of the Bidder and as a condition of award.

3.11 Projects which require a State of Maine wage determination will include that schedule as part of the Bid Documents. See section 00 73 46, if such rates are required.

3.12 Projects which require compliance with the Davis-Bacon Act are subject to the regulations contained the Code for Federal Regulations and the federal wage determination which is made a part of the Bid Documents. See section 00 73 46, if such rates are required.

3.13 The Owner is exempt from the payment of Maine State sales and use taxes as provided in 36 M.R.S. §1760 (1). The Contractor and Subcontractors shall not include taxes on exempt items in the construction contract.

00 43 13
Contractor Bid Bond

Bond No.: **insert bond number**

We, the undersigned, ***insert company name of Contractor***, ***select type of entity*** of ***insert name of municipality*** in the State of ***insert name of state*** as principal, and ***insert name of surety*** as Surety, are hereby held and firmly bound unto ***select title of obligee*** in the penal sum of ***five percent of the bid amount***, for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns, signed this ***insert date, i.e.: 8th*** day of ***select month***, ***select year***, which is the same date as that of the first specified bid due date, or subsequent bid due date revised by addendum.

The condition of the above obligation is such that whereas the principal has submitted to the Owner, or State of Maine, to a certain bid, attached hereto and hereby made a part hereof, to enter into a contract in writing, for the construction of ***insert name of project as designated in the contract documents***

Now therefore:

If said bid shall be rejected, or, in the alternate,

If said bid shall be accepted and the principal shall execute and deliver a contract in the form of contract attached hereto, properly completed in accordance with said bid, and shall furnish a bond for the faithful performance of said contract, and for the payment of all persons performing labor or furnishing material in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said bid, then this obligation shall be void.

Otherwise, the same shall remain in force and effect- it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received hereby stipulates and agrees that the obligation of said Surety and its bonds shall be in no way impaired or affected by any extension of the time within which the Obligee may accept such bid and said Surety does hereby waive notice of any such extension.

[Fillable bond forms may be downloaded from the Bureau of General Services website.]

00 41 13
Contractor Bid Form

Richmond Maintenance Facility Buildings BGS 3204

Bid Form submitted by:

Bid Administrator:
David Schoenherr BGS.Architect@Maine.gov
Bureau of General Services
111 Sewall Street, Cross State Office Building, 4th floor
77 State House Station
Augusta, Maine 04333-0077

Bidder:

Signature: _____

Printed name and title: _____

Company name: _____

Mailing address: _____

City, state, zip code: _____

Phone number: _____

Email address: _____

State of incorporation, if a corporation: _____

List of all partners, if a partnership: _____

The Bidder agrees, if the Owner offers to award the contract, to provide any and all bonds and certificates of insurance, as well as Schedule of Values, Project Schedule, and List of Subcontractors and Suppliers if required by the Owner, and to sign the designated Construction Contract within twelve calendar days after the date of notification of such acceptance, except if the twelfth day falls on a State of Maine government holiday or other closure day, or a Saturday, or a Sunday, in which case the aforementioned documents must be received before 12:00 noon on the first available business day following the holiday, other closure day, Saturday, or Sunday.

As a guarantee thereof, the Bidder submits, together with this bid, a bid bond or other acceptable instrument as and if required by the Bid Documents.

00 41 13
Contractor Bid Form

1. The Bidder, having carefully examined the *Richmond Maintenance Facility Buildings* Project Manual dated *12 May 2022*, prepared by *Pinnacle Hill Engineering*, as well as Specifications, Drawings, and any Addenda, the form of contract, and the premises and conditions relating to the work, proposes to furnish all labor, equipment and materials necessary for and reasonably incidental to the construction and completion of this project for the **Base Bid** amount of:

   $ _____.00

2. Allowances on this project.

3. Alternate Bids on this project.

   Any dollar amount line below that is left blank by the Bidder shall be read as a bid of **$0.00**.

   1 Metal in lieu of wood framing for Nav Aids Storage Building $ _____.00

   2 Epoxy floor coating in Nav Aids Storage Building $ _____.00

4. Bid security *is required* on this project.
   The Bidder shall include with this bid form a satisfactory Bid Bond (section 00 43 13) or a certified or cashier's check for 5% of the bid amount with this completed bid form submitted to the Owner.

5. Filed Sub-bids *are not used* on this project.

00 43 13
Contractor Bid Bond

In witness whereof, the principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set above.

Signed and sealed this ***insert date, i.e.: 8th*** day of ***select month***, ***select year***, which is the first specified bid due date, or subsequent bid due date revised by addendum.

Contractor

(Signature)

insert name and title

insert company name

insert address
insert city state zip code

Surety

(Signature)

insert name and title

insert company name

insert address
insert city state zip code

If Contractor is a partnership, all partners shall execute the bond. A power of attorney document indicating that it still is in full force and effect shall be provided by the person executing this bond.

[Fillable bond forms may be downloaded from the Bureau of General Services website.]

AdvantageME CT# _____

State of Maine
CONSTRUCTION CONTRACT

Large Construction Project

This form is used when the Contract value is $50,000 or greater.
The Project Manual, Specifications and Drawings, and any Addenda are considered part of this Contract.

Agreement entered into by and between the ***insert contracting entity name*** hereinafter called the ***Owner*** and ***insert Contractor company name*** hereinafter called the ***Contractor***.

BGS Project No.: ***insert number assigned by BGS*** Other Project No.: _____

For the following Project: ***title of project shown on documents*** at ***facility or campus name***, ***municipality***, Maine.

The Specifications and the Drawings have been prepared by ***firm name***, acting as Professional-of-Record and named in the documents as the Consultant Architect or Engineer.

The *Owner* and *Contractor* agree as follows:

ARTICLE 1 COMPENSATION AND PAYMENTS

1.1 The Owner shall pay the Contractor to furnish all labor, equipment, materials and incidentals necessary for the construction of the Work described in the Specifications and shown on the Drawings the Contract Amount as shown below.

Base Bid	*$0.00*
Alternate Bid number and name or "no Alternates"	*$0.00*
Alternate Bid number and name or "no Alternates"	*$0.00*
Alternate Bid number and name or "no Alternates"	*$0.00*
Alternate Bid number and name or "no Alternates"	*$0.00*
Alternate Bid number and name or "no Alternates"	*$0.00*
Total Contract Amount	***$0.00***

1.2 The Contractor's requisition shall contain sufficient detail and supporting information for the Owner to evaluate and support the payment requested.

1.2.1 Payments are due and payable twenty-five working days from the date of receipt of a Contractor requisition which is approved by the Owner.

1.2.2 Provisions for late payments are governed by 5 M.R.S. Chapter 144, *Payment of Invoices Received from Business Concerns*, and interest shall be calculated at 1% per month.

ARTICLE 2 COMMENCEMENT AND COMPLETION DATES

2.1 The Work of this Contract shall commence no sooner than the date this document is executed by the approval authority, or a subsequent date designated in the contract documents.

2.2 The Substantial Completion Date shall be ***15 December 2023***.

2.3 The Work of this Contract shall be completed on or before the Contract Final Completion Date of ***31 December 2023***.

2.4 The Contract Expiration Date shall be ***29 February 2024***. (This date is the Owner's deadline for internal management of contract accounts. The Contract Expiration Date does not directly relate to any contract obligation of the Contractor.)

ARTICLE 3 INELIGIBLE BIDDER

3.1 By signing this contract the Contractor attests that it has not been declared ineligible to bid on State of Maine projects. The Bureau of General Services may disallow award of this contract to any Contractor if there is evidence that the Contractor or any of its Subcontractors, through their own fault, have been terminated, suspended for cause, debarred from bidding, agreed to refrain from bidding as part of a settlement, have defaulted on a contract, or had a contract completed by another party.

3.2 By signing this contract the Contractor attests that it is not presently indicted for or otherwise criminally or civilly charged by a Federal, State or local government entity with commission of any of the following offenses and has not within a three-year period preceding this bid been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction, or contract under a public transaction, violation of Federal or State anti-trust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property.

3.3 The Contractor shall not make any award or permit any award (subgrant or contract) at any tier to any party which is debarred or suspended or is otherwise excluded from or ineligible for participation in Federal assistance programs or State of Maine projects.

ARTICLE 4 CONTRACTOR'S RESPONSIBILITIES

4.1 On this project, the Contractor ***shall*** furnish the Owner the appropriate contract bonds in the amount of 100% of the Contract Sum. Contract bonds are mandated if the Contract Sum exceeds $125,000, or if bonds are specifically required by the Contract Documents.

4.2 The Contractor shall comply with all laws, codes and regulations applicable to the Work.

4.3 The Contractor shall acquire all permits and third-party approvals applicable to the Work not specifically identified as provided by the Owner. Costs for Contractor-provided permits and third-party approvals shall be included in the Contract Sum identified in Section 1.1 above.

4.4 The Contractor shall remain an independent agent for the duration of this Contract, shall not become an employee of the State of Maine, and shall assure that no State employee will be compensated by, or otherwise benefit from, this Contract.

4.5 The Contractor shall be responsible for any design cost, construction cost, or other cost incurred on the Project to the extent caused by the negligent acts, errors or omissions of the Contractor or their Subcontractors in the performance of Work under this Contract.

ARTICLE 5 OWNER'S RESPONSIBILITIES

5.1 The Owner shall provide full information about the objectives, schedule, constraints and existing conditions of the project. The Owner has established a budget with reasonable contingencies that meets the project requirements.

5.2 By signing this contract, the Owner attests that all State of Maine procurement requirements for this contract have been met, including the solicitation of competitive bids.

ARTICLE 6 INSTRUMENTS OF SERVICE

6.1 The Contractor's use of the drawings, specifications and other documents known as the Consultant's Instruments of Service is limited to the execution of the Contractor's scope of work of this project unless the Contractor receives the written consent of the Owner and Consultant for use elsewhere.

ARTICLE 7 MISCELLANEOUS PROVISIONS

7.1 This Contract shall be governed by the laws of the State of Maine.

7.2 The Owner and Contractor, respectively, bind themselves, their partners, successors, assigns and legal representatives to this Contract. Neither party to this Contract shall assign the Contract as a whole without written consent of the other party, which consent the Owner may withhold without cause.

7.3 Notwithstanding any other provision of this Agreement, if the Owner does not receive sufficient funds to fund this Agreement or funds are de-appropriated, or if the Owner does not receive legal authority from the Maine State Legislature or Maine Courts to expend funds intended for this Agreement, then the Owner is not obligated to make payment under this Agreement; provided, however, the Owner shall be obligated to pay for services satisfactorily performed prior to any such non-appropriation in accordance with the termination provisions of this Agreement. The Owner shall timely notify the Contractor of any non-appropriation and the effective date of the non-appropriation.

ARTICLE 8 CONTRACT DOCUMENTS

8.1 The Project Manual, Specifications and Drawings, and any Addenda, together with this agreement, form the contract. Each element is as fully a part of the Contract as if hereto attached or herein repeated.

8.2 Specifications: ***indicate date of issuance of project manual***

8.3 Drawings: ***note each sheet number and title***

8.4 Addenda: ***note each addenda number and date, or "none"***

BGS Project No.: _____

The Contract is effective as of the date executed by the approval authority.

OWNER	**CONTRACTOR**
Signature *Date* *name and title* *name of contracting entity* *address* *telephone* *email address*	*Signature* *Date* *name and title* *name of contractor company* *address* *telephone* *email address* *Vendor Number*

Indicate the names of the review and approval individuals appropriate to the approval authority.

select proper approval authority	
Reviewed by:	**Approved by:**
Signature *Date* *insert name*	*Signature* *Date* *Joseph H. Ostwald*
Project Manager/ Contract Administrator	*Director, Planning, Design & Construction*

00 61 13.13
Contractor Performance Bond

Bond No.: **insert bond number**

We, the undersigned, ***insert company name of Contractor***, ***select type of entity*** of ***insert name of municipality*** in the State of ***insert name of state*** as principal, and ***insert name of surety*** as Surety, are hereby held and firmly bound unto ***select title of obligee*** in the penal sum of the Contract Price $ ***insert the Contract Price in numbers*** for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

The condition of the above obligation is such that if the principal shall promptly and faithfully perform the contract entered into this ***insert date, i.e.: 8th*** day of ***select month***, ***select year***, which is the same date as that of the notice of intent to award letter, or in the absence of such a letter, not later than the date the Owner signs the construction contract, for the construction of ***insert name of project as designated in the contract documents***, then this obligation shall be null and void.

Otherwise, the same shall remain in force and effect- it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received hereby stipulates and agrees that the obligation of said Surety and its bonds shall be in no way impaired or affected by any extension of the time which the Obligee may accept during the performance of the contract and said Surety does hereby waive notice of any such extension.

[Fillable bond forms may be downloaded from the Bureau of General Services website.]

00 61 13.13
Contractor Performance Bond

In witness whereof, the principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set above.

Signed and sealed this ***insert date, i.e.: 8th*** day of ***select month***, ***select year***, which is the same date as that of the notice of intent to award letter, or in the absence of such a letter, not later than the date the Owner signs the construction contract.

Contractor

_____

(Signature)

insert name and title

insert company name

insert address
insert city state zip code

Surety

_____

(Signature)

insert name and title

insert company name

insert address
insert city state zip code

If Contractor is a partnership, all partners shall execute the bond. A power of attorney document indicating that it still is in full force and effect shall be provided by the person executing this bond.

[Fillable bond forms may be downloaded from the Bureau of General Services website.]

00 61 13.16
Contractor Payment Bond

Bond No.: **insert bond number**

We, the undersigned, ***insert company name of Contractor***, ***select type of entity*** of ***insert name of municipality*** in the State of ***insert name of state*** as principal, and ***insert name of surety*** as Surety, are hereby held and firmly bound unto ***select title of obligee*** in the penal sum of the Contract Price $ ***insert the Contract Price in numbers*** for the use and benefit of claimants, defined as an entity having a contract with the principal or with a subcontractor of the principal for labor, materials, or both labor and materials, used or reasonably required for use in the performance of the contract, for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

The condition of the above obligation is such that if the principal shall promptly satisfy all claims and demands incurred for all labor and materials, used or required by the principal in connection with the work described in the contract entered into this ***insert date, i.e.: 8th*** day of ***select month***, ***select year***, which is the same date as that of the notice of intent to award letter, or in the absence of such a letter, not later than the date the Owner signs the construction contract, for the construction of ***insert name of project as designated in the contract documents***, and shall fully reimburse the obligee for all outlay and expense with said obligee may incur in making good any default of said principal, then this obligation shall be null and void.

Otherwise, the same shall remain in force and effect- it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received hereby stipulates and agrees that the obligation of said Surety and its bonds shall be in no way impaired or affected by any extension of the time which the Obligee may accept during the performance of the contract and said Surety does hereby waive notice of any such extension.

[Fillable bond forms may be downloaded from the Bureau of General Services website.]

00 61 13.16
Contractor Payment Bond

In witness whereof, the principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set above.

Signed and sealed this ***insert date, i.e.: 8th*** day of ***select month***, ***select year***, which is the same date as that of the notice of intent to award letter, or in the absence of such a letter, not later than the date the Owner signs the construction contract.

Contractor

_____

(Signature)

insert name and title

insert company name

insert address
insert city state zip code

Surety

_____

(Signature)

insert name and title

insert company name

insert address
insert city state zip code

If Contractor is a partnership, all partners shall execute the bond. A power of attorney document indicating that it still is in full force and effect shall be provided by the person executing this bond.

[Fillable bond forms may be downloaded from the Bureau of General Services website.]

00 71 00
Definitions

1. Definitions

1.1 *Addendum*: A document issued by the Consultant that amends the Bid Documents. Addenda shall not be issued less than seventy-two hours prior to the specified bid opening time.

1.2 *Allowance*: A specified dollar amount for a particular scope of work or service included in the Work that is identified in the Bid Documents and included in each Bidder's Bid. The Contractor shall document expenditures for an Allowance during the Project. Any unused balance shall be credited to the Owner. The Contractor is responsible for notifying the Owner of anticipated expenses greater than the specified amount and the Owner is responsible for those additional expenses.

1.3 *Alternate Bid*: The Contractor's written offer of a specified dollar amount, submitted on the Bid Form, for the performance of a particular scope of work described in the Bid Documents. The Owner determines the low bidder based on the sum of the base Bid and any combination of Alternate Bids that the Owner selects.

1.4 *Architect*: A Consultant acting as, or supporting, the Professional-of-Record who is responsible for the design of the Project. Equivalent to "Consultant" in State of Maine contract forms.

1.5 *Architectural Supplemental Instruction (ASI)*: A written instruction from the Architect for the purpose of clarification of the Contract Documents. An ASI does not alter the Contract Price or Contract Time. ASIs may be responses to RFIs and shall be issued by the Architect in a timely manner to avoid any negative impact on the Schedule of the Work.

1.6 *Bid*: The Contractor's written offer of a specified dollar amount or amounts, submitted on a form included in the Bid Documents, for the performance of the Work. A Bid may include bonds or other requirements. A base Bid is separate and distinct from Alternate Bids, being the only cost component necessary for the award of the contract, and representing the minimum amount of Work that is essential for the functioning of the Project.

1.7 *Bid Bond*: The security designated in the Bid Documents, furnished by Bidders as a guaranty of good faith to enter into a contract with the Owner, should a contract be awarded to that Bidder.

1.8 *Bidder*: Any business entity, individual or corporation that submits a bid for the performance of the work described in the Bid Documents, acting directly or through a duly authorized representative. See also *Responsive and Responsible Bidder*.

1.9 *Bid Documents*: The drawings, procurement and contracting requirements, general requirements, and the written specifications -including all addenda, that a bidder is required to reference in the submission of a bid.

1.10 *Bureau*: The State of Maine Bureau of General Services, or BGS, in the Department of Administrative and Financial Services.

1.11 *Calendar days*: Consecutive days, as occurring on a calendar, taking into account each day of the week, month, year, and any religious, national or local holidays. Calendar days are used for changes in Contract Time.

1.12 *Certificate of Substantial Completion*: A document developed by the Consultant that describes the final status of the Work and establishes the date that the Owner may use the facility for its intended purpose. The Certificate of Substantial Completion may also include a provisional list of items - a "punch list" - remaining to be completed by the Contractor. The Certificate of Substantial Completion identifies the date from which the project warranty period commences.

1.13 *Certificate of Occupancy*: A document developed by a local jurisdiction such as the Code Enforcement Officer that grants permission to the Owner to occupy a building.

1.14 *Change Order (CO)*: A document that modifies the contract and establishes the basis of a specific adjustment to the Contract Price or the Contract Time, or both. Change Orders may address correction of omissions, errors, and document discrepancies, or additional requirements. Change Orders should include all labor, materials and incidentals required to complete the work described. A Change Order is not valid until signed by the Contractor, Owner and Consultant and approved by the Bureau.

1.15 *Change Order Proposal (COP) (see also Proposal)*: Contract change proposed by the Contractor regarding the contract amount, requirements, or time. The Contractor implements the work of a COP after it is accepted by all parties. Accepted COPs are incorporated into the contract by Change Order.

1.16 *Clerk of the Works*: The authorized representative of the Consultant on the job site. Clerk of the Works is sometimes called the Architect's representative.

1.17 *Construction Change Directive (CCD)*: A written order prepared by the Consultant and signed by the Owner and Consultant, directing a change in the Work prior to final agreement with the Contractor on adjustment, if any, in the Contract Price or Contract Time, or both.

1.18 *Contract*: A written agreement between the Owner and the successful bidder which obligates the Contractor to perform the work specified in the Contract Documents and obligates the Owner to compensate the Contractor at the mutually accepted sum, rates or prices.

1.19 *Contract Bonds (also known as Payment and Performance Bonds)*: The approved forms of security, furnished by the Contractor and their surety, which guarantee the faithful performance of all the terms of the contract and the payment of all bills for labor, materials and equipment by the Contractor.

1.20 *Contract Documents*: The drawings and written specifications (including all addenda), Standard General Conditions, and the contract (including all Change Orders subsequently incorporated in the documents).

1.21 *Contract Expiration Date*: Date determined by the Owner as a deadline for internal management of contract accounts. This allows time after the Contract Final Completion Date for processing the final Requisition for Payment. The Contract Expiration Date does not directly relate to any contract obligation of the Contractor.

1.22 *Contract Final Completion Date*: Point of time when the Work is fully completed in compliance with the Contract Documents, as certified by the Consultant. Final payment to the Contractor is due upon Final Completion of the Project.

1.23 *Contract Price*: The dollar amount of the construction contract, also called *Contract Sum.*

1.24 *Contract Time*: The designated duration of time to execute the Work of the contract, with a specific date for completion.

1.25 *Contractor*: Also called the "General Contractor" or "GC" the individual or entity undertaking the execution of the general contract work under the terms of the contract with the Owner, acting directly or through a duly authorized representative. The Contractor is responsible for the means, methods and materials utilized in the execution and completion of the Work.

1.26 *Consultant*: The Architect or Engineer acting as Professional-of-Record for the Project. The Consultant is responsible for the design of the Project.

1.27 *Drawings*: The graphic and pictorial portion of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

1.28 *Engineer*: A Consultant acting as, or supporting, the Professional-of-Record who is responsible for the design of the Project. Equivalent to “Consultant” in State of Maine contract forms.

1.29 *Filed Sub-bid*: The designated major Subcontractor's (or, in some cases, Contractor’s) written offer of a specified dollar amount or amounts, submitted on a form included in the Bid Documents, for the performance of a particular portion of the Work. A Filed Sub-bid may include bonds or other requirements.

1.30 *General Requirements*: The on-site overhead expense items the Contractor provides for the Project, typically including, but not limited to, building permits, construction supervision, Contract Bonds, insurance, field office, temporary utilities, rubbish removal, and site fencing. Overhead expenses of the Contractor's general operation are not included. Sometimes referred to as the Contractor's General Conditions.

1.31 *Owner*: The State agency which is represented by duly authorized individuals. The Owner is responsible for defining the scope of the Project and compensation to the Consultant and Contractor.

1.32 *Owner’s Representative*: The individual or entity contracted by the Owner to be an advisor and information conduit regarding the Project.

1.33 *Overhead*: General and administrative expenses of the Contractor’s principal and branch offices, including payroll costs and other compensation of Contractor employees, deductibles paid on any insurance policy, charges against the Contractor for delinquent payments, and costs related to the correction of defective work, and the Contractor’s capital expenses, including interest on capital used for the work.

1.34 *Performance and Payment Bonds (also known as Contract Bonds)*: The approved forms of security, furnished by the Contractor and their surety, which guarantee the faithful performance of all the terms of the contract and the payment of all bills for labor, materials and equipment by the Contractor.

1.35 *Post-Bid Addendum*: Document issued by the Consultant that defines a potential Change Order prior to signing of the construction contract. The Post-Bid Addendum allows the Owner to negotiate

contract changes with the Bidder submitting the lowest valid bid, only if the negotiated changes to the Bid Documents result in no change or no increase in the bid price.

A Post-Bid Addendum may also be issued after a competitive construction Bid opening to those Bidders who submitted a Bid initially, for the purpose of rebidding the Project work without re-advertising.

1.36 *Project*: The construction project proposed by the Owner to be constructed according to the Contract Documents. The Project, a public improvement, may be tied logistically to other public improvements and other activities conducted by the Owner or other contractors.

1.37 *Proposal (see also Change Order Proposal)*: The Contractor's written offer submitted to the Owner for consideration containing a specified dollar amount or rate, for a specific scope of work, and including a schedule impact, if any. A proposal shall include all costs for overhead and profit. The Contractor implements the work of a Proposal after it is accepted by all parties. Accepted Proposals are incorporated into the contract by Change Order.

1.38 *Proposal Request (PR)*: An Owner's written request to the Contractor for a Change Order Proposal.

1.39 *Punch List*: A document that identifies the items of work remaining to be done by the Contractor at the Close Out of a Project. The Punch List is created as a result of a final inspection of the work only after the Contractor attests that all of the Work is in its complete and permanent status.

1.40 *Request For Information (RFI)*: A Contractor's written request to the Consultant for clarification, definition or description of the Work. RFIs shall be presented by the Contractor in a timely manner to avoid any negative impact on the Schedule of the Work.

1.41 *Request For Proposal (RFP)*: An Owner's written request to the Contractor for a Change Order Proposal.

1.42 *Requisition for Payment*: The document in which the Contractor certifies that the Work described is, to the best of the Contractor's knowledge, information and belief, complete and that all previous payments have been paid by the Contractor to Subcontractors and suppliers, and that the current requested payment is now due. See *Schedule of Values.*

1.43 *Responsive and Responsible Bidder*: A bidder who complies, when submitting a bid on a given project, with the following *responsive* standards, as required by the Bid Documents:
- submits specific qualifications to bid the project, if required;
- attends mandatory pre-bid conferences, if required;
- submits a bid prior to the close of the bid period;
- submits a complete bid form;
- submits a bid without indications of intent contrary to the stated requirements;
- submits other materials and information, such as bid security, as required;

and, meets the following minimums regarding these *responsible* standards:
- sustains a satisfactory record of project performance;
- maintains a permanent place of business in a known physical location;
- possesses the financial means for short- and long-term operations;
- possesses the appropriate technical experience and capabilities;
- employs adequate personnel and subcontractor resources;

maintains the equipment needed to perform the work;
complies with the proposed implementation schedule;
complies with the insurance and bonding requirements;
provides post-construction warranty coverage;
and other criteria which can be considered relevant to the contract.

1.44 *Retainage*: The amount, calculated at five percent (5%) of the contract value or a scheduled value, that the Owner shall withhold from the Contractor until the work or portion of work is declared substantially complete or otherwise accepted by the Owner. The Owner may, if requested, reduce the amount withheld if the Owner deems it desirable and prudent to do so. (See Title 5 M.R.S.A., Section 1746.)

1.45 *Sample*: A physical example provided by the Contractor which illustrates materials, equipment or workmanship and establishes standards by which the Work will be judged.

1.46 *Schedule of the Work*: The document prepared by the Contractor and approved by the Owner that specifies the dates on which the Contractor plans to begin and complete various parts of the Work, including dates on which information and approvals are required from the Owner.

1.47 *Schedule of Values*: The document prepared by the Contractor and approved by the Owner before the commencement of the Work that specifies the dollar values of discrete portions of the Work equal in sum to the contract amount. The Schedule of Values is used to document progress payments of the Work in regular (usually monthly) requisitions for payment. See *Requisition for Payment*.

1.48 *Shop Drawings*: The drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

1.49 *Specifications*: The portion of the Contract Documents consisting of the written requirements of the Work for materials, equipment, systems, standards, workmanship, and performance of related services.

1.50 *Subcontractor*: An individual or entity undertaking the execution of any part of the Work by virtue of a written agreement with the Contractor or any other Subcontractor. Also, an individual or entity retained by the Contractor or any other Subcontractor as an independent contractor to provide the labor, materials, equipment or services necessary to complete a specific portion of the Work.

1.51 *Substantial Completion Date*: Point of time when the Work or a designated portion of the Work is sufficiently complete in compliance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended purpose without unscheduled disruption. Substantial Completion is documented by the date of the Certificate of Substantial Completion signed by the Owner and the Contractor.

1.52 *Superintendent*: The representative of the Contractor on the job site, authorized by the Contractor to receive and fulfill instructions from the Consultant.

1.53 *Surety*: The individual or entity that is legally bound with the Contractor and Subcontractor to insure the faithful performance of the contract and for the payment of the bills for labor, materials and equipment by the Contractor and Subcontractors.

1.54 *Work*: The construction and services, whether completed or partially completed, including all labor, materials, equipment and services provided or to be provided by the Contractor and Subcontractors to fulfill the requirements of the Project as described in the Contract Documents.

00 72 13
General Conditions

Table of Contents of this General Conditions Section

1. Preconstruction Conference

1.1. The Contractor shall, upon acceptance of a contract and prior to commencing work, schedule a preconstruction conference with the Owner and Consultant. The purpose of this conference is as follows.

1. Introduce all parties who have a significant role in the Project, including:

   Owner (State agency or other contracting entity)

   Owner's Representative

   Consultant (Architect or Engineer)

   Subconsultants

   Clerk-of-the-works

   Contractor (GC)

   Superintendent

   Subcontractors

   Other State agencies

   Construction testing company

   Commissioning agent

   Special Inspections agent

   Bureau of General Services (BGS);

2. Review the responsibilities of each party;
3. Review any previously-identified special provisions of the Project;
4. Review the Schedule of the Work calendar submitted by the Contractor to be approved by the Owner and Consultant;
5. Review the Schedule of Values form submitted by the Contractor to be approved by the Owner and Consultant;
6. Establish routines for Shop Drawing approval, contract changes, requisitions, et cetera;
7. discuss jobsite issues;
8. Discuss Project close-out procedures;
9. Provide an opportunity for clarification of Contract Documents before work begins; and
10. Schedule regular meetings at appropriate intervals for the review of the progress of the Work.

2. Intent and Correlation of Contract Documents

2.1. The intent of the Contract Documents is to describe the complete Project. The Contract Documents consist of various components; each component complements the others. What is shown as a requirement by any one component shall be inferred as a requirement on all corresponding components.

2.2. The Contractor shall furnish all labor, equipment and materials, tools, transportation, insurance, services, supplies, operations and methods necessary for, and reasonably incidental to, the construction and completion of the Project. Any work that deviates from the Contract Documents which appears to be required by the exigencies of construction or by inconsistencies in the Contract Documents, will be determined by the Consultant and authorized in writing by the Consultant, Owner and the Bureau prior to execution. The Contractor shall be responsible for requesting clarifying information where the intent of the Contract Documents is uncertain.

2.3. The Contractor shall not utilize any apparent error or omission in the Contract Documents to the disadvantage of the Owner. The Contractor shall promptly notify the Consultant in writing of such errors or omissions. The Consultant shall make any corrections or clarifications necessary in such a situation to document the true intent of the Contract Documents.

3. Additional Drawings and Specifications

3.1. Upon the written request of the Contractor, the Owner shall provide, at no expense to the Contractor, up to five sets of printed Drawings and Specifications for the execution of the Work.

3.2. The Consultant shall promptly furnish to the Contractor revised Drawings and Specifications, for the area of the documents where those revisions apply, when corrections or clarifications are made by the Consultant. All such information shall be consistent with, and reasonably inferred from, the Contract Documents. The Contractor shall do no work without the proper Drawings and Specifications.

4. Ownership of Contract Documents

4.1. The designs represented on the Contract Documents are the property of the Consultant. The Drawings and Specifications shall not be used on other work without consent of the Consultant.

5. Permits, Laws, and Regulations

5.1. The Owner is responsible for obtaining any zoning approvals or other similar local project approvals necessary to complete the Work, unless otherwise specified in the Contract Documents.

5.2. The Owner is responsible for obtaining Maine Department of Environmental Protection, Maine Department of Transportation, or other similar state government project approvals necessary to complete the Work, unless otherwise indicated in the Contract Documents.

5.3. The Owner is responsible for obtaining any federal agency project approvals necessary to complete the Work, unless otherwise indicated in the Contract Documents.

5.4. The Owner is responsible for obtaining all easements for permanent structures or permanent changes in existing facilities.

5.5. The Contractor is responsible for obtaining and paying for all permits and licenses necessary for the implementation of the Work. The Contractor shall notify the Owner of any delays, variance or restrictions that may result from the issuing of permits and licenses.

5.6. The Contractor shall comply with all ordinances, laws, rules and regulations and make all required notices bearing on the implementation of the Work. In the event the Contractor observes disagreement between the Drawings and Specifications and any ordinances, laws, rules and regulations, the Contractor shall promptly notify the Consultant in writing. Any necessary changes shall be made as provided in the contract for changes in the work. The Contractor shall not perform any work knowing it to be contrary to such ordinances, laws, rules and regulations.

5.7. The Contractor shall comply with local, state and federal regulations regarding construction safety and all other aspects of the Work.

5.8. The Contractor shall comply with the Maine Code of Fair Practices and Affirmative Action, 5 M.R.S. §784 (2).

6. Taxes

6.1. The Owner is exempt from the payment of Maine State sales and use taxes as provided in 36 M.R.S. §1760 (1). The Contractor and Subcontractors shall not include taxes on exempt items in the construction contract.

6.2. Section 1760 further provides in subsection 61 that sales to a construction contractor or its subcontractor of tangible personal property that is to be physically incorporated in, and become a permanent part of, real property for sale to or owned by the Owner, are exempt from Maine State sales and use taxes. Tangible personal property is defined in 36 M.R.S. §1752 (17).

6.3. The Contractor may contact Maine Revenue Services, 24 State House Station, Augusta, Maine 04333 for guidance on tax exempt regulations authorized by 36 M.R.S. §1760 and detailed in Rule 302 (18-125 CMR 302).

7. Labor and Wages

7.1. The Contractor shall conform to the labor laws of the State of Maine, and all other laws, ordinances, and legal requirements affecting the work in Maine.

7.2. The Consultant shall include a wage determination document prepared by the Maine Department of Labor in the Contract Documents for state-funded contracts in excess of $50,000. The document shows the minimum wages required to be paid to each category of labor employed on the project.

7.3. On projects requiring a Maine wage determination, the Contractor shall submit monthly payroll records to the Owner ("the contracting agency") showing the name and occupation of all workers and all independent contractors employed on the project. The monthly submission must also include the Contractor's company name, the title of the project, hours worked, hourly rate or other method of remuneration, and the actual wages or other compensation paid to each person.

7.4. The Contractor shall not reveal, in the payroll records submitted to the Owner, personal information regarding workers and independent contractors, other than the information described above. Such information shall not include Social Security number, employee identification number, or employee address or phone number, for example.

7.5. The Contractor shall conform to Maine statute (39-A M.R.S. §105-A (6)) by providing to the Workers' Compensation Board a list of all subcontractors and independent contractors on the job site and a record of the entity to whom that subcontractor or independent contractor is directly contracted and by whom that subcontractor or independent contractor is insured for workers' compensation purposes.

7.6. The Contractor shall enforce strict discipline and good order among their employees at all times, and shall not employ any person unfit or unskilled to do the work assigned to them.

7.7. The Contractor shall promptly pay all employees when their compensation is due, shall promptly pay all others who have billed and are due for materials, supplies and services used in the Work, and shall promptly pay all others who have billed and are due for insurance, workers compensation coverage, federal and state unemployment compensation, and Social Security charges pertaining to this Project. Before final payments are made, the Contractor shall furnish to the Owner affidavits that all such payments described above have been made.

7.8. The Contractor may contact the Maine Department of Labor, 54 State House Station, Augusta, Maine 04333 for guidance on labor issues.

7.9. The Contractor may contact the Maine Workers' Compensation Board, 27 State House Station, Augusta, Maine 04333 for guidance on workers' compensation issues.

8. Indemnification

8.1. The Contractor shall indemnify and hold harmless the Owner and its officers and employees from and against any and all damages, liabilities, and costs, including reasonable attorney's fees, and defense costs, for any and all injuries to persons or property, including claims for violation of intellectual property rights, to the extent caused by the negligent acts or omissions of the Contractor, its employees, agents, officers or subcontractors in the performance of work under this Agreement. The Contractor shall not be liable for claims to the extent caused by the negligent acts or omissions of the Owner or for actions taken in reasonable reliance on written instructions of the Owner.

8.2. The Contractor shall notify the Owner promptly of all claims arising out of the performance of work under this Agreement by the Contractor, its employees or agents, officers or subcontractors.

8.3. This indemnity provision shall survive the termination of the Agreement, completion of the project or the expiration of the term of the Agreement.

9. Insurance Requirements

9.1. The Contractor shall provide, with each original of the signed Contract, an insurance certificate or certificates acceptable to the Owner and BGS. The Contractor shall submit insurance certificates to the Owner and BGS at the commencement of this Contract and at policy renewal or revision dates. The certificates shall identify the project name and BGS project number, and shall name the Owner as certificate holder and as additional insured for general liability and automobile liability coverages. The submitted forms shall contain a provision that coverage afforded under the insurance policies will not be canceled or materially changed unless at least ten days prior written notice by registered letter has been given to the Owner and BGS.

9.2. The Owner does not warrant or represent that the insurance required herein constitutes an insurance portfolio which adequately addresses all risks faced by the Contractor or its Subcontractors. The Contractor is responsible for the existence, extent and adequacy of insurance prior to commencement of work. The Contractor shall not allow any Subcontractor to commence work until all similar insurance required of the Subcontractor has been confirmed by the Contractor.

9.3. The Contractor shall procure and maintain primary insurance for the duration of the Project and, if written on a Claims-Made basis, shall also procure and maintain Extended Reporting Period (ERP) insurance for the period of time that any claims could be brought. The Contractor shall ensure that all Subcontractors they engage or employ will procure and maintain similar insurance in form and amount acceptable to the Owner and BGS. At a minimum, the insurance shall be of the types and limits set forth herein protecting the Contractor from claims which may result from the Contractor's execution of the Work, whether such execution be by the Contractor or by those employed by the Contractor or by those for whose acts they may be liable. All required insurance coverages shall be placed with carriers authorized to conduct business in the State of Maine by the Maine Bureau of Insurance.

1. The Contractor shall have Workers' Compensation insurance for all employees on the Project site in accordance with the requirements of the Workers' Compensation law of the State of Maine. Minimum acceptable limits for Employer's Liability are:

Bodily Injury by Accident $500,000
Bodily Injury by Disease .....$500,000 Each Employee
Bodily Injury by Disease .....$500,000 Policy Limit

2. The Contractor shall have Commercial General Liability insurance providing coverage for bodily injury and property damage liability for all hazards of the Project including premise and operations, products and completed operations, contractual, and personal injury liabilities. The policy shall include collapse and underground coverage as well as explosion coverage if explosion hazards exist. Aggregate limits shall apply on a location or project basis. Minimum acceptable limits are:

   General aggregate limit $2,000,000
   Products and completed operations aggregate $1,000,000
   Each occurrence limit $1,000,000
   Personal injury aggregate $1,000,000

3. The Contractor shall have Automobile Liability insurance against claims for bodily injury, death or property damage resulting from the maintenance, ownership or use of all owned, non-owned and hired automobiles, trucks and trailers. Minimum acceptable limit is:

   Any one accident or loss.....$500,000

4. For the portion of a project which is new construction, the Contractor shall procure and maintain Builder's Risk insurance naming the Owner, Contractor, and any Subcontractor as insureds as their interest may appear. Covered causes of loss form shall be all Risks of Direct Physical Loss, endorsed to include flood, earthquake, transit and sprinkler leakage where sprinkler coverage is applicable. Unless specifically authorized in writing by the Owner, the limit of insurance shall not be less than the initial contract amount, for the portion of the project which is new construction, and coverage shall apply during the entire contract period and until the work is accepted by the Owner.

5. The Contractor shall have Owner's Protective Liability insurance for contract values $50,000 and above, naming the Owner as the Named Insured. Minimum acceptable limits are:

   General aggregate limit $2,000,000
   Each occurrence limit $1,000,000

10. Contract Bonds

10.1. When noted as required in the Bid Documents, the Contractor shall provide to the Owner a Performance Bond and a Payment Bond, or "contract bonds", upon execution of the contract. Each bond value shall be for the full amount of the contract and issued by a surety company authorized to do business in the State of Maine as approved by the Owner. The bonds shall be executed on the forms furnished in the Bid Documents. The bonds shall allow for any subsequent additions or deductions of the contract.

10.2. The contract bonds shall continue in effect for one year after final acceptance of the contract to protect the Owner's interest in connection with the one year guarantee of workmanship and materials and to assure settlement of claims for the payment of all bills for labor, materials and equipment by the Contractor.

11. Patents and Royalties

11.1. The Contractor shall, for all time, secure for the Owner the free and undisputed right to the use of any patented articles or methods used in the Work. The expense of defending any suits for infringement or alleged infringement of such patents shall be borne by the Contractor. Awards

made regarding patent suits shall be paid by the Contractor. The Contractor shall hold the Owner harmless regarding patent suits that may arise due to installations made by the Contractor, and to any awards made as a result of such suits.

11.2. Any royalty payments related to the work done by the Contractor for the Project shall be borne by the Contractor. The Contractor shall hold the Owner harmless regarding any royalty payments that may arise due to installations made by the Contractor.

12. Surveys, Layout of Work

12.1. The Owner shall furnish all property surveys unless otherwise specified.

12.2. The Contractor is responsible for correctly staking out the Work on the site. The Contractor shall employ a competent surveyor to position all construction on the site. The surveyor shall run the axis lines, establish correct datum points and check each line and point on the site to insure their accuracy. All such lines and points shall be carefully preserved throughout the construction.

12.3. The Contractor shall lay out all work from dimensions given on the Drawings. The Contractor shall take measurements and verify dimensions of any existing work that affects the Work or to which the Work is to be fitted. The Contractor is solely responsible for the accuracy of all measurements. The Contractor shall verify all grades, lines, levels, elevations and dimensions shown on the Drawings and report any errors or inconsistencies to the Consultant prior to commencing work.

13. Record of Documents

13.1. The Contractor shall maintain one complete set of Contract Documents on the jobsite, in good order and current status, for access by the Owner and Consultant.

13.2. The Contractor shall maintain, continuously updated, complete records of Requests for Information, Architectural Supplemental Instructions (or equivalent), Information Bulletins, supplemental sketches, Change Order Proposals, Change Orders, Shop Drawings, testing reports, et cetera, for access by the Owner and Consultant.

14. Allowances

14.1. The Contract Price shall include all allowances described in the Contract Documents. The Contractor shall include all overhead and profit necessary to implement each allowance in their Contract Price.

14.2. The Contractor shall not be required to employ parties for allowance work against whom the Contractor has a reasonable objection. In such a case, the Contractor shall notify the Owner in writing of their position and shall propose an alternative party to complete the work of the allowance.

15. Shop Drawings

15.1. The Contractor shall administer Shop Drawings prepared by the Contractor, Subcontractors, suppliers or others to conform to the approved Schedule of the Work. The Contractor shall verify all field measurements, check and authorize all Shop Drawings and schedules required by the Work. The Contractor is the responsible party and contact for the Contractor's work as well as that of Subcontractors, suppliers or others who provide Shop Drawings.

15.2. The Consultant shall review and acknowledge Shop Drawings, with reasonable promptness, for general conformity with the design concept of the project and compliance with the information provided in the Contract Documents.

15.3. The Contractor shall provide monthly updated logs containing: requests for information, information bulletins, supplemental instructions, supplemental sketches, change order proposals, change orders, submittals, testing and deficiencies.

15.4. The Contractor shall make any corrections required by the Consultant, and shall submit a quantity of corrected copies as may be needed. The acceptance of Shop Drawings or schedules by the Consultant shall not relieve the Contractor from responsibility for deviations from Drawings and Specifications, unless the Contractor has called such deviations to the attention of the Consultant at the time of submission and secured the Consultant's written approval. The acceptance of Shop Drawings or schedules by the Consultant does not relieve the Contractor from responsibility for errors in Shop Drawings or schedules.

16. Samples

16.1. The Contractor shall furnish for approval, with reasonable promptness, all samples as directed by the Consultant. The Consultant shall review and approve such samples, with reasonable promptness, for general conformity with the design concept of the project and compliance with the information provided in the Contract Documents. The subsequent work shall be in accord with the approved samples.

17. Substitutions

17.1. The Contractor shall furnish items and materials described in the Contract Documents. If the item or material specified describes a proprietary product, or uses the name of a manufacturer, the term "or approved equal" shall be implied, if it is not included in the text. The specific item or material specified establishes a minimum standard for the general design, level of quality, type, function, durability, efficiency, reliability, compatibility, warranty coverage, installation factors and required maintenance. The Drawing or written Specification shall not be construed to exclude other manufacturers products of comparable design, quality, and efficiency.

17.2. The Contractor may submit detailed information about a proposed substitution to the Consultant for consideration. Particular models of items and particular materials which the Contractor asserts to be equal to the items and materials identified in the Contract Documents shall be allowed only with written approval by the Consultant. The request for substitution shall include a cost comparison and a reason or reasons for the substitution.

17.3. The Consultant may request additional information about the proposed substitution. The approval or rejection of a proposed substitution may be based on timeliness of the request, source of the information, the considerations of minimum standards described above, or other considerations. The Consultant should briefly state the rationale for the decision. The decision shall be considered final.

17.4. The duration of a substitution review process can not be the basis for a claim for delay in the Schedule of the Work.

18. Assignment of Contract

18.1. The Contractor shall not assign or sublet the contract as a whole without the written consent of the Owner. The Contractor shall not assign any money due to the Contractor without the written consent of the Owner.

19. Separate Contracts

19.1. The Owner reserves the right to create other contracts in connection with this Project using similar General Conditions. The Contractor shall allow the Owner's other contractors reasonable opportunity for the delivery and storage of materials and the execution of their work. The Contractor shall coordinate and properly connect the Work of all contractors.

19.2. The Contractor shall promptly report to the Consultant and Owner any apparent deficiencies in work of the Owner's other contractors that impacts the proper execution or results of the Contractor. The Contractor's failure to observe or report any deficiencies constitutes an acceptance of the Owner's other contractors work as suitable for the interface of the Contractor's work, except for latent deficiencies in the Owner's other contractors work.

19.3. Similarly, the Contractor shall promptly report to the Consultant and Owner any apparent deficiencies in their own work that would impact the proper execution or results of the Owner's other contractors.

19.4. The Contractor shall report to the Consultant and Owner any conflicts or claims for damages with the Owner's other contractors and settle such conflicts or claims for damages by mutual agreement or arbitration, if necessary, at no expense to the Owner.

19.5. In the event the Owner's other contractors sue the Owner regarding any damage alleged to have been caused by the Contractor, the Owner shall notify the Contractor, who shall defend such proceedings at the Contractor's expense. The Contractor shall pay or satisfy any judgment that may arise against the Owner, and pay all other costs incurred.

20. Subcontracts

20.1. The Contractor shall not subcontract any part of this contract without the written permission of the Owner.

20.2. The Contractor shall submit a complete list of named Subcontractors and material suppliers to the Consultant and Owner for approval by the Owner prior to commencing work. The Subcontractors named shall be reputable companies of recognized standing with a record of satisfactory work.

20.3. The Contractor shall not employ any Subcontractor or use any material until they have been approved, or where there is reason to believe the resulting work will not comply with the Contract Documents.

20.4. The Contractor, not the Owner, is as fully responsible for the acts and omissions of Subcontractors and of persons employed by them, as the Contractor is for the acts and omissions of persons directly or indirectly employed by the Contractor.

20.5. Neither the Contract Documents nor any Contractor-Subcontractor contract shall indicate, infer or create any direct contractual relationship between any Subcontractor and the Owner.

21. Contractor-Subcontractor Relationship

21.1. The Contractor shall be bound to the Subcontractor by all the obligations in the Contract Documents that bind the Contractor to the Owner.

21.2. The Contractor shall pay the Subcontractor, in proportion to the dollar value of the work completed and requisitioned by the Subcontractor, the approved dollar amount allowed to the Contractor no more than seven days after receipt of payment from the Owner.

21.3. The Contractor shall pay the Subcontractor accordingly if the Contract Documents or the subcontract provide for earlier or larger payments than described in the provision above.

21.4. The Contractor shall pay the Subcontractor for completed and requisitioned subcontract work, less retainage, no more than seven days after receipt of payment from the Owner for the Contractor's approved Requisition for Payment, even if the Consultant fails to certify a portion of the Requisition for Payment for a cause not the fault of the Subcontractor.

21.5. The Contractor shall not make a claim for liquidated damages or penalty for delay in any amount in excess of amounts that are specified by the subcontract.

21.6. The Contractor shall not make a claim for services rendered or materials furnished by the Subcontractor unless written notice is given by the Contractor to the Subcontractor within ten calendar days of the day in which the claim originated.

21.7. The Contractor shall give the Subcontractor an opportunity to present and to submit evidence in any progress conference or disputes involving subcontract work.

21.8. The Contractor shall pay the Subcontractor a just share of any fire insurance payment received by the Contractor.

21.9. The Subcontractor shall be bound to the Contractor by the terms of the Contract Documents and assumes toward the Contractor all the obligations and responsibilities that the Contractor, by those documents, assumes toward the Owner.

21.10. The Subcontractor shall submit applications for payment to the Contractor in such reasonable time as to enable the Contractor to apply for payment as specified.

21.11. The Subcontractor shall make any claims for extra cost, extensions of time or damages, to the Contractor in the manner provided in these General Conditions for like claims by the Contractor to the Owner, except that the time for the Subcontractor to make claims for extra cost is seven calendar days after the receipt of Consultant's instructions.

22. Supervision of the Work

22.1. During all stages of the Work the Contractor shall have a competent superintendent, with any necessary assistant superintendents, overseeing the project. The superintendent shall not be reassigned without the consent of the Owner unless a superintendent ceases to be employed by the Contractor due to unsatisfactory performance.

22.2. The superintendent represents the Contractor on the jobsite. Directives given by the Consultant or Owner to the superintendent shall be as binding as if given directly to the Contractor's main office. All important directives shall be confirmed in writing to the Contractor. The Consultant

and Owner are not responsible for the acts or omissions of the superintendent or assistant superintendents.

22.3. The Contractor shall provide supervision of the Work equal to the industry's highest standard of care. The superintendent shall carefully study and compare all Contract Documents and promptly report any error, inconsistency or omission discovered to the Consultant. The Contractor may not necessarily be held liable for damages resulting directly from any error, inconsistency or omission in the Contract Documents or other instructions by the Consultant that was not revealed by the superintendent in a timely way.

23. Observation of the Work

23.1. The Contractor shall allow the Owner, the Consultant and the Bureau continuous access to the site for the purpose of observation of the progress of the work. All necessary safeguards and accommodations for such observations shall be provided by the Contractor.

23.2. The Contractor shall coordinate all required testing, approval or demonstration of the Work. The Contractor shall give sufficient notice to the appropriate parties of readiness for testing, inspection or examination.

23.3. The Contractor shall schedule inspections and obtain all required certificates of inspection for inspections by a party other than the Consultant.

23.4. The Consultant shall make all scheduled observations promptly, prior to the work being concealed or buried by the Contractor. If approval of the Work is required of the Consultant, the Contractor shall notify the Consultant of the construction schedule in this regard. Work concealed or buried prior to the Consultant's approval may need to be uncovered at the Contractor’s expense.

23.5. The Consultant may order reexamination of questioned work, and, if so ordered, the work must be uncovered by the Contractor. If the work is found to conform to the Contract Documents, the Owner shall pay the expense of the reexamination and remedial work. If the work is found to not conform to the Contract Documents, the Contractor shall pay the expense, unless the defect in the work was caused by the Owner's Contractor, whose responsibility the reexamination expense becomes.

23.6. The Bureau shall periodically observe the Work during the course of construction and make recommendations to the Contractor or Consultant as necessary. Such recommendations shall be considered and implemented through the usual means for changes to the Work.

24. Consultant's Status

24.1. The Consultant represents the Owner during the construction period, and observes the work in progress on behalf of the Owner. The Consultant has authority to act on behalf of the Owner only to the extent expressly provided by the Contract Documents or otherwise demonstrated to the Contractor. The Consultant has authority to stop the work whenever such an action is necessary, in the Consultant's reasonable opinion, to ensure the proper execution of the contract.

24.2. The Consultant is the interpreter of the conditions of the contract and the judge of its performance. The Consultant shall favor neither the Owner nor the Contractor, but shall use the Consultant’s powers under the contract to enforce faithful performance by both parties.

24.3. In the event of the termination of the Consultant's employment on the project prior to completion of the work, the Owner shall appoint a capable and reputable replacement. The status of the new Consultant relative to this contract shall be that of the former Consultant.

25. Management of the Premises

25.1. The Contractor shall place equipment and materials, and conduct activities on the premises in a manner that does not unreasonably hinder site circulation, environmental stability, or any long term effect. Likewise, the Consultant's directions shall not cause the use of premises to be impeded for the Contractor or Owner.

25.2. The Contractor shall not use the premises for any purpose other than that which is directly related to the scope of work. The Owner shall not use the premises for any purpose incompatible with the proposed work simultaneous to the work of the Contractor.

25.3. The Contractor shall enforce the Consultant's instructions regarding information posted on the premises such as signage and advertisements, as well as activities conducted on the premises such as fires, and smoking.

25.4. The Owner may occupy any part of the Project that is completed with the written consent of the Contractor, and without prejudice to any of the rights of the Owner or Contractor. Such use or occupancy shall not, in and of itself, be construed as a final acceptance of any work or materials.

26. Safety and Security of the Premises

26.1. The Contractor shall designate, and make known to the Consultant and the Owner, a safety officer whose duty is the prevention of accidents on the site.

26.2. The Contractor shall continuously maintain security on the premises and protect from unreasonable occasion of injury all people authorized to be on the job site. The Contractor shall also effectively protect the property and adjacent properties from damage or loss.

26.3. The Contractor shall take all necessary precautions to ensure the safety of workers and others on and adjacent to the site, abiding by applicable local, state and federal safety regulations. The Contractor shall erect and continuously maintain safeguards for the protection of workers and others, and shall post signs and other warnings regarding hazards associated with the construction process, such as protruding fasteners, moving equipment, trenches and holes, scaffolding, window, door or stair openings, and falling materials.

26.4. The Contractor shall restore the premises to conditions that existed prior to the start of the project at areas not intended to be altered according to the Contract Documents.

26.5. The Contractor shall protect existing utilities and exercise care working in the vicinity of utilities shown in the Drawings and Specifications or otherwise located by the Contractor.

26.6. The Contractor shall protect from damage existing trees and other significant plantings and landscape features of the site which will remain a permanent part of the site. If necessary or indicated in the Contract Documents, tree trunks shall be boxed and barriers erected to prevent damage to tree branches or roots.

26.7. The Contractor shall repair or replace damage to the Work caused by the Contractor's or Subcontractor's forces, including that which is reasonably protected, at the expense of the responsible party.

26.8. The Contractor shall not load, or allow to be loaded, any part of the Project with a force which imperils personal or structural safety. The Consultant may consult with the Contractor on such means and methods of construction, however, the ultimate responsibility lies with the Contractor.

26.9. The Contractor shall not jeopardize any work in place with subsequent construction activities such as blasting, drilling, excavating, cutting, patching or altering work. The Consultant must approve altering any structural components of the project. The Contractor shall supervise all construction activities carried out by others on site to ensure that the work is neatly done and in a manner that will not endanger the structure or the component parts.

26.10. The Contractor may act with their sole discretion in emergency situations that potentially effect health, life or serious damage to the premises or adjacent properties, to prevent such potential loss or injury. The Contractor may negotiate with the Owner for compensation for expenses due to such emergency work.

26.11. The Contractor and Subcontractors shall have no responsibility for the identification, discovery, presence, handling, removal or disposal of, or exposure of persons to, hazardous materials in any form at the project site. The Contractor shall avoid disruption of any hazardous materials or toxic substances at the project site and promptly notify the Owner in writing on the occasion of such a discovery.

26.12. The Contractor shall keep the premises free of any unsafe accumulation of waste materials caused by the work. The Contractor shall regularly keep the spaces "broom clean". See the Close-out of the Work provisions of this section regarding cleaning at the completion of the project.

27. Changes in the Work

27.1. The Contractor shall not proceed with extra work without an approved Change Order or Construction Change Directive. A Change Order which has been properly signed by all parties shall become a part of the contract.

27.2. A Change Order is the usual document for directing changes in the Work. In certain circumstances, however, the Owner may utilize a Construction Change Directive to direct the Contractor to perform changes in the Work that are generally consistent with the scope of the project. The Owner shall use a Construction Change Directive only when the normal process for approving changes to the Work has failed to the detriment of the Project, or when agreement on the terms of a Change Order cannot be met, or when an urgent situation requires, in the Owner's judgment, prompt action by the Contractor.

27.3. The Consultant shall prepare the Construction Change Directive representing a complete scope of work, with proposed Contract Price and Contract Time revisions, if any, clearly stated.

27.4. The Contractor shall promptly carry out a Construction Change Directive which has been signed by the Owner and the Consultant. Work thus completed by the Contractor constitutes the basis for a Change Order. Changes in the Contract Price and Contract Time shall be as defined in the Construction Change Directive unless subsequently negotiated with some other terms.

27.5. The method of determining the dollar value of extra work shall be by:
1. an estimate of the Contractor accepted by Owner as a lump sum, or
2. unit prices named in the contract or subsequently agreed upon, or
3. cost plus a designated percentage, or
4. cost plus a fixed fee.

27.6. The Contractor shall determine the dollar value of the extra work for both the lump sum and cost plus designated percentage methods so as not to exceed the following rates. The rates include all overhead and profit expenses.
1. Contractor - for any work performed by the Contractor's own forces, up to 20% of the cost;
2. Subcontractor - for work performed by Subcontractor's own forces, up to 20% of the cost;
3. Contractor - for work performed by Contractor's Subcontractor, up to 10% of the amount due the Subcontractor.

27.7. The Contractor shall keep and provide records as needed or directed for the cost plus designated percentage method. The Consultant shall review and certify the appropriate amount which includes the Contractor's overhead and profit. The Owner shall make payments based on the Consultant's certificate.

27.8. Cost reflected in Change Orders shall be limited to the following: cost of materials, cost of delivery, cost of labor (including Social Security, pension, Workers' Compensation insurance, and unemployment insurance), and cost of rental of power tools and equipment. Labor cost may include a pro-ratio share of a foreman's time only in the case of an extension of contract time granted due to the Change Order.

27.9. Overhead reflected in Change Orders shall be limited to the following: bond premium, supervision, wages of clerks, time keepers, and watchmen, small tools, incidental expenses, general office expenses, and all other overhead expenses directly related to the Change Order.

27.10. The Contractor shall provide credit to the Owner for labor, materials, equipment and other costs but not overhead and profit expenses for those Change Order items that result in a net value of credit to the contract.

27.11. The Owner may change the scope of work of the Project without invalidating the contract. The Owner shall notify the Contractor of a change of the scope of work for the Owner's Contractors, which may affect the work of this Contractor, without invalidating the contract. Change Orders for extension of the time caused by such changes shall be developed at the time of directing the change in scope of work.

27.12. The Consultant may order minor changes in the Work, not involving extra cost, which is consistent with the intent of the design or project.

27.13. The Contractor shall immediately give written notification to the Consultant of latent conditions discovered at the site which materially differ from those represented in the Drawings or Specifications, and which may eventually result in a change in the scope of work. The Contractor shall suspend work until receiving direction from the Consultant. The Consultant shall promptly investigate the conditions and respond to the Contractor's notice with direction that avoids any unnecessary delay of the Work. The Consultant shall determine if the discovered conditions warrant a Change Order.

27.14. The Contractor shall, within ten calendar days of receipt of the information, give written notification to the Consultant if the Contractor claims that instructions by the Consultant will

constitute extra cost not accounted for by Change Order or otherwise under the contract. The Consultant shall promptly respond to the Contractor's notice with direction that avoids any unnecessary delay of the Work. The Consultant shall determine if the Contractor's claim warrants a Change Order.

28. Correction of the Work

28.1. The Contractor shall promptly remove from the premises all work the Consultant declares is non-conforming to the contract. The Contractor shall replace the work properly at no expense to the Owner. The Contractor is also responsible for the expenses of others whose work was damaged or destroyed by such remedial work.

28.2. The Owner may elect to remove non-conforming work if it is not removed by the Contractor within a reasonable time, that time defined in a written notice from the Consultant. The Owner may elect to store removed non-conforming work not removed by the Contractor at the Contractor's expense. The Owner may, with ten days written notice, dispose of materials which the Contractor does not remove. The Owner may sell the materials and apply the net proceeds, after deducting all expenses, to the costs that should have been borne by the Contractor.

28.3. The Contractor shall remedy any defects due to faulty materials or workmanship and pay for any related damage to other work which appears within a period of one year from the date of substantial completion, and in accord with the terms of any guarantees provided in the contract. The Owner shall promptly give notice of observed defects to the Contractor and Consultant. The Consultant shall determine the status of all claimed defects. The Contractor shall perform all remedial work without unjustifiable delay in either the initial response or the corrective action.

28.4. The Consultant may authorize, after a reasonable notification to the Contractor, an equitable deduction from the contract amount in lieu of the Contractor correcting non-conforming or defective work.

29. Owner's Right to do Work

29.1. The Owner may, using other contractors, correct deficiencies attributable to the Contractor, or complete unfinished work. Such action shall take place only after giving the Contractor three days written notice, and provided the Consultant approves of the proposed course of action as an appropriate remedy. The Owner may then deduct the cost of the remedial work from the amount due the Contractor.

29.2. The Owner may act with their sole discretion when the Contractor is unable to take action in emergency situations that potentially effect health, life or serious damage to the premises or adjacent properties, to prevent such potential loss or injury. The Owner shall inform the Contractor of the emergency work performed, particularly where it may affect the work of the Contractor.

30. Termination of Contract and Stop Work Action

30.1. The Owner may, owing to a certificate of the Consultant indicating that sufficient cause exists to justify such action, without prejudice to any other right or remedy and after giving the Contractor and the Contractor's surety seven days written notice, terminate the employment of the Contractor. At that time the Owner may take possession of the premises and of all materials, tools and appliances on the premises and finish the work by whatever method the Owner may deem expedient. Cause for such action by the Owner includes:

1. the contractor is adjudged bankrupt, or makes a general assignment for the benefit of its creditors, or
2. a receiver is appointed due to the Contractor's insolvency, or
3. the Contractor persistently or repeatedly refuses or fails to provide enough properly skilled workers or proper materials, or
4. the Contractor fails to make prompt payment to Subcontractors or suppliers of materials or labor, or
5. the Contractor persistently disregards laws, ordinances or the instructions of the Consultant, or is otherwise found guilty of a substantial violation of a provision of the Contract Documents.

30.2. The Contractor is not entitled, as a consequence of the termination of the employment of the Contractor as described above, to receive any further payment until the Work is finished. If the unpaid balance of the contract amount exceeds the expense of finishing the Work, including compensation for additional architectural, managerial and administrative services, such balance shall be paid to the Contractor. If the expense of finishing the Work exceeds the unpaid balance, the Contractor shall pay the difference to the Owner. The Consultant shall certify the expense incurred by the Contractor's default. This obligation for payment shall continue to exist after termination of the contract.

30.3. The Contractor may, if the Work is stopped by order of any court or other public authority for a period of thirty consecutive days, and through no act or fault of the Contractor or of anyone employed by the Contractor, with seven days written notice to the Owner and the Consultant, terminate this contract. The Contractor may then recover from the Owner payment for all work executed, any proven loss and reasonable profit and damage.

30.4. The Contractor may, if the Consultant fails to issue a certificate for payment within seven days after the Contractor's formal request for payment, through no fault of the Contractor, or if the Owner fails to pay to the Contractor within 30 days after submission of any sum certified by the Consultant, with seven days written notice to the Owner and the Consultant, stop the Work or terminate this Contract.

31. Delays and Extension of Time

31.1. The completion date of the contract shall be extended if the work is delayed by changes ordered in the work which have approved time extensions, or by an act or neglect of the Owner, the Consultant, or the Owner's Contractor, or by strikes, lockouts, fire, flooding, unusual delay in transportation, unavoidable casualties, or by other causes beyond the Contractor's control. The Consultant shall determine the status of all claimed causes.

31.2. The contract shall not be extended for delay occurring more than seven calendar days before the Contractor's claim made in writing to the Consultant. In case of a continuing cause of delay, only one claim is necessary.

31.3. The contract shall not be extended due to failure of the Consultant to furnish drawings if no schedule or agreement is made between the Contractor and the Consultant indicating the dates which drawings shall be furnished and fourteen calendar days has passed after said date for such drawings.

31.4. This article does not exclude the recovery of damages for delay by either party under other provisions in the Contract Document.

32. Payments to the Contractor

32.1. As noted under *Preconstruction Conference* in this section, the Contractor shall submit a Schedule of Values form, before the first application for payment, for approval by the Owner and Consultant. The Consultant may direct the Contractor to provide evidence that supports the correctness of the form. The approved Schedule of Values shall be used as a basis for payments.

32.2. The Contractor shall submit an application for each payment ("Requisition for Payment") on a form approved by the Owner and Consultant. The Consultant may require receipts or other documents showing the Contractor's payments for materials and labor, including payments to Subcontractors.

32.3. The Contractor shall submit Requisitions for Payment as the work progresses not more frequently than once each month, unless the Owner approves a more frequent interval due to unusual circumstances. The Requisition for Payment is based on the proportionate quantities of the various classes of work completed or incorporated in the Work, in agreement with the actual progress of the Work and the dollar value indicated in the Schedule of Values.

32.4. The Consultant shall verify and certify each Requisition for Payment which appears to be complete and correct prior to payment being made by the Owner. The Consultant may certify an appropriate amount for materials not incorporated in the Work which have been delivered and suitably stored at the site. The Contractor shall submit bills of sale, insurance certificates, or other such documents that will adequately protect the Owner's interests prior to payments being certified.

32.5. In the event any materials delivered but not yet incorporated in the Work have been included in a certified Requisition for Payment with payment made, and said materials thereafter are damaged, deteriorated or destroyed, or for any reason whatsoever become unsuitable or unavailable for use in the Work, the full amount previously allowed shall be deducted from subsequent payments unless the Contractor satisfactorily replaces said material.

32.6. The Contractor may request certification of an appropriate dollar amount for materials not incorporated in the Work which have been delivered and suitably stored away from the site. The Contractor shall submit bills of sale, insurance certificates, right-of-entry documents or other such documents that will adequately protect the Owner's interests. The Consultant shall determine if the Contractor's documentation for the materials is complete and specifically designated for the Project. The Owner may allow certification of such payments.

32.7. Subcontractors may request, and shall receive from the Consultant, copies of approved Requisitions for Payment showing the amounts certified in the Schedule of Values.

32.8. Certified Requisitions for Payment, payments made to the Contractor, or partial or entire occupancy of the project by the Owner shall not constitute an acceptance of any work that does not conform to the Contract Documents. The making and acceptance of the final payment constitutes a waiver of all claims by the Owner, other than those arising from unsettled liens, from faulty work or

materials appearing within one year from final payment or from requirements of the Drawings and Specifications, and of all claims by the Contractor, except those previously made and still unsettled.

33. Payments Withheld

33.1. The Owner shall retain five percent of each payment due the Contractor as part security for the fulfillment of the contract by the Contractor. The Owner may make payment of a portion of this "retainage" to the Contractor temporarily or permanently during the progress of the Work. The Owner may thereafter withhold further payments until the full amount of the five percent is reestablished. The Contractor may deposit with the Maine State Treasurer certain securities in place of retainage amounts due according to Maine Statute (5 M.R.S. §1746).

33.2. The Consultant may withhold or nullify the whole or a portion of any Requisitions for Payment submitted by the Contractor in the amount that may be necessary, in his reasonable opinion, to protect the Owner from loss due to any of the following:

1. defective work not remedied;
2. claims filed or reasonable evidence indicating probable filing of claims;
3. failure to make payments properly to Subcontractors or suppliers;
4. a reasonable doubt that the contract can be completed for the balance then unpaid;
5. liability for damage to another contractor.

The Owner shall make payment to the Contractor, in the amount withheld, when the above circumstances are removed.

34. Liens

34.1. The Contractor shall deliver to the Owner a complete release of all liens arising out of this contract before the final payment or any part of the retainage payment is released. The Contractor shall provide with the release of liens an affidavit asserting each release includes all labor and materials for which a lien could be filed. Alternately, the Contractor, in the event any Subcontractor or supplier refuses to furnish a release of lien in full, may furnish a bond satisfactory to the Owner, to indemnify the Owner against any lien.

34.2. In the event any lien remains unsatisfied after all payments to the Contractor are made by the Owner, the Contractor shall refund to the Owner all money that the latter may be compelled to pay in discharging such lien, including all cost and reasonable attorney's fees.

35. Workmanship

35.1. The Contractor shall provide materials, equipment, and installed work equal to or better than the quality specified in the Contract Documents and approved in submittal and sample. The installation methods shall be of the highest standards, and the best obtainable from the respective trades. The Consultant's decision on the quality of work shall be final.

35.2. The Contractor shall know local labor conditions for skilled and unskilled labor in order to apply the labor appropriately to the Work. All labor shall be performed by individuals well skilled in their respective trades.

35.3. The Contractor shall perform all cutting, fitting, patching and placing of work in such a manner to allow subsequent work to fit properly, whether that be by the Contractor, the Owner's Contractors or others. The Owner and Consultant may advise the Contractor regarding such subsequent work. Notwithstanding the notification or knowledge of such subsequent work, the Contractor may be

directed to comply with this standard of compatible construction by the Consultant at the Contractor's expense.

35.4. The Contractor shall request clarification or revision of any design work by the Consultant, prior to commencing that work, in a circumstance where the Contractor believes the work cannot feasibly be completed at the highest quality, or as indicated in the Contract Documents. The Consultant shall respond to such requests in a timely way, providing clarifying information, a feasible revision, or instruction allowing a reduced quality of work. The Contractor shall follow the direction of the Consultant regarding the required request for information.

35.5. The Contractor shall guarantee the Work against any defects in workmanship and materials for a period of one year commencing with the date of the Certificate of Substantial Completion, unless specified otherwise for specific elements of the project. The Work may also be subdivided in mutually agreed upon components, each defined by a separate Certificate of Substantial Completion.

36. Close-out of the Work

36.1. The Contractor shall remove from the premises all waste materials caused by the work. The Contractor shall make the spaces “broom clean” unless a more thorough cleaning is specified. The Contractor shall clean all windows and glass immediately prior to the final inspection, unless otherwise directed.

36.2. The Owner may conduct the cleaning of the premises where the Contractor, duly notified by the Consultant, fails to adequately complete the task. The expense of this cleaning may be deducted from the sum due to the Contractor.

36.3. The Contractor shall participate in all final inspections and acknowledge the documentation of unsatisfactory work, customarily called the "punch list", to be corrected by the Contractor. The Consultant shall document the successful completion of the Work in a dated Certificate of Substantial Completion, to be signed by Owner, Consultant, and Contractor.

36.4. The Contractor shall not call for final inspection of any portion of the Work that is not completely and permanently installed. The Contractor may be found liable for the expenses of individuals called to final inspection meetings prematurely.

36.5. The Contractor and all major Subcontractors shall participate in the end-of-warranty-period conference, typically scheduled close to one year after the Substantial Completion date.

37. Date of Completion and Liquidated Damages

37.1. The Contractor may make a written request to the Owner for an extension or reduction of time, if necessary. The request shall include the reasons the Contractor believes justifies the proposed completion date. The Owner may grant the revision of the contract completion date if the Work was delayed due to conditions beyond the control and the responsibility of the Contractor. The Contractor shall not conduct unauthorized accelerated work or file delay claims to recover alleged damages for unauthorized early completion.

37.2. The Contractor shall vigorously pursue the completion of the Work and notify the Owner of any factors that have, may, or will affect the approved Schedule of the Work. The Contractor may be found responsible for expenses of the Owner or Consultant if the Contractor fails to make notification of project delays.

37.3. The Project is planned to be done in an orderly fashion which allows for an iterative submittal review process, construction administration including minor changes in the Work and some bad weather. The Contractor shall not file delay claims to recover alleged damages on work the Consultant determines has followed the expected rate of progress.

37.4. The Consultant shall prepare the Certificate of Substantial Completion which, when signed by the Owner and the Contractor, documents the date of Substantial Completion of the Work or a designated portion of the Work. The Owner shall not consider the issuance of a Certificate of Occupancy by an outside authority a prerequisite for Substantial Completion if the Certificate of Occupancy cannot be obtained due to factors beyond the Contractor's control.

37.5. Liquidated Damages may be deducted from the sum due to the Contractor for each calendar day that the Work remains uncompleted after the completion date specified in the Contract or an approved amended completion date. The dollar amount per day shall be calculated using the Schedule of Liquidated Damages table shown below.

If the original contract amount is:	The per day Liquidated Damages shall be:
Less than $100,000	$250
$100,000 to less than $2,000,000	$750
$2,000,000 to less than $10,000,000	$1,500
$10,000,000 and greater	$1,500 plus $250 for each $2,000,000 over $10,000,000

38. Dispute Resolution

38.1. Mediation

1. A dispute between the parties which arises under this Contract which cannot be resolved through informal negotiation, shall be submitted to a neutral mediator jointly selected by the parties.

2. Either party may file suit before or during mediation if the party, in good faith, deems it to be necessary to avoid losing the right to sue due to a statute of limitations. If suit is filed before good faith mediation efforts are completed, the party filing suit shall agree to stay all proceedings in the lawsuit pending completion of the mediation process, provided such stay is without prejudice.

3. In any mediation between the Owner and the Consultant, the Owner has the right to consolidate related claims between Owner and Contractor.

38.2. Arbitration

1. If the dispute is not resolved through mediation, the dispute shall be settled by arbitration. The arbitration shall be conducted before a panel of three arbitrators. Each party shall select one arbitrator; the third arbitrator shall be appointed by the arbitrators selected by the parties. The arbitration shall be conducted in accordance with the Maine Uniform Arbitration Act (MUAA), except as otherwise provided in this section.

2. The decision of the arbitrators shall be final and binding upon all parties. The decision may be entered in court as provided in the MUAA.

3. The costs of the arbitration, including the arbitrators' fees shall be borne equally by the parties to the arbitration, unless the arbitrator orders otherwise.

4. In any arbitration between the Owner and the Consultant, the Owner has the right to consolidate related claims between Owner and Contractor.

00 73 46
Wage Determination Schedule

PART 1- GENERAL

1.1 Related Documents
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specifications Sections, apply to this Section.

1.2 Summary
A. This Section includes the wage determination requirements for Contractors as issued by the State of Maine Department of Labor Bureau of Labor Standards or the United States Department of Labor.

1.3 Requirements
A. Conform to the wage determination schedule for this project which is shown on the following page.

PART 2 - PRODUCTS (not used)

PART 3 - EXECUTION (not used)

THIS DOCUMENT MUST BE CLEARLY POSTED AT ALL CONSTRUCTION SITES FUNDED IN PART WITH STATE FUNDS

State of Maine
Department of Labor
Bureau of Labor Standards
Augusta, Maine 04333-0045
Telephone (207) 623-7906

Wage Determination - In accordance with 26 MRS §1301 et. seq., this is a determination by the Bureau of Labor Standards, of the fair minimum wage rate to be paid to laborers and workers employed on the below titled project.

2022 Fair Minimum Wage Rates
Building 2 Sagadahoc County
(other than 1 or 2 family homes)

Occupational Title	Minimum Wage	Minimum Benefit	Total
Brickmasons And Blockmasons	$35.00	$0.00	$35.00
Carpenter	$26.40	$12.38	$38.78
Carpet Installers	$20.50	$0.72	$21.22
Cement Masons And Concrete Finisher	$23.00	$5.20	$28.20
Construction And Maintenance Painters	$21.00	$1.87	$22.87
Construction Laborer	$20.00	$2.49	$22.49
Control And Valve Installers And Repairers - Except Mechanical Door	$26.00	$5.49	$31.49
Crane And Tower Operators	$26.38	$5.98	$32.36
Drywall And Ceiling Tile Installers	$26.89	$3.11	$30.00
Earth Drillers - Except Oil And Gas	$23.25	$5.53	$28.78
Electricians	$32.90	$4.86	$37.76
Elevator Installers And Repairers	$56.69	$42.31	$99.00
Excavating And Loading Machine And Dragline Operators	$26.00	$0.00	$26.00
Fence Erectors	$23.00	$5.72	$28.72
Floor Layers - Except Carpet/Wood/Hard Tiles	$21.50	$5.12	$26.62
Glaziers	$24.00	$2.22	$26.22
Hazardous Materials Removal Workers	$20.00	$2.77	$22.77
Heating And Air Conditioning And Refrigeration Mechanics And Installers	$29.00	$4.26	$33.26
Heavy And Tractor - Trailer Truck Drivers	$21.00	$0.43	$21.43
Industrial Machinery Mechanics	$26.00	$5.82	$31.82
Industrial Truck And Tractor Operators	$24.00	$5.61	$29.61
Insulation Workers - Floor Ceiling And Wall	$26.25	$2.97	$29.22
Ironworker - Ornamental	$25.00	$3.32	$28.32
Light Truck Or Delivery Services Drivers	$20.00	$2.30	$22.30
Mobile Heavy Equipment Mechanics - Except Engines	$28.50	$4.37	$32.87
Operating Engineers And Other Equipment Operators	$26.00	$2.15	$28.15
Paving Surfacing And Tamping Equipment Operators	$33.12	$0.00	$33.12
Pipelayers	$28.00	$7.20	$35.20
Plumbers Pipe Fitters And Steamfitters	$27.25	$4.65	$31.90
Reinforcing Iron And Rebar Workers	$21.00	$5.69	$26.69
Roofers	$21.00	$0.61	$21.61
Sheet Metal Workers	$25.00	$5.17	$30.17
Sider	$18.00	$2.44	$20.44
Structural Iron And Steel Workers	$25.38	$5.71	$31.09
Tapers	$26.75	$1.41	$28.16
Telecommunications Equipment Installers And Repairers - Except Line Installers	$33.25	$10.78	$44.03
Tile And Marble Setters	$25.50	$5.30	$30.80

Welders are classified as the trade to which welding is incidental (e.g. welding structural steel is Structural Iron and Steel Worker)

Apprentices – The minimum wage rate for registered apprentices are those set forth in the standards and policies of the Maine State Apprenticeship and Training Council for approved apprenticeship programs.

For any other specific trade on this project not listed above, contact the Bureau of Labor Standards for further clarification.

Title 26 §1310 requires that a clearly legible statement of all fair minimum wage and benefits rates to be paid the several classes of laborers, workers and mechanics employed on the construction on the public work must be kept posted in a prominent and easily accessible place at the site by each contractor and subcontractor subject to sections 1304 to 1313.

Appeal – Any person affected by the determination of these rates may appeal to the Commissioner of Labor by filing a written notice with the Commissioner stating the specific grounds of the objection within ten (10) days from the filing of these rates.

A true copy

Attest: Scott R. Cotnoir
Scott R. Cotnoir
Wage & Hour Director
Bureau of Labor Standards

Expiration Date: 12-31-2022

THIS DOCUMENT MUST BE CLEARLY POSTED AT ALL CONSTRUCTION SITES FUNDED IN PART WITH STATE FUNDS

State of Maine
Department of Labor
Bureau of Labor Standards
Augusta, Maine 04333-0045
Telephone (207) 623-7906

Wage Determination - In accordance with 26 MRS §1301 et. seq., this is a determination by the Bureau of Labor Standards, of the fair minimum wage rate to be paid to laborers and workers employed on the below titled project.

2022 Fair Minimum Wage Rates
Heavy & Bridge Sagadahoc County

Occupational Title	Minimum Wage	Minimum Benefit	Total
Carpenter	$29.00	$5.53	$34.53
Cement Masons And Concrete Finisher	$20.04	$1.02	$21.06
Commercial Divers	$34.00	$4.98	$38.98
Construction And Maintenance Painters	$27.00	$0.00	$27.00
Construction Laborer	$22.00	$4.12	$26.12
Conveyor Operators And Tenders	$16.50	$0.00	$16.50
Crane And Tower Operators	$31.00	$8.54	$39.54
Crushing Grinding And Polishing Machine Operators	$21.00	$4.38	$25.38
Earth Drillers - Except Oil And Gas	$23.25	$5.53	$28.78
Electrical Power - Line Installer And Repairers	$44.00	$23.96	$67.96
Electricians	$32.00	$8.38	$40.38
Excavating And Loading Machine And Dragline Operators	$32.43	$8.17	$40.60
Flaggers	$21.00	$0.62	$21.62
Heating And Air Conditioning And Refrigeration Mechanics And Installers	$26.33	$4.06	$30.39
Heavy And Tractor - Trailer Truck Drivers	$23.50	$3.58	$27.08
Highway Maintenance Workers	$21.66	$3.22	$24.88
Industrial Machinery Mechanics	$30.00	$7.45	$37.45
Industrial Truck And Tractor Operators	$24.00	$5.61	$29.61
Ironworker - Ornamental	$25.00	$3.32	$28.32
Light Truck Or Delivery Services Drivers	$24.50	$6.23	$30.73
Millwrights	$34.00	$15.48	$49.48
Mobile Heavy Equipment Mechanics - Except Engines	$29.00	$7.67	$36.67
Operating Engineers And Other Equipment Operators	$34.82	$28.90	$63.72
Paving Surfacing And Tamping Equipment Operators	$35.11	$0.00	$35.11
Pile-Driver Operators	$30.54	$8.93	$39.47
Pipelayers	$30.00	$7.20	$37.20
Plumbers Pipe Fitters And Steamfitters	$32.86	$18.00	$50.86
Radio Cellular And Tower Equipment Installers	$27.00	$0.00	$27.00
Reinforcing Iron And Rebar Workers	$27.60	$35.40	$63.00
Riggers	$24.25	$9.27	$33.52
Sheet Metal Workers	$24.00	$5.48	$29.48
Structural Iron And Steel Workers	$32.50	$4.50	$37.00
Telecommunications Line Installers And Repairers	$25.00	$3.75	$28.75

Welders are classified as the trade to which welding is incidental (e.g. welding structural steel is Structural Iron and Steel Worker)

Apprentices – The minimum wage rate for registered apprentices are those set forth in the standards and policies of the Maine State Apprenticeship and Training Council for approved apprenticeship programs.

For any other specific trade on this project not listed above, contact the Bureau of Labor Standards for further clarification.

Title 26 §1310 requires that a clearly legible statement of all fair minimum wage and benefits rates to be paid the several classes of laborers, workers and mechanics employed on the construction on the public work must be kept posted in a prominent and easily accessible place at the site by each contractor and subcontractor subject to sections 1304 to 1313.

Appeal – Any person affected by the determination of these rates may appeal to the Commissioner of Labor by filing a written notice with the Commissioner stating the specific grounds of the objection within ten (10) days from the filing of these rates.

A true copy

Attest: Scott R. Cotnoir

Scott R. Cotnoir
Wage & Hour Director
Bureau of Labor Standards

Expiration Date: 12-31-2022

SPECIFICATIONS

SECTION 01 01 00 – SUMMARY OF WORK - RICHMOND MAINTENANCE FACILITY BUILDINGS

PART 1 - GENERAL

PROJECT SUMMARY:

1. SCOPE OF WORK

A. Mobilize, and provide temporary facilities as required.

B. Assist Owner's Representative in filing applications for required local building, plumbing, and electrical permits as required.

C. Protect property outside the work area from damage from Contractor's equipment. Locate and protect underground utilities.

D. Sitework
    1. Clearing and Grubbing
    2. Rock Excavation will be required to provide drainage and underground utility provisions as shown. Test pits are shown on the plans indicating depth to ledge. Contractor is responsible for trench drilling and blasting to provide the clearance and pitch necessary for the new drainage ditches and drain lines. The replacement electrical lines crossing the parking lot will require trench blasting. The new entrance drive on Rte 201 will require shallow depth blasting near the road and for the drainage swale on the south side.
    3. New building foundations will bear directly on bedrock. Rock excavation is not anticipated to be required for the foundation or within the building footprints, but may be necessary to drain perched water pockets on the bedrock surface. If so it will be addressed by the Owner by change order.
    4. Excavation and backfill for building foundations and floors. Remove all soil and clean to ledge over the footprint of the building. Place and compact new gravel under new slab. Install drainage.
    5. Stockpile excavated topsoil for use as loam. Transport other excess excavated material not otherwise reusable on the project to use as common fill on site where directed by the Owner.
    6. Construct new Entrance to Rte 201, per the MDOT Entrance Permit (see Appendix A). This includes rock excavation, culvert, fill, base courses and bituminous paving and associated work.
    7. Construct new driveways and storage areas with gravel surface. Provide new granular fill and crushed aggregate finish course. Compact and fine grade. Provide new crushed aggregate surface material to blend new work into existing surfaces.
    8. Provide trenching and backfilling for underground utility lines between buildings as shown. Coordinate with the Owner and the Owner's electrician for work with the Contractor during the excavation. Preliminary work in preparation for this

project has been done with the installation of the meter pedestal and removal over overhead wires.

a. Contractor will excavate a new trench from the existing electrical meter pedestal to the existing Office building, crossing the parking lot easterly. The exact route will be as directed by the Owner and depending upon underground rock ledge. Multiple conduits for electric power and data will be installed in the trench after excavation, by the Owner's electrician. These new lines replace all of the existing lines now crossing the parking area. The existing lines will be discontinued. Installing cables and making the connections is the responsibility of the Owner's electrician.
b. A second trench for conduit to the Nav Aids Building will depart from the above trench near the front of the Carpentry shops and head south along the front of the existing buildings. Multiple conduits for electric power and data will be installed in the trench after excavation, by the Owner's electrician.
c. A separate trench from the meter pedestal to the new Carpentry shop has been started as part of the meter pedestal installation. The Contractor will complete the trench as part of the new building foundation
d. Underground drainage - The contractor will excavate and install drainage piping, then backfill a trench from near the future Nav Aids Building and running north, along the front of the existing buildings, across the entrance driveway and ending in a level spreader at the north side of the driveway. Test pits were made along the route of the main north -south axis and are noted on the plans. Trench blasting will be required to provide the depth and slope.
e. Foundation drains around and within the new building foundations as shown on the plans. Rock excavation may be required for some of the runs.

9. Provide and compact new gravel surface course in the existing parking areas to restore existing surfaces disturbed in the new work and blend smoothly into the surrounding areas. Regrade as shown.

10. Loam, seed and mulch the areas not gravel surfaced. Transition smoothly into surrounding surfaces. Finished areas shall be smooth and mowable, free from stumps, rocks, settled areas or other obstructions. Maintain grass until established growth is assured.

E. Buildings

1. Construct the new buildings complete in all respects except specifically shown and noted. The Owner is bidding the Nav Aids building as both a metal framed, pre-engineered building and as a wood framed building with roof trusses. **The wood framed option is part of the Base Bid. The metal framed option is bid as an add or deduct under Alternate #1.** The Owner will evaluate the prices from the bids received and choose the lowest responsible bid. At that time the drawings will be updated to incorporate the chosen option and alternates.
2. This contract includes the electrical service panels and all other building wiring and components, in the new Carpentry Shop and the new Nav Aids Building.

The Owner's electrician will connect the new service panel to the meter pedestal installed by the Contractor.

3. The heating system for the Carpentry Shop will be by others, except this contract includes the embedded tubing for the in-floor radiant heating, brought up above the floor as shown.

4. The Carpentry Shop insulation, interior wall finishes and trim, and interior painting will be done by the Owner. The ceiling panels will be part of the Contractor's scope so that the electrical work and lighting can be completed.

F. Remove trash and debris from site. Demobilize after Final Inspection and punch list completion.

2. COORDINATION

A. The Owner's Representative for the project shall be kept informed of activities and schedules, and shall be responsible to authorize work and coordinate with the Contractor.

B. Notify the Owner's Representative and the Engineer of questions or adjustments needed to the Contract Documents if found. Do not proceed until instructed by the Owner's Representative. Changes in the Contract shall be recorded whether or not affecting the price and schedule.

C. The Owner's Representative will direct the Contractor on items not shown in these plans such as utilities, details of site grading, and shall make the determination of such things as style, colors, and finishes where choices exist.

D. The Richmond Facility will be in use and occupied during the construction. Plan and sequence operations to avoid disruption to extent practical. Confine work and stored materials to work areas designated by the Owner's Rep. Do not expose the interiors to weather or insects during construction. Coordinate with the Owner's representative and other staff on schedules and outages.

E. The work shall preferably be scheduled so that one driveway serving the facility remains usable for the facility staff and operations at all times. Work that blocks the existing driveway shall only be started when arrangements are made with the Owner. The Owner can schedule reasonable short outages in addition to times when the facility is closed, if sufficient advance notice is given.

3. CONTRACTOR USE OF SITE

A. Provide skilled craftsman, and a skilled knowledgeable foreman to supervise construction crew.

B. Owner's Usage during Construction - Coordinate with the local staff to keep the facility open to the extent practical during the work.

C. Contractor is responsible for temporary facilities for the construction personnel, as needed or required. Limited assistance is available for the Contractor including covered storage, water, and electricity. Electricity supply may not be adequate for heavy tools and Contractors may need to provide their own power. Depending upon crew size the Contractor shall augment the existing toilet facilities with portable units.

D. Store and secure equipment and materials in a neat and organized manner for after work hours.

E. Construction equipment and materials should not be parked or stored where they will block use of the existing roadways.

F. Conform to Bureau of Parks and Lands Spill Control and Reporting Procedures and prevent water pollution.

G. Control and remove rubbish, wood, concrete, or other debris from the site and the Owner's property. Soils and rock may be disposed of on-site where designated by Owner.

END OF SECTION

SECTION 01 33 00 CONTRACTOR SUBMITTALS

1.0 ITEMS REQUIRED FOR SUBMITTAL
Refer to the Technical Specifications for specific submittal requirements.

1.1 SHOP DRAWING AND SUBMITTALS PROCEDURE INSTRUCTIONS
The following procedure will apply to all submittals received from contractors and vendors:

Submittals and Shop Drawings will be submitted by the contractor or vendor as follows:

1. The Contractor will designate, monitor, and maintain a specific email address for project correspondence.

2. All submittals shall be submitted as pdf file attachments to the Owner and Engineer via the following email recipients:

   heather.seiders@maine.gov
   PinnacleHillEngineering@gmail.com
   Such other parties as designated by the Owner and Engineer

3. Each submittal shall be sent via a specific email using the subject line to show the submittal title and revision number. Do not use chain emails with multiple subjects or mix submittals together with those from unrelated vendors and specifications.

4. The Contractor shall have reviewed the submittal prior to submitting to the Owner and Engineer and shall so state in the cover email. Submittals received directly from the vendor and not reviewed first by the Contractor may not be reviewed.

5. After review, copies will be distributed via email to the Owner and the Contractor. The Vendor will be copied at the request of the Contractor.

6. If the submittal is rejected or returned for substantial corrections and must be resubmitted, the procedure is repeated.

7. The Engineer will attempt to have shop drawings reviewed and returned in an expeditious manner. Allow two weeks in the schedule for review if possible.

1.2 RECORD INFORMATION

The Contractor will keep records of any changes or clarifications to the design plans and provide that information to the Engineer by email notifications. These should be sent as soon as possible in each case.

Given that the Contractor has the best opportunity to record hidden and buried conditions that may not be later visible, the Contractor is required to take and submit digital photographs on a frequent basis throughout the work. In particular, the photographs shall

record hidden conditions just prior to being covered by new work, such as the interiors of concrete forms just prior to the placement of concrete, or the excavation prior and during backfilling, as well as finished and completed items.

The Contractor shall engage qualified surveying personnel and shall record as-built information, particularly that which is concealed or inaccessible in the finished project. The survey personnel shall create an autocad based site plan and update that drawing file as the as-built record. Submit periodic version to the Owner and Engineer, and a final version, so marked, at the completion of the site work

After completion of the project, a "Record" set of pdf , photos , and other files will be assembled and delivered by the Engineer to the Owner.

END OF SECTION

SECTION 03300 – CONCRETE

PART 1 – GENERAL

1. RELATED DOCUMENTS

Drawings and general provisions of Contract, including General Conditions and Instruction to Bidders sections, apply to work of this section.

2. DESCRIPTION OF WORK

A. Scope of work is for providing new cast-in-place concrete. Also included in this section is surface preparation, curing, finishing, grouting, formwork, and reinforcing steel.

B. Extent of work is indicated in the Contract Documents and shown on drawings.

3. QUALITY ASSURANCE

A. Codes and Standards: Comply with provisions of the following codes, specifications and standards, except where more stringent requirements are specified.

ACI 211.1		Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete.
ACI 214		Recommended Practice for Evaluation of Strength Test Results of Concrete.
ACI 301		Specifications for Structural Concrete for Buildings.
ACI 304		Recommended Practice for Measuring, Mixing, Transporting, and Placing Concrete.
ACI 305	-	Hot Weather Concreting.
ACI 306	-	Cold Weather Concreting
ACI 308	-	Standard Practice for Curing Concrete
ACI 309	-	Consolidation of Concrete
ACI 318		Building Code Requirements for Reinforced Concrete.
ACI 347	-	Recommended Practice for Concrete Formwork.

ASTM C 31		Standard Method of Making and Curing Concrete Test Specimens in the field.
ASTM C 33	-	Standard Specifications for Concrete Aggregates.
ASTM C 42		Standard Method of Obtaining and Testing Drilled Cores and Sawed Beams of Concrete.
ASTM C 70	-	Test for Surface Moisture in Fine Aggregate.
ASTM C 94	-	Standard Specification for Ready-Mixed Concrete.
ASTM C 109		Standard Test Method for Compressive Strength of Hydraulic Cement Mortars using 2-in. or 50 mm cube specimens.
ASTM C 143		Standard Test Method for Slump of Portland Cement Concrete.
ASTM C 150		Standard Specifications for Portland Cement.
ASTM C 172		Standard Method of Sampling Fresh Concrete.
ASTM C 231		Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.
ASTM C 260		Standard Specification for Air-Entraining Admixtures for Concrete.
ASTM C 494		Standard Specification for Chemical Admixtures for Concrete.

B. Materials: Materials used in producing the concrete shall be from the same source for the duration of the project. Change of source for cement admixture or fine and coarse aggregate constitutes a new mix design and will require resubmittal of all data and laboratory tests. Any costs associated with resubmittals shall be borne by Contractor at no charge to Owner.

C. Tolerances - The tolerances for finished cast-in-place concrete shall conform to ACI-347.

D. Provide curing and sealing compound system as specified including manufacturers warranty. Install using factory licensed applicators, or under the supervision of the manufacturer's representative.

4. CONCRETE TESTING

The Contractor is responsible for providing testing by an approved testing laboratory who will submit reports directly to the Owner and Engineer. Concrete materials and operations will be tested and inspected as the work progresses. Failure to detect any defective work or material shall not in any way prevent later rejection when such defect is discovered nor shall it obligate the Engineer for final acceptance.

5. SUBMITTALS

A. Submit mix design per ACI 318.

B. Product Data: Submit data for proprietary materials and items, including reinforcement and forming accessories, admixtures, patching compounds, joint systems, curing compounds, and others as requested by Engineer.

C. Shop Drawings; Reinforcement: Submit original shop drawings for fabrication, bending, and placement of concrete reinforcement. Comply with ACI 315 "Manual of Standard Practice for Detailing Reinforced Concrete Structures" showing bar schedules, spacing, arrangement of concrete reinforcement.

D. Reference Paragraph 2.5.B for the required mix report submittals.

PART 2 – PRODUCTS

1. FORM MATERIALS

A. Forms for Exposed Finish Concrete: Plywood, metal, metal-framed plywood faced, or other acceptable panel-type materials, to provide continuous, straight, smooth, exposed surfaces. Furnish in largest practicable sizes to minimize number of joints and to conform to joint system shown on drawings.

B. Forms for Unexposed Finish Concrete: Plywood, lumber, metal, or other acceptable material. Provide lumber dressed on at least 2 edges and one side for tight fit.

C. Form Coatings: Provide commercial formulation form-coating compounds that will not bond with, stain, nor adversely affect concrete surfaces, and will not impair subsequent treatments of concrete surfaces.

D. Form Ties: Factory-fabricated, adjustable-length, removable or snap-off metal form ties, designed to prevent form deflection and to prevent

spalling concrete upon removal. Provide units which will leave no metal closer than 2" to surface. Provide ties which, when removed, will leave holes not larger than 1" diameter in concrete surface.

2. REINFORCING MATERIALS

A. Reinforcing Bars: ASTM A 615, Grade 60, deformed.

B. Supports for Reinforcement: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire fabric in place. Use wire bar type supports complying with CRSI specifications.

3. CONCRETE MATERIALS

A. Portland Cement: ASTM C 150, Type II.

1. Use one brand of cement throughout project, unless otherwise acceptable to Engineer.

B. Normal Weight Aggregates: ASTM C 33, and as herein specified. Provide aggregates from a single source for exposed concrete.

1. Do not use fine or coarse aggregates containing spalling-causing deleterious substances:

a. Use source of aggregate with documented service records of satisfactory performance regarding alkali reactivity.

b. Where service records of field performance do not exist, Owner may require the Contractor to submit results of laboratory tests demonstrating the suitability of the aggregate in regards to alkali reactivity. Testing shall be in accordance with ASTM C 227, C 289 and C 586 or as otherwise directed by the Owner.

2. Local aggregates not complying with ASTM C 33 but which have shown by special test or actual service to produce concrete of adequate strength and durability may be used when acceptable to Engineer.

3. Aggregate material to be quartzite quartz, limestone, dolomite, granite, feldspar, or other low shrinkage rock.

4. For slab on grade maximum fine aggregate gradation to be 5 - 15% passing No. 50 and 0 - 5 passing No. 100-sieve.

C. Water: Potable

D. Air-Entraining Admixture shall be used: ASTM C 260, certified by manufacturer to be compatible with other required admixtures.

1. Available Products: Subject to compliance with requirements, products which may be incorporated in the work include, but are not limited to, the following:

"Darex AEA" or"Daravair," GCP Applied Technologies
“MasterAir AE" Master Builders.
"Sealtight Air Entraining Agent," W.R. Meadows, Inc.
"Sika AER" Sika Corp.

E. Water-Reducing Admixture may be used: ASTM C 494, Type A, and containing not more than 0.1 percent chloride ions.

1. Available Products: Subject to compliance with requirements, products which may be incorporated in the work include, but are not limited to, the following:

"WRDA"; GCP Applied Technologies
"Pozzolith 322N"; Master Builders
"Plastocrete 250"; Sika Corp.

F. High-Range Water-Reducing Admixture (Super Plasticizer) may be used: ASTM C 494, Type F or Type G and containing not more than 0.1 percent chloride ions.

1. Available Products: Subject to compliance with requirements, products which may be incorporated in the work include, but are not limited to, the following:

“Daracem"; GCP Applied Technologies
"Sikament SPMN"; Sika Corp
“Master Rheobuild 1000"; Master Builders

G. Prohibited Admixtures: Calcium chloride thyocyanates or admixtures containing more than 0.1 percent chloride ions are not permitted.

4. RELATED MATERIALS

A. Non-Shrink Grout: CRD-C 621, factory pre-mixed grout.

1. Minimum Requirements

a. Early Volume Charge: ASTM C-827: 0.00% Shrinkage.

b. Hardened Volume Charge: 0.00% shrinkage and expansion after set.

c. Compressive Strength: ASTM C-109 = 5,000 psi at 7 days.

2. Available Products: Subject to compliance with requirements, products which may be incorporated in the work include, but are not limited to, the following:

Masterflow 713; Master Builders.
Sealtight 588 Grout; W.R. Meadows.
Five Star Grout; U.S. Grout Corp.

B. Absorptive Cover: Burlap cloth made from jute or kenaf, weighing approximately 9 oz. per sq. yd., complying with AASHTO M 182, Class 2.

C. Moisture-Retaining Cover: One of the following, complying with ASTM C 171.

Waterproof paper
Polyethylene film
Polyethylene-coated burlap

D. Curing/hardening/sealing agent on floor slabs:
Curing compound is not compatible with the epoxy floor finish and may not be used in the Nav Aids Building.
Other surfaces may use compound meeting ASTM C309

E. Epoxy Floor Coating -see Section 09 67 23

5. PROPORTIONING AND DESIGN OF MIXES

A. Prepare design mixes for each type and strength of concrete by either laboratory trial batch or field experience methods as specified in ACI 301. If trial batch method used, use an independent testing facility acceptable to Engineer for preparing and reporting proposed mix designs.

B. Submit written reports to Engineer of each proposed mix for each class of concrete at least 15 days prior to start of work. Do not begin concrete production until mixes have been reviewed by Engineer.

C. Design mixes to provide normal weight concrete with the following properties:

4000 psi 28-day compressive strength; W/C ratio, 0.45 maximum by weight.

D. Adjustment to Concrete Mixes: Mix design adjustments may be requested by Contractor when characteristics of materials, job conditions, weather, test results, or other circumstances warrant; at

no additional cost to Owner and as accepted by Engineer. Laboratory test data for revised mix design and strength results must be submitted to and accepted by Engineer before using in work.

E. Admixtures:

1. Use air-entraining admixture in all concrete, unless otherwise indicated. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having total air content of 5 to 7 percent.

2. Use admixtures for water-reducing in strict compliance with manufacturer's directions. All concrete may contain High Range Water-Reducing (HRWR) admixture (super plasticizer) for placement and workability, at the contractor's option.

3. Slump Limits: Proportion and design mixes to result in concrete slump at point of placement; to conform to the approved mix design. If a HRWR is used then as follows:

a. Before the addition of HRWR, concrete slump shall be verified to be 1-1/2" plus or minus 1". A tolerance of up to 1" above the maximum will be allowed for one batch in any 5 consecutive batches. Concrete beyond these limits shall be rejected.

b. After addition of HRWR, concrete slump shall be no more than 9".

6. CONCRETE MIXING

A. Ready-Mix Concrete: Comply with requirements of ASTM C 94, and as herein specified.

1. During hot weather, or under conditions contributing to rapid setting of concrete, a shorter mixing time than specified in ASTM C 94 may be required.

2. Provide batch ticket for each batch discharged and used in work, indicating project identification name and number, date, mix type, mix time, quantity, and amount of water introduced.

PART 3 – EXECUTION

1. GENERAL

A. Coordinate the placement of forms, reinforcing steel, and concrete inspection of the work with the Owner/ Engineer. Twenty-four hours notice is to be given to the Owner prior to each concrete placement.

2. FORMS

A. Design, erect, support, brace, and maintain form work to support vertical and lateral, static, and dynamic loads that might be applied until such loads can be supported by concrete structure. Construct form work so concrete members and structures are of correct size, shape, alignment, elevation, and position. Maintain form work construction tolerances complying with ACI 347.

B. Design form work to be readily removable without impact, shock, or damage to cast-in-place concrete surfaces and adjacent materials.

C. Construct form to sizes, shapes, lines, and dimensions shown, and to obtain accurate alignment, location, grades, level and plumb work in finished structures. Provide for openings, offsets, keyways, recesses, moldings, rustications, reglets, chamfers, blocking, screeds, bulkheads, anchorages and inserts, and other features required in work. Use selected materials to obtain required finishes. Solidly butt joints and provide back-up at joints to prevent leakage of cement paste.

D. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush plates or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces where slope is too steep to place concrete with bottom forms only. Kerf wood inserts for forming keyways, reglets, recesses, and the like, to prevent swelling and for easy removal.

E. Provide temporary openings where interior area of form work is inaccessible for clean-out, for inspection before concrete placement, and for placement of concrete. Securely brace temporary openings and set tightly to forms to prevent loss of concrete mortar. Locate temporary openings on forms at inconspicuous locations.

F. Chamfer all exposed corners and edges with a 3/4 inch chamfer. Use wood, metal, PVC, or rubber chamfer strips fabricated to produce uniform smooth lines and tight edge joints.

G. Cleaning and Tightening: Thoroughly clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, or other debris just before concrete is placed. Retightening forms and bracing after concrete placement is required to eliminate mortar leaks and maintain proper alignment.

3. PLACING REINFORCEMENT

A. Comply with Concrete Reinforcing Steel Institute's recommended practice for "Placing Reinforcing Bars"; for details and methods of reinforcement placement and supports, and as herein specified.

B. Clean reinforcement of loose rust and mill scale, earth, ice, and other materials which reduce or destroy bond with concrete.

C. Accurately position, support, and secure reinforcement against displacement by form work, construction, or concrete placement operations. Locate and support reinforcing by metal chairs, runners, bolsters, spacers, and hangers, as required.

D. Place reinforcement to obtain at least minimum coverages for concrete protection. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement operation. Set wire ties so ends are directed into concrete, not toward exposed concrete surfaces.

4. JOINTS

A. Construction Joints: Locate and install construction joints as indicated or, if not indicated, locate so as not to impair strength and appearance of the structure, as acceptable to Engineer.

B. Place construction joints perpendicular to main reinforcement. Continue reinforcement across construction joints, except where otherwise indicated.

5. PREPARATION OF FORM SURFACES

A. Clean re-used forms of concrete matrix residue, repair and patch as required to return forms to acceptable surface condition.

B. Coat contact surfaces of forms with a form-coating compound before reinforcement is placed.

C. Thin form-coating compounds only with thinning agent of type, amount, and under conditions of form-coating compound manufacturer's directions. Do not allow excess form-coating material to accumulate in forms or to come into contact with in-place concrete surfaces against which fresh concrete will be placed. Apply in compliance with manufacturer's instructions.

D. Coat steel forms with a non-staining, rust-preventative form oil or otherwise protect against rusting. Rust-stained steel form work is not acceptable.

6. CONCRETE PLACEMENT

A. Preplacement Inspection: Before placing concrete, inspect and complete form work installation and reinforcing steel.

B. General: Comply with ACI 304 "Recommended Practice for Measuring, Mixing, Transporting, and Placing Concrete", and as herein specified.

1. Deposit concrete continuously or in layers of such thickness that no concrete will be placed on concrete which has hardened sufficiently to cause the formation of seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as herein specified. Deposit concrete as nearly as practicable to its final location to avoid segregation, maximum free drop of concrete to be five feet.

C. Placing Concrete in Form: Deposit concrete in forms in horizontal layers not deeper than 18" and in a manner to avoid inclined construction joints. Where placement consists of several layers, place each layer while preceding layer is still plastic to avoid cold joints.

D. Consolidate placed concrete by mechanical vibrating equipment supplemented by hand-spading, rodding, or tamping. Use equipment and procedures for consolidation of concrete in accordance with ACI 309.

E. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations not farther than visible effectiveness of machine. Place vibrators to rapidly penetrate placed layer and at least 6" into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to set. At each insertion limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without casing segregation of mix.

F. Placing Concrete Slabs: Deposit and consolidate concrete slabs in a continuous operation, within limits of construction joints, until the placing of a panel or section is completed.

G. Consolidate concrete during placing operations so that concrete is thoroughly worked around reinforcement and into corners.

H. Bring slab surfaces to correct level with straight edge and strike-off. Use bull floats or darbies to smooth surface, free of humps or hollows. Do not disturb slab surfaces prior to beginning finishing operations.

I. Maintain reinforcing in proper position during concrete placement operations.

J. Cold Weather Placing: Protect concrete work from physical damage or reduced strength which could be caused by frost, freezing actions, or

low temperatures, in compliance with ACI 306, and as herein specified.

When air temperature has fallen to or is expected to fall below 40 deg. F (4 deg. C), uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 deg. F (10 deg. C), and not more than 80 deg. F (27 deg. C) at point of placement. Air entrainment admixture amount will vary with concrete temperatures.

K. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.

L. Do not use calcium chloride, salt, and other materials containing antifreeze agents or chemical accelerators, unless otherwise accepted in mix designs.

M. Hot Weather Placing: When hot weather conditions exist that would seriously impair quality and strength of concrete, place concrete in compliance with ACI 305 and as herein specified.

N. Cool ingredients before mixing to maintain concrete temperature at time of placement below 80 deg F (32 deg C). Mixing water may be chilled, or chopped ice may be used to control temperature provided water equivalent of ice is calculated to total amount of mixing water. Use of liquid nitrogen to cool concrete is Contractor's option.

O. Fog spray forms, reinforcing steel, and subgrade just before concrete is placed.

P. Use water-reducing retarding admixture (Type D) when required by high temperatures, low humidity, or other adverse placing conditions.

7. FINISH OF VERTICAL SURFACES

A. All vertical concrete formed surfaces shall receive a "Smooth Form Finish".

Smooth Form Finish: Provide as-cast smooth form finish for all formed concrete surfaces.

Produce smooth form finish by selecting form material to impart a smooth, hard, uniform texture and arranging them orderly and symmetrically with a minimum of seams. Repair and patch defective areas, with fins or other projections completely removed and smoothed, and any holes filled.

8. FINISH OF HORIZONTAL SURFACES

A. Trowel Finish: Apply steel trowel finish to all horizontal concrete surfaces and to the spillway crest.

B. Non-Slip Broom Finish: Apply non-slip broom finish to all horizontal walking surfaces. Immediately after trowel finishing, slightly roughen concrete surface by brooming in direction perpendicular to main traffic route. Coordinate final finish with Owner before application.

9. CONCRETE CURING AND PROTECTION

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.

1. Start initial curing as soon as free water has disappeared from concrete surface after placing and finishing. Keep continuously moist for not less than 7 days.

2. Begin final curing procedures immediately following initial curing and before concrete has dried. Continue final curing for at least 7 days in accordance with ACI 301 procedures. Avoid rapid drying at end of final curing period.

B. Curing Methods: Perform curing of concrete by curing and sealing compound except as not allowed for epoxy coating. For those areas use moisture retaining cover and wetting.

Apply specified curing and sealing compound to concrete slabs within 2 hours of completing the final finishing operation and after surface water sheen has disappeared.

Apply uniformly in continuous operation by power-spray or roller in accordance with manufacturer's directions. Recoat areas subjected to heavy rainfall within 3 hours after initial application. Maintain continuity of coating and repair damage during curing period.

C. Curing Formed Surfaces: Cure formed concrete surfaces, including undersides of beams, supported slabs, and other similar surfaces by moist curing with forms in place for full curing period or until forms are removed. If forms are removed, continue curing by methods specified above, as applicable.

10. REMOVAL OF FORMS

Form Work not supporting weight of concrete, such as sides of beams, walls, columns, and similar parts of the work, may be removed after cumulatively curing at not less than 50 deg F (10 deg C) for 24 hours after placing concrete, provided concrete is sufficiently hard to not be damaged by form removal operations, and provided curing and protection operations are maintained.

11. RE-USE OF FORMS

A. Clean and repair surfaces of forms to be re-used in work. Split, frayed, delaminated, or otherwise damaged form facing material will not be acceptable for surfaces. Apply new form coating compound as specified for new formwork.

B. When forms are extended for successive concrete placement, thoroughly clean surfaces, remove fins and laitance, and tighten forms to close joints. Align and secure joint to avoid offsets. Do not use "patched" forms for exposed concrete surfaces, except as acceptable to Owner.

12. CONCRETE SURFACE REPAIRS OF NEW CAST-IN-PLACE CONCRETE

A. Patching Defective Areas: Repair and patch defective areas in a manner acceptable to the Owner.

Cut out honeycomb, rock pockets, voids over 1/4" in any dimension, and holes left by tie rods and bolts, down to solid concrete but, in no case to a depth of less than 1". Make edges of cuts perpendicular to the concrete surface. Thoroughly clean and dampen with water the area to be patched.

B. For exposed-to-view surfaces, blend white Portland cement and standard Portland cement so that, when dry, patching mortar will match color surrounding. Provide test areas at inconspicuous location to verify mixture and color match before proceeding with patching. Compact mortar in place and strike-off slightly higher than surrounding surface.

C. Repair of Formed Surfaces: Remove and replace concrete having defective surfaces if defects cannot be repaired to satisfaction of Engineer. Surface defects, as such, include color and texture irregularities, cracks, spalls, air bubbles, honeycomb, rock pockets' fins and other projections on surface; and stains and other discolorations that cannot be removed by cleaning. Flush out form tie holes, fill with dry pack mortar, or precast cement cone plugs secured in place with bonding agent.

D. Repair finished unformed surfaces that contain defects which affect durability of concrete. Surface defects, as such, include crazing, cracks in excess of 0.01" wide or which penetrate to reinforcement or completely through non-reinforced sections regardless of width, spalling, pop-outs, honeycomb, rock pockets, and other objectionable conditions.

E. Correct high areas in unformed surfaces by grinding, after concrete has cured at least 14 days.

F. Correct low areas in unformed surfaces during or immediately after completion of surface finishing operations by cutting out low areas and replacing with fresh concrete. Finish repaired areas to blend into adjacent concrete. Proprietary patching compounds may be used when acceptable to Engineer.

G. Repair defective areas, except random cracks and single holes not exceeding 1" diameter, by cutting out and replacing with fresh concrete. Remove defective areas to sound concrete with clean, square cuts and expose reinforcing steel with at least 3/4" clearance all around. Dampen concrete surfaces in contact with patching concrete. Mix patching concrete of same materials to provide concrete of same type or class as original concrete. Place, compact, and finish to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.

13. QUALITY CONTROL TESTING DURING CONSTRUCTION

A. The Contractor shall employ a testing laboratory to perform tests and to submit test reports.

Notification: Notify Owner and Engineer twenty-four (24) working hours prior to each concrete placement, or as directed by Owner. Notify testing lab and arrange for technician to be on site prior to the first truck of each placement.

B. Sampling and testing for quality control during field placement of concrete shall include the following, or as directed by Engineer or Owner.

1. Sampling Fresh Concrete: ASTM C172, except modified for slump to comply with ASTM C 94.

2. Slump: ASTM C 143; one test at point of discharge for truckload of concrete; additional tests when concrete consistency seems to have changed.

3. Air Content: ASTM C 173, volumetric method for lightweight or normal weight concrete, ASTM C 231 pressure method for normal weight concrete; one test for each set of compression test specimen.

4. Concrete Temperature: Test hourly when air temperature is 40 deg F (4 deg C) and below, and when 80 deg F (27 deg C) and above; and each time a set of compression test specimens are required.

5. Compression Test Specimen: ASTM C 31; one set of 4 standard cylinders for each compressive strength test, unless otherwise directed. Mold and store cylinders for laboratory cured test specimens except when field-cure test specimens are required.

6. Compressive Strength Tests: ASTM C 39; one set for each day's pour plus additional sets for each 50 cu. yds., over and above the first 75 cu. yds. of concrete placed in any one day; one specimen tested at 7 days, two specimens tested at 28 days, and one specimen retained in reserve for later testing if required.

    a. When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, evaluate current operations and provide corrective procedures for protecting and curing the in-place concrete.

    b. Strength level of concrete will be considered satisfactory if averages of sets of three consecutive strength test results equal or exceed specified compressive strength, and no individual strength test result falls below specified compressive strength by more than 500 psi.

C. Test results will be reported in writing to Owner, Engineer and Contractor within 3 days after tests. Reports of compressive strength tests shall contain the project identification name and number, date of concrete placement, name of concrete testing service, concrete type and class, location of concrete batch in structure, design compressive strength at 28 days, concrete mix proportions and materials; weight of concrete in pounds per cubic foot; compressive breaking strength and type of break for both 7-day tests and 28-day tests.

D. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted but shall not be used as the sole basis for acceptance or rejection.

E. Additional Tests: The testing service will make additional tests of in-place concrete, as requested by Engineer, when test results indicate specified concrete strengths and other characteristics have not been attained in the structure. Testing service may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42, or by other methods as directed. Contractor shall pay for such tests when unacceptable concrete is verified.

END OF SECTION

SECTION 06 10 00 - WOOD FRAMED CONSTRUCTION

PART 1 – GENERAL

1.1 Complete the work as shown on the drawings and as specified herein with materials, equipment, tools and labor as necessary.

1.2 Use skilled carpenters. Install finished components of fine appearance representative of quality workmanship.

1.3 Store delivered materials in a safe area at the job site. Store off the ground and protect from the weather.

1.4 Comply with International Building Code, latest edition, Chapter 23, Wood

PART 2 – PRODUCTS

2.1 Wood materials: New, sound, free from defects and conforming to standards established by accepted associations typical of the following:

NELMA-Northeastern Lumber Manufacturer's Association, Inc.
APA-American Plywood Association
ALSC-American Lumber Standards Committee

2.2 Lumber: Dressed four sides unless otherwise specified; kiln dried to a maximum of 19% moisture content by weight.

2x Framing members: NELMA No.2 Eastern Spruce, kiln dried, except sills shall be Southern Pine pressure treated lumber. Treatment level for ground contact.

Interior Finish lumber: Eastern White Pine, #2 or better, graded for appearance, S4S, kiln dried, unless otherwise specified on plans.

2.3 Sheathing:
Roof Sheathing: 5/8" x 4' x 8' Zip System Roof Sheathing, Huber Engineered Woods
Wall Sheathing : 7/16" x 4' x 10' Zip System Wall Sheathing, Huber Engineered Woods
Tape for seams: 6" wide Zip tape by Huber Engineered Woods

2.4 Interior Wall Sheathing (Carpentry Shop)
7/16" Oriented Strand Board. Install with embossed side on the finished side.

2.5 Catwalk Floor(Carpentry Shop) : 3/4" Advantech: Huber Engineered Woods; or equal

2.6 Roof Trusses - See plans for design loads and other requirements.
Truss anchors shall be specified and provided by the truss manufacturer.

2.7 Nails for Framing and Sheathing Galvanized common wire nails unless otherwise specified. Comply with the International Building Code, Section 2304, Fastening Schedule or as follows:

2.8 Fastening Schedule:

Building Element	Galvanized Nail Size	Number & Location
Stud to sole plate	8d	4 toe nail or
	16d	2 end nail
Stud to top plate	16d	2 end nail
Double top plate	10d	2 @ 16" o.c. end nail
Top plate laps	16d	8 in lap splice
Roof rafters to plate	8d	Hurricane Anchors (per manufacturer specification)
Roof rafters to ridge board	10d	Rafter connectors (RR) (per manufacturer specification)
Roof sheathing 5/8" APA panel	8d	6" o.c. on edges, 12" o.c. intermediate supports
Wall sheathing (1/2" or less)	6d	6" o.c. direct edges and 12" o.c. intermediate
Truss Fasteners		Install per truss mfr's instructions

2.9 Nails for Trim: Galvanized 6d or 8d finish nails, driven flush with surface.

2.10. Roofing - Provide metal standing seam roof panels and associated eave and gable trim per Section 13 34 19 – Metal Building Systems, Paragraph 2.3.

2.11. Siding - Provide metal ribbed wall panels and associated trim per Section 13 34 19 – Metal Building Systems, Paragraph 2.4

2.12. Translucent Panels - per Section 13 34 19 – Metal Building Systems, Paragraph 2.8

PART 3 – EXECUTION

3.1 Select wood materials for best appearance where exposed in the finished building. Prevent and clean or replace stains, marks, and damage of exposed wood materials during construction.

3.2 True and plumb the framework in accordance with Truss manufacturers plans, tolerances and installation specifications.

3.3 Finish Carpentry:
Select finish trim for best appearance. Prevent damaging, staining, or marking of wood trim during handling and construction. Sand or plane all edges and remove splinters and tears. Sand all exposed faces to receive finish. Sand ends of boards exposed in finished work.

Arrange nailing of exposed member in planned fashion, with uniform spacing and regular patterns.

Where clear or semi-transparent finish is to be used, select lumber for appearance. Remove all stains and grade marks and sand prior to applying finishes.

END OF SECTION

SECTION 07 41 13 - METAL ROOF AND WALL PANELS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
1. Standing seam metal roof panels, including trim accessories.
2. Ribbed metal wall panels, including trim and accessories.

1.2 REFERENCES

A. General: The Standards listed by reference form a part of this specification section.

B. ASTM International:

1. ASTM A 653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
2. ASTM A 792 - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
3. ASTM A 1011 - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength.
4. ASTM B 209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
5. ASTM D 2244 - Standard Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates.
6. ASTM D 4214 - Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films..
7. ASTM E 1592 - Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference.
8. ASTM E 1646 - Standard Test Method for Water Penetration of Exterior Metal Roof Panel Systems by Uniform Static Air Pressure Difference.
9. ASTM E 1680 - Standard Test Method for Rate of Air Leakage through Exterior Metal Roof Panel Systems
10. ASTM E 2140 - Standard Test Method for Water Penetration of Metal Roof Panel Systems by Static Water Pressure Head.

C. Underwriters Laboratories (UL):

1. UL 263 - Fire Tests of Building Construction and Materials.
2. UL 580 - Tests For Uplift Resistance of Roof Assemblies.
3. UL 790 - Standard Test Methods for Fire Tests of Roof Coverings.

4. UL 2218 - Impact Resistance of Prepared Roof Covering Materials.

D. Sheet Metal and Air Conditioning Contractors' National Association (SMACNA): "Architectural Sheet Metal Manual."

1.3 SUBMITTALS

A. Product Technical Data: For each type of product required, including manufacturer's preparation recommendations, storage and handling requirements, and recommended installation methods.

B. The Owner reserves the right to require samples of materials and color matches.

C. Shop Drawings: Showing methods of installation, plans, sections, elevations and details of roof and wall panels, specified loads, flashings, vents, sealants, interfaces with all materials not supplied by the metal panel system manufacturer, and identification of proposed component parts and their finishes. Do not proceed with fabrication prior to approval of shop drawings.

D. Certificates: Product certificates signed by manufacturer certifying materials comply with specified performance characteristics, criteria and physical requirements.

E. Test and Evaluation Reports: Showing compliance with specified performance characteristics and physical properties.

F. Qualifications Statements: For manufacturer and installer if requested by Owner/ Engineer..

G. Warranty Statement: Submit terms of warranty including all terms and conditions. Include statements of all installation requirements that are necessary to receive the full warranty and all conditions or methods that will void the warranty.

1.4 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For installed products including maintenance methods and precautions against cleaning materials and methods detrimental to finishes and performance.

B. Warranty: Warranty documents required in this section.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications:

1. Minimum of ten years experience in manufacturing metal roof systems.
2. Provider of trim and accessories to match panels.

B. Installer Qualifications:

1. Company and project foreman/supervisor shall have at least five years experience in the installation of standing seam metal roof panels.
2. Experience on at least five projects of similar size, type and complexity to this project that have been in service for a minimum of two years with satisfactory performance of the roof system.
3. Competent in techniques required by manufacturer for installation indicated or supervised by such supervisor when material is being installed.

C. Preinstallation Conference: Conduct a preinstallation conference at the start of the installation and invite Owner and Engineer.

1.6 DELIVERY, STORAGE AND HANDLING

A. General: Comply with manufacturer's current printed product storage recommendations.

B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.

C. Storage: Store materials above ground, under waterproof covering, protected from exposure to harmful weather conditions and at temperature and humidity conditions recommended by manufacturer. Provide proper ventilation of metal panel system to prevent condensation build-up between each panel and trim or flashing component. Tilt stack to drain in wet conditions. Remove strippable plastic film before storage under high-heat conditions. Store products in manufacturer's unopened packaging until just prior to installation.

D. Handling: Exercise caution in unloading and handling metal panel system to prevent bending, warping, twisting and surface damage.

1.7 WARRANTY

A. Weather Tightness Warranty: Manufacturer's standard form for weather tightness in which manufacturer agrees to repair or replace panels that fail within specified warranty period.

1. Warranty Period: 20 years from date of Substantial Completion.
2. Manufacturer's warranty may exclude failure due to physical damage.

B. Special Exposed Panel Finish Warranty: Manufacturer's standard form PVDF (Fluorocarbon) System Warranty for film integrity, chalk rating and fade rating in which manufacturer agrees to repair or replace panels that show evidence of deterioration within specified warranty period.

1. Deterioration shall include but is not limited to:

a. Color fading of more than 5 Hunter units when tested according to ASTM D 2244.
b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
c. Cracking, checking, peeling or failure of paint to adhere to bare metal.

2. Warranty Period: Film integrity and chalk and fade rating for 25 years from date of Substantial Completion.
3. Manufacturer's warranty may exclude surface deterioration due to physical damage.

D. Special Warranty: Installer's standard form in which installer agrees to repair or replace standing seam panels that fail due to poor workmanship or faulty installation within the specified warranty period.

1. Warranty Period: 2 years from date of Substantial Completion.

PART 2 PRODUCTS

2.1 STANDING SEAM ROOF PANELS

A. Basis of Design Product: 24 gage galvanized or Galvalume steel panels, factory finished, roll formed to manufacturer's profile, finish coat PVDF coating (polyvinylidene fluoride). Profile height not less than 1 1/2". Either mechanically seamed or snap lock types with factory applied sealant are acceptable.

B. Acceptable products include but are not limited to:
   1. Metal Sales Manufacturing Corporation; Vertical Seam.
   2. Fabral Metal Wall and Roof Systems; Stand'N Seam ; or 1 1/2" SSR
   3. Everlast Roofing Inc.; Everseam
   4. McElroy Metal; Medallion Lok
   5. Englert A1000-1 1/2" Snap-Lock or A300-1 1/2" Mechanically Seamed

B. Substitution Limitations: If none of the above listed products is proposed the bidder must have approval of the substitutions prior to submitting a bid. The Owner reserves the right to reject any proposed product substitution for any reason.

C. Product Options:

1. Panel Coverage: 12 or 16 inches width at Contractors option
2. Rib Height: 1-1/2 inches minimum.
3. Material: Aluminum-zinc alloy-coated steel sheet, ASTM A 792, Class AZ50 coating designation, structural quality, Grade 50, Galvanized sheet is also acceptable for this project.
4. Minimum Thickness [[0.0236-inch (0.60-mm) (24 gage)]
5. Profile: Flat
6. Sealant: Factory-applied side lap sealant.
7. Side Lap: Snap seamed or mechanically seamed.
8. Attachment: Concealed clip designed for thermal movement.
9. Application: Designed for application over solid substrate.
10. Surface Finish: PVDF (Kynar 500 or Hylar 5000
11. Color: Dark brown shade as selected by Owner from manufacturer's standard colors.
12. Fire Resistance Rating: Comply with UL 263 and UL 790 Class A Fire Resistance Ratings.
13. Impact Resistance: Comply with UL 2218 Class 4.
14. Air Infiltration: Tested according to ASTM E 1680.
15. Water Infiltration: No leakage when tested according to ASTM E 1646.
16. Wind Uplift Resistance: Meet IBC code or ASCE 7 standard. Tested according to ASTM E 1592 and in compliance with UL 580, Class 90 Wind Uplift.

2.2 METAL WALL PANELS

A. Basis of Design Product: 24 gage galvanized steel panels, factory finished roll formed to manufacturer's profile, finished with PVDF coating (polyvinylidene fluoride). Profile height not less than 1 1/4". Exposed hex head self drilling wood screws with neoprene washers colored to match panel.

B. Acceptable products include but are not limited to:
   1. Metal Sales Manufacturing Corporation; PBR-Panel
   2. Fabral Metal Wall and Roof Systems; Mighti Rib
   3. Everlast Roofing Inc.; PBR Panel
   4. McElroy Metal; R-Panel
   5. Englert Inc.; Uniline R

B. Substitution Limitations: If none of the above listed products is proposed the bidder must have approval of the substitution prior to submitting a bid. The Owner reserves the right to reject any proposed product substitution.

C. Product Options:

1. Panel width 36" or as standard
2. Rib spacing: 12 or 16 inches width at Contractors option
2. Rib Height: 1-1/4 inches minimum.
3. Material: Aluminum-zinc alloy-coated steel sheet, ASTM A 792, Class AZ50 coating designation, structural quality, Grade 50, Galvanized sheet is also acceptable for this project.
4. Minimum Thickness [[0.0236-inch (0.60-mm) (24 gage)]
5. Profile: Ribbed
6. Attachment: Exposed fasteners color matched.
7. Application: vertical application over solid substrate.
8. Surface Finish: PVDF (Kynar 500 or Hylar 5000
9. Color: Dark brown as selected by Owner from manufacturer's standard colors.
10. Fire Resistance Rating: Comply with UL 263 and UL 790 Class A Fire Resistance Ratings.
11. Impact Resistance: Comply with UL 2218 Class 4.
12. Water Infiltration: No leakage when tested according to ASTM E 1646.
13. Wind Resistance: Meet IBC code or ASCE 7 standard.

2.3 ROOF AND WALL UNDERLAYMENT MATERIALS

A. General: follow manufacturer's requirements and recommendations for material and fasteners to meet their warranty requirements.

B. Install one roll's width of WR Grace Ice and Water Shield (or equal) self adhering underlayment along roof eaves unless the manufacturer requires a greater amount.

PART 3 EXECUTION

3.1 SURFACE PREPARATION

A. Install products per the manufacturer's requirements and recommendations to meet warranty terms.

B. Provide underpayments, surface sheets, permeable barriers, sealants, or other materials even it not shown on the drawings or in the specifications if those are requirements to meet the warranty terms of the manufacturer. The Contract Documents may not show or mention all items necessary for a full and complete installation.

3.2 PANEL INSTALLATION

A. General: Comply with panel manufacturer's installation instructions including but not limited to special techniques, tools, interface with other work, and integration of systems.

B. Fasten metal roof panels to supports with concealed clips at each standing-seam joint at location, spacing, and using proper fasteners as recommended by panel manufacturer.

C. Installation Tolerances: Shim and align metal roof panel units within installed tolerance of 1/4 inch in 20 feet on slope and location lines as indicated and within 3 1/8 inch offset of adjoining faces and of alignment of matching profiles.

3.3 ACCESSORY INSTALLATION

A. General: Install accessories using techniques recommended by manufacturer and which will assure positive anchorage to building and weather tight mounting. Provide for thermal movement. Coordinate installation with flashings and other components.

B. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and the SMACNA "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and install units to true level. Install work with laps, joints, and seams that will be permanently watertight.

3.4 CLEANING

A. Remove temporary coverings and protection of adjacent work areas.

B. Repair or replace any installed products that have been damaged.

C. Clean installed panels in accordance with manufacturer's instructions prior to Owner's acceptance.

D. Remove and lawfully dispose of construction debris from Project site.

3.5 PROTECTION

A. Protect installed product and finish surfaces from damage during construction.

END OF SECTION

SECTION 08 36 00 SECTIONAL OVERHEAD DOORS

PART 1 - GENERAL

1. SECTION INCLUDES

A. Insulated Sectional Overhead Doors.

B. Electric Operators and Controls.

C. Operating Hardware, tracks, and support.

2. REFERENCES

A. ANSI/DASMA 102 - American National Standard Specifications for Sectional Overhead Type Doors.

3. DESIGN / PERFORMANCE REQUIREMENTS

A. Wind Loads: Design and size components to withstand loads caused by pressure and suction of wind acting normal to plane of wall as calculated in accordance with ASCE 7 wind pressures. Design pressure shall be minimum of 30 lbs/sq ft.

B. Wiring Connections: Provide 115 volts, single phase, 60 Hz. Unless door size and weight requires 230 volts, single phase, 60 Hz.

C. Single-Source Responsibility: Provide doors, tracks, motors, and accessories from one manufacturer for each type of door. Provide secondary components from source acceptable to manufacturer of primary components.

4. SUBMITTALS

A. Submit under provisions of Section 01 33 00.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.

C. Shop Drawings: Indicate plans and elevations including opening dimensions and required tolerances, connection details, anchorage spacing, hardware locations, and installation details.

D. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

E. Operation and Maintenance Data.

F. Warranty

5. QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum five years documented experience.

B. Installer Qualifications: Authorized representative of the manufacturer with minimum five years documented experience.

C. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories, Inc. acceptable to authority having jurisdiction as suitable for purpose specified.

6. DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened labeled packaging until ready for installation.

B. Protect materials from exposure to moisture until ready for installation.

C. Store materials in a dry, ventilated weathertight location.

7. WARRANTY

A. Warranty: Manufacturer’s limited door and operators System warranty for 10 year against delamination of polyurethane foam from steel face and all other components for 3 years or 20,000 cycles, whichever comes first.

PART 2 -PRODUCTS

1. MANUFACTURERS

B. Acceptable Manufacturer:
Overhead Door Corp., 2501 S. State Hwy. 121, Suite 200, Lewisville, TX 75067.
Web Site: www.overheaddoor.com.

C. Requests for substitutions must be submitted in writing at least 7 days before the bid in order to be considered. Substantial advantage must be offered to the Owner in terms of cost, time, or other valuable consideration. Written documentation must show an equal product to that specified.

2. INSULATED SECTIONAL OVERHEAD DOORS

A. Model 591 Series Thermacore Insulated Steel Doors by Overhead Door Corporation. Units shall have the following characteristics:

1. Door Assembly: Metal/foam/metal sandwich panel construction, with PVC thermal break and weather-tight ship-lap design meeting joints.
   a. Panel Thickness: 1-5/8 inches.
   b. Exterior Surface: Ribbed, textured.
   c. Exterior Steel: .015 inch (.38 mm), hot-dipped galvanized.
   d. End Stiles: 16 gauge.
   e. Spring Counterbalance: Sized to weight of the door, with a helically wound, oil tempered torsion spring mounted on a steel shaft; cable drum of die cast aluminum with high strength galvanized aircraft cable. Sized with a minimum 7 to 1 safety factor.
      1) Standard cycle spring: 10,000 cycles.
      2) High cycle spring: 25,000 cycles.
   f. Insulation: CFC-free and HCFC-free polyurethane, fully encapsulated.
   g. Thermal Values: R-value of 14.86; U-value of 0.067.
   h. Air Infiltration: 0.08 cfm at 15 mph; 0.08 cfm at 25 mph.
   i. Window Pattern: “Clear Long Double “ consisting of rectangular fixed glazed panels with 90 degree corners across the full width of the door opening. Arranged at an eye level for average height person and at a consistent height for all doors in the project. Glazing 1/4 inch (6 mm) Tempered glass.

2. Finish and Color:
   A. Exterior Surfaces of Door panels and trim: Precoated steel with polyvinylidene fluoride (PVDF) finish, color as selected from manufacturer's standard colors.

   B. Interior Surfaces: Precoated manufacturer's standard finish, color white unless directed by Owner.

3. Wind load Design: Provide to meet the Design/Performance requirements specified on the plans.
4. Hardware: Galvanized steel hinges and fixtures. Ball bearing rollers with hardened steel races.
5. Lock:
   a. Interior mounted slide lock with interlock switch for automatic operator.
6. Weatherstripping:
   a. EPDM bulb-type strip at bottom section.
   b. Flexible Jamb seals.
   c. Flexible Header seal.

7.Track: Provide track as recommended by manufacturer to suit loading required and clearances available.
8.Manual Operation: Chain hoist with pull rope backup if practical.
9.Electric Motor Operation: Provide UL listed electric operator, size and type as recommended by manufacturer to move door in either direction at not less than 2/3 foot nor more than 1 foot per second. Operator shall meet UL325/2010 requirements for continuous monitoring of safety devices.

a. Entrapment Protection is required for momentary contact, includes radio control operation by one of the following:
   1) Pneumatic sensing edge Constant contact only complying with UL 325/2010.
   2) Electric sensing edge monitored to meet UL 325/2010.
   3) Photoelectric sensors monitored to meet UL 325/2010.

b. Operator Controls:
   1) Push-button and key operated control stations with open, close, and stop buttons.
   2) Surface mounting.
   3) Interior location.
   4) Both interior and exterior location.

c. Special Operation:
   1) Radio control operation.
   2) Photocell operation.
   3) Commercial light package.

PART 3 - EXECUTION

3. 1 EXAMINATION

A. Do not begin installation until openings have been properly prepared.

B. Verify wall openings are ready to receive work and opening dimensions and tolerances are within specified limits.

C. Verify electric power is available and of correct characteristics.

3.2. PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3.INSTALLATION

A. Install overhead doors and track in accordance with approved shop drawings and the manufacturer's printed instructions.

B. Coordinate installation with adjacent work to ensure proper clearances and allow for maintenance.

C. Anchor assembly to wall construction and building framing without distortion or stress.

D. Securely brace door tracks suspended from structure. Secure tracks to structural members only.

E. Fit and align door assembly including hardware.

F. Coordinate installation of electrical service. Complete power and control wiring from disconnect to unit components.

3.4.CLEANING AND ADJUSTING

A. Adjust door assembly to smooth operation and in full contact with weatherstripping.

B. Clean doors, frames and glass.

C. Remove temporary labels and visible markings.

3.5.PROTECTION

A. Protect installed products until completion of project. Touch-up, damaged coatings and finishes and repair minor damage before Substantial Completion.

END OF SECTION

SECTION 09 67 23-RESINOUS FLOORING

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This section includes the following:

1. Resinous flooring system for the Nav Aids Building floor. The entire floor is to receive the system.

B. Related sections include the following:

1. Cast-in-Place Concrete, section 03 30 00

1.3 SYSTEM DESCRIPTION

A. The system shall be the Dur-A- Flex "SHOP FLOOR" or approved equal.
B. The work shall consist of preparation of the substrate, the furnishing and application of an epoxy based multi roller applied flooring system with flintshot quartz aggregate and urethane topcoat. The system shall have the color and texture as specified by the Owner with a nominal thickness of 1/8 inch. It shall be applied strictly in accordance with the Manufacturer's recommendations.
C. Cove base is not required.

1.4 SUBMITTALS

A. Product Data: Latest edition of Manufacturer's literature including performance data and installation procedures.
B. Manufacturer's Safety Data Sheet (SDS) for each product being used.
C. Samples: A 3 x 3 inch square samples of the proposed system. Color, texture, and thickness shall be representative of overall appearance of finished system subject to normal tolerances.

1.5 QUALITY ASSURANCE

A. The Manufacturer shall have a minimum of 10 years experience in the production, sales, and technical support of epoxy and urethane industrial flooring and related materials.
B. The Applicator shall have experience in installation of the flooring system as confirmed by the manufacturer in all phases of surface preparation and application of the product specified.
C. Requests for substitutions :
The specified system shall be used for the alternate bid as designated on the Bid Form. The bidders may submit additional bids for the equivalent generic systems by

other manufacturers. If alternative systems are proposed, the bidder shall submit full information on the proposed system and the cost or other advantages to the Owner. The Owner will make a determination and reserves the right to select the specified system, an alternative proposed system, or not any system. The Owner reserves the right to award the work as a separate contract at a later date.

D. System shall be in compliance with requirements of United States Department of Agriculture (USDA), Food, Drug Administration (FDA), and local Health Department.

E. System shall be in compliance with the Indoor Air Quality requirements of California section 01350 as verified by a qualified independent testing laboratory.

F. A pre-installation conference shall be held between Applicator, General Contractor and the Owner to review and provide clarification of this specification, application procedure, quality control, inspection and acceptance criteria and production schedule.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Packaging and Shipping

1. All components of the system shall be delivered to the site in the Manufacturer's packaging, clearly identified with the product type and batch number.

B. Storage and Protection

1. The Contractor shall provide and maintain proper storage for all components. The area shall be between 60 F and 90 F, dry, out of direct sunlight and in accordance with the Manufacturer's recommendations and relevant health and safety regulations.
2. Copies of Safety Data Sheets (SDS) for all components shall be kept on site for review by the Owner, Engineer or other staff personnel.

C. Waste Disposal

1. The Contractor is responsible for proper disposal of all hazardous and non-hazardous waste generated during installation of the system.

1.7 PROJECT CONDITIONS

A. Site Requirements

1. Application may proceed while air, material and substrate temperatures are between 60 F and 90 F providing the substrate temperature is above the dew point. Outside of this range, the Manufacturer shall be consulted.
2. The relative humidity in the specific location of the application shall be less than 85 % and the surface temperature shall be at least 5 F above the dew point.
3. The Applicator shall ensure that adequate ventilation is available for the work area.
4. The Contractor shall supply adequate lighting equal to the final lighting level during the preparation and installation of the system.

B. Conditions of new concrete to be coated with epoxy material.

1. The Contractor and Applicator shall define the acceptable conditions for the substrate and discuss these in the pre-installation conference. They shall be in writing and have been provided or reviewed by the Manufacturer. Do not begin installation until these conditions are met.
2. Concrete shall be moisture cured for a minimum of 7 days and have fully cured a minimum of twenty eight days in accordance with ACI-308 prior to the application of the coating system pending moisture tests.
3. Concrete shall have a flat rubbed finish, float and light steel trowel finish. A hard steel trowel finish is not desirable.
4. Sealers and curing agents shall not to be used.
5. Concrete surfaces on grade shall have been constructed with a vapor barrier to protect against the effects of vapor transmission and possible delamination of the system.

C. Safety Requirements

1. All open flames and spark-producing equipment shall be removed from the work area prior to commencement of application.
2. "No Smoking" signs shall be posted at the entrances to the work area and enforced by the Contractor and Applicator.
3. Remove all foodstuffs from the work area.
4. Non-related personnel in the work area shall be kept to a minimum.

1.8 WARRANTY

A. The Contractor shall warranty the floor for one year against delamination and coating failure under normal use. The warranty shall not be limited to Manufacturer's Warranty of the products.

PART 2 – PRODUCTS

2.1 FLOORING

A. Dur-A-Flex, Inc, Shop Floor, Epoxy-Based seamless flooring system.

1. System Materials:
   a. Primer: Dur-A-Flex, Inc, Dur-A-Glaze #4 WB resin and WB Primer hardener.
   b. Broadcast and Grout Coat: Dur-A-Flex, Inc, Shop Floor resin and hardener.
   c. The aggregate shall be Dur-A-Flex, Inc. Flintshot quartz aggregate.
   d. Topcoat: Dur-A-Flex, Inc. Armor Top resin, hardener and pigment.

2. Patch Materials
   a. Shallow Fill and Patching: Use Dur-A-Flex, Inc. Dur-A-Glaze #4 Cove Rez.
   b. Deep Fill and Sloping Material (over ¼ inch): Use Dur-A-Flex, Inc. Dur-A-Crete.

2.2 MANUFACTURER

A. The floor system shall be manufactured by Dur-A-Flex, Inc., 95 Goodwin Street, East Hartford, CT 06108, Phone: (860) 528-9838, Email: contact_us@dur-a-flex.com
B. Substitutions for similar products are not allowed unless approved by the Owner in writing. The same manufacturer shall provide all components of the system.

2.3 PRODUCT REQUIREMENTS

A.	Primer	Dur-A-Glaze #4 WB
1.	Percent Solids	56 %
2.	VOC	2 g/L
3.	Bond Strength to Concrete ASTM D 4541	550 psi, substrates fails
4.	Hardness, ASTM D 3363	3H
5.	Elongation, ASTM D 2370	9 %
6.	Flexibility (1/4: Cylindrical mandrel), ASTM D 1737	Pass
7.	Impact Resistance, MIL D-2794	>160
6.	Abrasion Resistance ASTM D 4060, CS 17 wheel, 1,000 g Load	30 mg loss

B.	Broadcast and Grout Coat	Dur-A-Glaze Shop Floor
1.	VOC	8 g/L
2.	Compressive Strength, ASTM D 695	17,500 psi
3.	Tensile Strength, ASTM D 638	4,000 psi
4.	Flexural Strength, ASTM D 790	6,250 psi
5.	Flexural Modulus of Elasticity, ASTM D 790	6.2×10^5
6.	Abrasion Resistance, ASTM D 4060 CS 17 Wheel, 1,000 gm load, 1,000 cycles	24 mg loss
7.	Flame Spread/NFPA-101, ASTM E 84	Class B
8.	Flammability, ASTM D 635	Self Extinguishing
9.	Indentation, MIL D-3134	0.025 Max
10.	Impact Resistance MIL D-3134	Pass
11.	Water Absorption. ASTM D-750	0.04%

C.	Topcoat	Armor Top		
1.	Percent Solids	95.2 %		
2.	VOC	0 g/L		
3.	Tensile Strength, ASTM D 2370	7,000 psi		
4.	Adhesion, ASTM 4541	Substrate Failure		
5.	Hardness, ASTM D 3363	>4H		
6.	60^0 Gloss ASTM D 523	Gloss: 75 +/- 10	Satin: 50+/- 10	
7.	Abrasion Resistance, ASTM D4060 CS 17 wheel (1,000 g load) 1,000 cycles	<u>Gloss</u>	<u>Satin</u>	
		4	8	mg loss with grit
		10	12	mg loss without grit
8.	Pot Life, 70 F, 50% RH	45 mins		
9.	Full Chemical Resistance	7 days		

PART 3 – EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas and conditions, with Applicator present, for compliance with requirements for maximum moisture content, installation tolerances and other conditions affecting flooring performance. Verify that substrates and conditions are satisfactory for flooring installation and comply with requirements specified. Do not proceed until requirements have been met.

3.2 PREPARATION

A. General

1. New and existing concrete surfaces shall be free of oil, grease, curing compounds, loose particles, moss, algae growth, laitance, friable matter, dirt, and bituminous products.
2. Moisture Testing: Perform tests recommended by manufacturer and as follows.
. a. Perform relative humidity test using is situ probes, ASTM F 2170. Proceed with installation only after substrates have a maximum 75% relative humidity level measurement.
   b. If the relative humidity exceeds 75% then Dur-A-Flex, Inc Dur-A-Glaze MVP Primer moisture mitigation system must be installed prior to resinous flooring installation. Slab-on grade substrates without a vapor barrier may also require the moisture mitigation system.
3. There shall be no visible moisture present on the surface at the time of application of the system. Compressed oil-free air and/or a light passing of a propane torch may be used to dry the substrate.
4. Mechanical surface preparation
   a. Shot blast all surfaces to receive flooring system with a mobile steel shot, dust recycling machine (Blastrac or equal). All surface and embedded accumulations of paint, toppings hardened concrete layers, laitance, power trowel finishes and other similar surface characteristics shall be completely removed leaving a bare concrete surface having a minimum profile of CSP 4-5 as described by the International Concrete Repair Institute.
   b. Floor areas inaccessible to the mobile blast machines shall be mechanically abraded to the same degree of cleanliness, soundness and profile using diamond grinders, needle guns, bush hammers, or other suitable equipment.
   c. Cracks and joints (non-moving) greater than 1/8 inch wide are to be chiseled or chipped-out and repaired per manufacturer's recommendations.
5. At damaged areas, mechanically remove loose or delaminated concrete to a sound concrete and patch per manufactures recommendations.

3.3 APPLICATION

A. General

1. The system shall be applied in six distinct steps as listed below:

a. Substrate preparation
b. Priming
c. First broadcast coat application with first aggregate broadcast
d. Second broadcast coat with second aggregate broadcast
e. Grout coat application, sand floor (if required)
f. Topcoat application, urethane

2. Immediately prior to the application of any component of the system, the surface shall be dry and any remaining dust or loose particles shall be removed using a vacuum or clean, dry, oil-free compressed air.
3. The handling, mixing and addition of components shall be performed in a safe manner to achieve the desired results in accordance with the Manufacturer's recommendations.

B. Primer

1. The primer shall consist of a liquid resin and hardener that is mixed at the ratio of 1 part resin to 4 parts hardener per the manufacturer's instructions.
2. The primer shall be applied by 1/8" notched squeegee and back rolled at the rate of 200-250 sf/gal to yield a dry film thickness of 6 mils.

C. Broadcast Coat

1. The broadcast coat shall be applied as a double broadcast system as specified by the Architect.
2. The broadcast coat shall be comprised of two components, a resin, and hardener as supplied by the Manufacturer and mixed in the ratio of 2 parts resin to 1 part hardener.
3. The resin shall be added to the hardener and thoroughly mixed by suitably approved mechanical means.
4. The broadcast coat shall be applied over horizontal surfaces using "v" notched squeegee and back rolled at the rate of 90-100 sf/gal.
5. Quartz aggregate shall be broadcast to excess into the wet material at the rate of 0.5 lbs/sf.
6. Allow material to fully cure. Vacuum, sweep and/or blow to remove all loose aggregate.
7. Apply a second coat of resin with a coverage rate of 90-100 sf/gal and broadcast flintshot aggregate to rejection at the rate of 0.5 lbs/sf.
8. Allow material to fully cure. Vacuum, sweep and/or blow to remove all loose aggregate.

D. Grout Coat

1. The grout coat shall be comprised of liquid components, combined at a ratio of 2 parts resin to 1 part hardener by volume and shall be thoroughly blended by mechanical means such as a high speed paddle mixer.
2. The grout coat shall be squeegee applied with a coverage rate of 90-100 sf/gal
3. The grout coat will be back rolled and cross rolled to provide a uniform texture and finish.

E. Topcoat (Urethane)

1. The topcoat of Armor Top shall be roller applied at the rate of 500 sf/gal to yield a dry film thickness of 3 mils.
2. The topcoat shall be comprised of a liquid resin, hardener and pigment mixed per the manufacturer's instructions.
3. The finished floor will have a nominal thickness of 1/8 inch.

3.4 FIELD QUALITY CONTROL

A. Tests, Inspection

1. The following tests shall be conducted by the Applicator:
   a. Temperature
      1. Air, substrate temperatures and, if applicable, dew point.
   b. Coverage Rates
      1. Rates for all layers shall be monitored by checking quantity of material used against the area covered.

3.5 CLEANING AND PROTECTION

A. Cure flooring material in compliance with manufacturer's directions, taking care to prevent their contamination during stages of application and prior to completion of the curing process.
B. Remove masking. Perform detail cleaning at floor termination, to leave cleanable surface for subsequent work of other sections.

END OF SECTION

SECTION 13 34 19 – METAL BUILDING SYSTEMS (Metal Framed Bid Option)

PART 1 - GENERAL

1.1 NAV AIDS BUILDING - Metal Building System Components

A. Clear span rigid frame 50'-0"wide x 80'-0" long (measured as the out-to-out of girt lines.)
B. Minimum clearances at inside of frames and wall framing, as shown on the plans.
C. Bay spacing of 20'-0 ft. has been assumed but may be modified by the building manufacturer, subject to review.
D. Roof Slope: 6"Vertical to 12"Horizontal (26.6°).
E. Primary Framing: Rigid frame of rafter beams and columns, braced end frames and end wall columns.
F. Secondary Framing: Roof Purlins, Wall girts, flange bracing, and other items detailed.
G. Lateral Bracing: Horizontal loads not resisted by main frame action shall be resisted by rod bracing in the sidewall and in the end wall, and rod bracing in the roof.
H. Wall and Roof System: Preformed steel panels and accessory components.
I. Accessories: translucent panels, doors, overhead doors, as shown.
J. Electrical system
K. Unheated - heating system is not included

1.2 CARPENTRY SHOP

A. To the extent practical, the Carpentry Shop shall have the same metal roofing, metal siding, and metal eave, gable and door trim and flashing as the Nav Aids Building.

1.3 References

A. AISI S100, *North American Specification for the Design of Cold-Formed Steel Structural Members,*

B. *AISC 360, Specification for Structural Steel Buildings, American Institute of Steel Construction,*

C. AISC, Steel Design Guide Series 3, *Serviceability Design Considerations for Low-Rise Buildings*,

D. ASTM A36-08, Standard "Specification for Carbon Structural Steel,"

F. ASTM A123-08, Standard "Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products,

G. ASTM A153-05, Standard "Specification for Zinc Coating (Hot Dip) on Iron and Steel Hardware,"

H. ASTM A307-07b, Standard "Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength, "

I. ASTM A32510, Standard "Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength,

J. ASTM A463-06, Standard "Specification for Steel Sheet, Aluminum-Coated, by the Hot-Dip Process,

K. ASTM A49010a, Standard "Specification for Heat Treated Steel Structural Bolts, 150 ksi Minimum Tensile Strength,"

L. ASTM A50010, Standard "Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes,",

M. ASTM A501-07, Standard "Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing,"

N. ASTM A529-05(2009), Standard "Specification for High-Strength Carbon-Manganese Steel of Structural Quality,"

O. ASTM A572-07, Standard "Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel,

P. ASTM A653-08, Standard "Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process,",

Q. ASTM A792-08, Standard "Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process, ",

R. ASTM A1011-08, Standard "Specification for Steel Sheet and Strip Hot Rolled Carbon, Structural High Strength Low-Alloy and High Strength Low-Alloy with Improved Formability,"

S. ASTM D1494-97(2008), Standard "Test Method for Diffused Light Transmission Factor of Reinforced Plastic panels,",

T. ASTM E1514-98(2003), Standard "Specification for Structural Standing Seam Steel Roof panel Systems,",

U. ASTM E159205, Standard "Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference,",

V. ASTM E1646-95(2003), Standard "Test Method for Water Penetration of Exterior Metal Roof Panel Systems by Uniform Static Air Pressure Difference,",

W. ASTM E1680-95(2003), Standard "Test Method of Rate of Air Leakage through Exterior Metal Roof Panel Systems,",

X. AWS A2.4, Standard Welding Symbols,

Y. AWS D1.1, Structural Welding Code - Steel,

Z. AWS D1.3, Structural Welding Code - Sheet Steel,

AA. SSPC, (Society for Protective Coatings) - SP-2 - Specification for Hand Tool Cleaning, 2004 (Part of Steel Structures Painting Manual, Vol. Two)

BB. SSPC, - Paint 15 – Steel Joist Shop Primer/Metal Building Primer; Society for Protective Coatings; 2004 (Part of Steel Structures Painting Manual, Vol. Two)

CC. SSPC, – Paint 20 – Zinc-Rich Primers (Type I, "Inorganic," and Type II, "Organic"); Society for Protective Coatings; 1991 (Part of Steel Structures Painting Manual, Vol. Two).

DD. UL 580, - Tests for Uplift Resistance of Roof Assemblies, 2006 (with Revisions through July 2009).

1.4 Design Requirements

A. The building shall be designed by the Manufacturer as a complete system. All components of the system shall be supplied or specified by the same manufacturer.

B. Design Code: Design shall be in accordance with MUBEC (Maine Uniform Building and Energy Code). MUBEC incorporates IBC 2015 and by reference that incorporates ASCE 7 for this project.

C. Dead Loads: The dead load shall be the self weight of the Metal Building System and as determined by the system manufacturer.

D. Collateral Loads: The design shall include a collateral dead load of 12 psf to account for hung loads as may be incorporated by the Owner. Collateral Loads shall be applied to the roof purlins but not to roof panels. The location of the monorail and it's load requirements are shown on the plans

F. Live Loads: as defined on the contract drawings.

G. Snow Loads: The design roof snow loads shall be as defined on the contract drawings. Design per ASCE 7 using the factors defined on the drawings. Design of the structural framing system shall include the monorail live load simultaneous with snow load.

H. Wind Loads:
The design wind loads for design of the main wind force system and the components and cladding shall be as defined on the contract drawings. Design per ASCE 7 using the formula factors defined on the drawings.

I. Deflection: Requirements shall be in accordance with the applicable provisions of the AISC Steel Design Guide Series 3 - Serviceability Design Considerations for Steel Buildings. Deflections shall be limited as follows:

Primary Framing:

L/180 for roof snow load. (Not including monorail load)

H/100 for 10-year wind load deflection at eaves, where H equals the height from the floor slab, or less if required by the door manufacturer.

Secondary Framing:

L/150 for roof dead load + roof snow load; but not less than that required to maintain positive drainage for the greater of dead load + 1/2 roof snow load or dead load + 5 PSF.

L/120 for 25-year wind load on walls and roof.

L/180 for roof snow load on sheeting.

1. Thermal Effects:
Standing Seam roof panels shall be free to move in response to the expansion and contraction forces resulting from a temperature variation.

Wall and Roof Assemblies shall permit movement of components without buckling, failure of joint seals, undue stress on fasteners or other detrimental effects, when subject to temperature range of -40 degrees F to 100 degrees F.

1.5 Submittals

A. All manufacturers drawings and design calculations shall bear the professional seal and signature of a licensed professional engineer registered in the state of Maine.

B. Submit anchor bolt placement plan, column reactions, baseplate dimensions and locations in advance of erection drawings so that foundation plans may be prepared.

C. Product Data: Provide data on metal siding and roofing panel profile, component dimensions, fasteners, color charts and sample for Owner's selection, doors and door frames, sealant materials and translucent panels.

D. Manufacturer's Installation Instructions: Indicate preparation requirements, assembly sequence, special tools, crane requirement, and component storage and handling.

E. Shop and Erection Drawings:

Indicate assembly dimensions piece marks, locations of structural members, connections, attachments, openings, cambers, loads,; wall and roof system dimensions, panel layout, general construction details, anchorages and method of anchorage; all framing members and connections; anchor bolt settings, sizes, and locations from datum, foundation loads and if required indicate field welded connections with AWS A2.4 welding symbols; indicate net weld lengths.

1.6 Quality Assurance

Fabricate structural steel members in accordance with MBMA Metal Building Systems Manual, and, for items not covered, AISC - Specification for Structural Steel Buildings.

1.7 Qualifications

A. Manufacturer: The company manufacturing the products specified in this Section shall have a minimum of 10 years experience in the manufacture of steel building systems. The metal building systems manufacturer shall be accredited under the International Accreditation Service, "Accreditation Criteria for Inspection Programs for Manufacturers of Metal Building Systems (AC472)."

B. Structural framing and covering shall be the design of a licensed Professional Engineer experienced in design of this work.

C. Erector shall have specialized experience in the erection of steel building systems for a period of at least 5 years.

1.8 Field Measurements and Verification

The metal building contractor is responsible for the design dimensions, coordination and field verification of the foundation such that the building frame will correctly fit and interface, including all embedments and attachments. Contractor shall verify that field measurements are correct as indicated on erection drawings from the instructions by the manufacturer. Contractor shall certify the that the metal building system will fit in writing to the Owner’s Representative and take any action required to identify and correct any defects prior to start of erection.

1.9 Warranty

Building manufacturer shall provide manufacturer's standard Standard Warranties include:

A. Material and Workmanship - 3 years

B. Roof & Wall Finish Warranty - 25 Years coverage for exterior pre-finished surfaces to cover pre-finished color coat against chipping, cracking or crazing, blistering, peeling, chalking, or fading.

C. Weathertight warranty for roof system - 10 Years

D. Structural Warranty - 10 Years

E. Metal building contractor shall provide a workmanship warranty of 3 years.

1.10 Administration

A. All nomenclature shall conform to the MBMA Metal Building Systems Manual.

B. Coordination and administration of the work shall be in accordance with the MBMA Metal Building Systems Manual - Chapter IV Common Industry Practices.

SECTION 2 – PRODUCTS

2.1 Materials - Building Frame System

A. Steel Shapes and Plates -Wide flange and WT shapes: ASTM A992, ASTM A572or ASTM A529.

B. Angles, Channels and Plates: ASTM A36 or ASTM A572/A572M or ASTM A529.

C. Cold-Formed and Hot Formed Hollow Structural Sections: ASTM A500, ASTM A501 or ASTM B221,

D. Structural-Steel Sheet: Hot-rolled, ASTM A1011 or cold-rolled, ASTM A1008.

E. Metallic-Coated Steel Sheet ASTM A653 or ASTM A606.

F. High-Strength Bolts, Nuts, and Washers -

1. ASTM F3125, heavy hex steel structural bolts; ASTM A563 heavy hex carbon-steel nuts; and ASTM F436 hardened carbon-steel washers.

2. Tension-Control, High-Strength Bolt-Nut-Washer Assemblies: ASTM F1852,

3. Finish: Hot-dip zinc coating, ASTM A153

D. Non-High-Strength Bolts, Nuts, and Washers

1. ASTM A307, ASTM A563M ASTM A563, and ASTM F844.

2. Finish: Hot-dip zinc coating, ASTM A153

C. Anchor Rods

1. Material ASTM F1554.

2. Nuts: ASTM A563 hex carbon steel.

3. Plate Washers: ASTM A36 carbon steel.

4. Washers: ASTM F436 hardened carbon steel.

E. Threaded Rods

F. ASTM A193, ASTM A572, ASTM A36, or ASTM A307.

1. Nuts: ASTM A563 hex carbon steel.

2. Washers: ASTM F436 hardened or ASTM A36.

3. Finish: Hot-dip zinc coating, ASTM A1532.1.13

D. Primer. : SSPC-Paint 15, Type I, red oxide.

2.2 Materials - Structural Framing

A. Comply with MBMA MBSM - "Metal Building Systems Manual": Chapter IV, Section 9, "Fabrication and Erection Tolerances."

B. Primary Framing

Manufacturer's standard structural primary framing system includes transverse frames; rafters, rakes, canopy beams; sidewall, intermediate, end-wall, and corner columns; and wind bracing designed to withstand required loads and specified requirements. Provide frames with attachment plates, bearing plates, and splice members. Provide frame span and spacing indicated or as agreed with Owner.

Shop fabricate framing components by welding or by using high-strength bolts to the indicated size and section with base-plates, bearing plates, stiffeners, and other items required. Cut, form, punch, drill, and weld framing for bolted field erection.

a. Rigid Clear-Span Frames: I-shaped frame sections fabricated from shop-welded, built-up steel plates or structural-steel shapes. Interior columns are not desirable and not permitted for the Base Bid but may be offered as an alternative if they provide a cost savings.

c. Frame Configuration: Single gable

d. Exterior Column Type: Uniform depth for end walls and Tapered on sidewalls.

e. Rafter Type: Uniform depth.

C. Secondary Framing

Manufacturer's standard secondary framing members, including purlins, girts, eave struts, flange bracing, base members, gable angles, clips, headers, jambs, and other miscellaneous structural members. Fabricate framing from cold-formed, structural-steel sheet or roll-formed, metallic-coated steel sheet pre-painted with coil coating, unless otherwise indicated.

Shop fabricate framing components by roll-forming or break-forming to the indicated size and section with base-plates, bearing plates, stiffeners, and other plates required for erection. Cut, form, punch, drill, and weld secondary framing for bolted field connections to primary framing.

a. Purlins: C or Z-shaped sections; fabricated from steel sheet, built-up steel plates, or structural-steel shapes; minimum depth as required to comply with system performance requirements.

b. Girts: C or Z-shaped sections; fabricated from steel sheet, built-up steel plates, or structural-steel shapes as required to comply with system performance requirements.

c. Eave Struts: Unequal-flange, C-shaped sections; fabricated from steel sheet, built-up steel plates, or structural-steel shapes; to provide adequate backup for metal panels.

d. Flange Bracing: Structural-steel angles or cold-formed structural tubing to stiffen primary frame flanges.

e. Sag Bracing: Structural-steel angles.

f. Base or Sill Angles: Zinc-coated (galvanized) steel sheet.

g. Purlin and Girt Clips: Steel sheet. Provide galvanized clips where clips are connected to galvanized framing members.

h. Secondary End-Wall Framing: Manufacturer's standard sections.

i. Framing for Openings: Channel shapes; fabricated cold-formed, structural-steel sheet or structural-steel shapes. Frame head and jamb of door openings, and head, jamb, and sill of other openings.

j. Miscellaneous Structural Members: Manufacturer's standard sections fabricated from cold-formed, structural-steel sheet; built-up steel plates; or zinc-coated (galvanized) steel sheet; designed to withstand required loads.

D. Bracing Provide adjustable wind and seismic bracing using any method specified as follows, at manufacturer's option :

1. Rods: ASTM A36 or ASTM A572 threaded at each end

2. Angles: Fabricated from structural-steel shapes to match primary framing, of size required to withstand design loads.

3. Rigid Portal Frames: Fabricate from shop-welded, built-up steel plates or structural-steel shapes to match primary framing; of size required to withstand design loads.

4. Do not use cable bracing, fixed-base columns or diaphragm action of the metal panels to resist wind forces.

E. Shop Paint - Clean all framing and bracing members to remove loose rust and mill scale. Provide 1 shop coat of primer to an average dry film thickness of 1 mil according to. SSPC SP 2. Balance of painting and coating procedures must conform to SSPC Paint 15 and SSPC Painting Manual

2.3 Materials - Roof Systems

A. Sheet Steel Stock: Galvalume coated with PVDF finish coating as required by manufacturer's design. Color as selected from manufacturer's standard colors.

B. Standing Seam Roofing: Minimum 24 gauge metal thickness profile, ASTM E1592 tested, UL 580, Class 90 uplift rating; mechanically formed seam joining sides of each seam, with factory applied sealant. Clips shall be concealed under the seam such that no fasteners shall penetrate the roof panels.

C. Soffit Panels: Minimum 26 gauge metal thickness, flat unperforated, color as selected from manufacturer's standard colors.

D. Insulation - None

E. Closures: Manufacturer's standard type, closed cell or metal.

F. Fasteners for panels: Manufacturer's standard type. Size and design to maintain load and weather tightness requirements. Fasteners to be stainless steel, head and shank, self tapping or self drilling and tapping.

G. Sealant: Manufacturer's standard type.

H. Exterior Surfaces of Roof Panels: Precoated steel with polyvinylidene fluoride (PVDF) finish, color as selected from manufacturer's standard colors.

I. Interior Surfaces of Roof Panels: Precoated steel with coat of manufacturer's standard finish, color white unless directed by Owner.

2.4 Materials - Wall Systems

A. Sheet Steel Stock: Galvalume with PVDF coating as required by manufacturer's design.

B. Wall Insulation: None

C. Siding: Minimum 26 gauge metal thickness, ribbed profile with lapped male/female edges.

D. Liner: none

E. Closures: Manufacturer's standard type, closed cell or metal. Use venting closures where noted.

F. Fasteners: Manufacturer's standard type, size and design to maintain load and weather tightness requirements. Fasteners -stainless steel head and shank, self tapping or self drilling and tapping.

G. Exterior Surfaces of Wall Panels: Precoated steel of polyvinylidene fluoride (PVDF)finish, color as selected by Owner from manufacturer's standard colors.

H. Interior Surfaces of Wall Panels: Precoated steel with coat of manufacturer's standard finish, color white unless directed by Owner.

2.5 Materials - Trim

Flashings, Internal and External Corners, Closure Pieces, etc: shall be the same material and finish as adjacent material, profile to suit system. Color shall be the same as wall and or roof panels as selected by the Owner..

2.5 Materials - Metal Personnel Doors And Frames

Doors and frames shall be designed by their manufacturer to meet the wind load provisions as specified for components and cladding

Building system manufacturer shall supply a standard door and frame type as shown on plan and in Door Schedule.

2.6 Materials - Overhead Doors And Frames

Doors and support tracks and frames shall be designed by their manufacturer to meet the wind load provisions as specified for components and cladding.

Doors shall be designed using beam action to transfer loads from jamb to jamb.

Supply and coordinate clearances and blockouts for formwork in the foundation and any embedments for tracks and sills, including brackets, hangers and other hardware required, for a complete installation.

Supply and coordinate provisions to mount door openers in the metal building framing system.

2.7 Materials - Overhead Monorail Beam.

Provide monorail beam for boat maintenance at the location noted on the floor plan, including the monorail beam, bolted end stops, connection to the roof steel framing mounting and connection hardware.

Design of the the structural framing system shall include the monorail load to occur simultaneous with the snow load.

2.8 Materials - Translucent Panels

Translucent wall panels shall be clear, tinted white panels and be compatible profile with the steel wall panels, and shall meet the requirements of Section 1.4C. Panel shall be 8 oz. per square foot. The minimum visible light transmission shall be 60% when measured in accordance with ASTM D1494.

2.9 Ridge and Eave Ventilation

Provide continuous screened ventilation along the roof ridge and the two eaves. Screen shall be manufacturer's standard for prevention of insect and bird entry

2.10. Fabrication - Primary Framing

A. Framing Members: Clean and prepare in accordance with SSPC-SP2 as a minimum, and coat with primer meeting SSPC No. 15

B. Hot rolled members shall be fabricated in accordance with AISC Specification for pipe, tube, and rolled structural shapes.

C. Fabricate built-up members in accordance with MBMA Metal Building Systems Manual, Chapter IV Common Industry Practices.

2.11 Fabrication - Secondary

A. Framing Members: Clean and prepare in accordance with SSPC-SP2 as a minimum, and coat with primer meeting SSPC No. 15

B. Cold Formed Members: Cold formed structural shapes shall be fabricated in accordance with MBMA Metal Building Systems Manual, Chapter IV Common Industry Practices.

SECTION 3 – EXECUTION

3.1 Execution

Verify site conditions and provide written notice to Owner that the conditions and are acceptable. Do not proceed until unsatisfactory conditions have been corrected. Verify that foundation, floor slab, mechanical and electrical utilities, and placed anchors are in correct position and properly squared.

Provide access to the work area for Owner and Engineer provided inspections, if required.

3.2 Erection - Framing

A. Erect framing in accordance with MBMA Metal Building Systems Manual, Chapter IV Common Industry Practices.

B. Use templates for accurate setting of anchor rods. When required, level bearing plate area with steel wedges, shims or grout. Check all previously placed anchorages.

C. Erect building frame true and level with vertical members plumb and bracing properly installed. Maintain structural stability of frame during erection.

D. Ream holes requiring enlargement to admit bolts. Burned holes for bolted connections are not permitted without written approval by designer. Burned holes are to be reamed.

E. Tighten bolts and nuts in accordance with "Specification for Structural Joints Using High-Strength Bolts," using specified procedure. Use one of the following to assure correct tightening:

1. Calibrated wrench tightening,

2. Tension control bolts, or

3. Direct tension indicator washers

F. The erector shall furnish temporary guys and bracing where needed for squaring, plumbing, and securing the structural framing against loads, such as wind loads acting on the exposed framing and seismic forces, as well as loads due to erection and erection operation, but not including loads resulting from the performance of work by others. Bracing furnished by the manufacturer for the metal building system cannot be assumed to be adequate during erection and are not to be used to pull frames into plumb condition.
The temporary guys, braces, falsework and cribbing that are the property of the erector shall be removed immediately upon completion of erection.

G. Do not field cut or modify structural members without approval of the metal building manufacturer.

H. After erection, erector shall prime welds, abrasions, and surfaces needing touch-up.

3.3 Erection - Wall And Roofing Systems

A. Install all wall and roofing systems in accordance with manufacturer's instructions and details.

B. Exercise care when cutting prefinished material to ensure cuttings do not remain on finish surface.

C. Fasten cladding system to structural supports, using proper fasteners aligned level and plumb.

D. Set purlins and girts at right angle and bolt to appropriate clips. Attach to clips as required to satisfy design loads and as shown on drawings.

E. Place screw down roof panels at right angle to purlins and girts. Attach and plumb wall panels as shown on drawings. Maintain consistent module coverage for entire length of wall. Predrill panels. Apply manufacturer's roof panel side and end lap sealant between panel ends and side laps to provide water-tight installation.

F. Place Standing Seam Roof panels at right angle to purlins. Attach with sliding concealed clip where expansion and contraction must be accounted for. Lap panel ends the dimension as determined by manufacturer's standard h. Place end laps above purlin. Follow manufacturer's instructions for fastening and sealing end laps.

3.5 Erection - Translucent Panels

A. The translucent panels to be installed in accordance with manufacturer's instructions and details.

B. To be coordinated with installation of wall systems and related flashings and trims.

C. The installation shall be weathertight.

3.7 Tolerances

A. All work shall be performed by experienced workmen in a workmanlike manner to published tolerances.

B. Install framing in accordance with MBMA Metal Building Systems Manual, Chapter IV Common Industry Practices.

END OF SECTION

SECTION 31 00 00 – EARTHWORK

PART 1 – GENERAL

1.0 DESCRIPTION OF WORK

Extent and specifications for earthwork is shown on drawings.

1.2 QUALITY ASSURANCE

A. Comply with the requirements of the State of Maine Erosion Control Handbook, Best Management Practices (BMP's).

B. Testing and Inspection Services:

Employ, at Contractor's expense, testing laboratory to perform soil testing and inspection service for quality control testing during earthwork operations.

1.3 SUBMITTALS

A. Test Reports-Soils materials: Submit following reports directly to Owner/ Engineer from the testing services, with copy to Contractor and Owner:

Test reports on imported borrow and gravel materials.

Field density test reports.

B. Product Submittals: Furnish samples, manufacturers' product data, test reports, and materials' certifications substantiating that materials for geotextiles, silt fence and other products comply with the specified requirements.

1.4 JOB CONDITIONS

A. The project site is an active facility and the work must be coordinated to reduce interference with ongoing operations. Coordinate with the Owner and schedule work to cause the minimum practical disruption.

B. The entire site and work area is underlain with shallow bedrock. Some test pits have been made to determine the depth to bedrock, and are shown on the plans. Additional test borings, test pits or probes and other exploratory operations may be made by Contractor at no cost to Owner.

B. Existing Utilities: must be located before start of excavation. Contractor shall employ specialty testing companies such as Dig Safe to explore and locate the existing underground utilities in areas of work. Carefully hand excavate to locate and protect these utilities in the areas of project

excavations. If utilities are to remain in place, provide adequate means of support and protection during earthwork operations.

Should uncharted, or incorrectly charted, electrical lines, piping or other utilities be encountered during excavation, consult the Owner and utilities company immediately for directions. Cooperate with Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility owner.

C. Use of explosives:

Contractor is solely responsible for handling, storage, and use of explosive materials when their use is required. Refer to Section 31 33 06

D. Protection of Persons and Property: Barricade unsafe areas occurring as part of this work.

Protect adjacent trees, structures, pavements, and other facilities from damage caused by equipment operation, settlement, lateral movement, undermining, washout and other hazards created by earthwork operations.

PART 2 – PRODUCTS

Refer to the Plans for soil erosion control and earthwork materials specifications.

PART 3 – EXECUTION

Refer to the Plans for soil erosion control and earthwork execution specifications.

Refer to SECTION 31 23 06 for rock excavation requirements

DISPOSAL OF EXCESS AND WASTE MATERIALS

Unacceptable and excess excavated material shall be disposed of and leveled at a site designated by the Contractor and approved by the Owner. Dispose of trees and stumps off-site in conformance with applicable Local, State and Federal regulations.

Disposal of other materials shall be Contractor's responsibility.

END OF SECTION

SECTION 31 23 06
BLASTING- SURFACE

PART 1 – GENERAL

1.0 All labor, materials, and equipment related to the removal of rock encountered in the project are supplied by the Contractor except as noted.

1.1 SCOPE
Comply with Maine Department of Transportation Standard Specifications 2020 Section 203.042 and related sections for Rock Excavation and Blasting; except that the designated Owner's Representative shall fill the role where the specification uses the term of Resident.

The breakage of rock and hard/unyielding materials may be conducted by any means unless otherwise stated herein. If the contractor elects to use drilling and blasting for breakage or displacement of any units, Section 203.042 Rock Excavation and Blasting shall apply and covers activities associated with drilling and blasting for rock excavation at the surface. Comply with requirements and procedures for all activities relating to drilling; blasting and the transportation, storage and use of explosives; breakage and displacement of rock.

The Contractor shall use explosives with care and expertise and in such a way as to prevent injuries to persons and to avoid damage to all structures, properties, governmental, commerce and businesses, and natural resources and their habitat.

1.4 DEFINITIONS

1.4.1 Controlled Blasting

Controlled blasting refers to blasting techniques used to better distribute the explosive charge to minimize impacts such as fracturing and loosening of the rock beyond the design excavation line (overbreak). This is accomplished by using small diameter, decoupled charges in closely spaced blastholes placed on the perimeter of an excavation. Methods including but not limited to line drilling, and pre-splitting (pre-shearing) cushion blasting, and buffer zone blasting.

1.4.2 Flyrock

Flyrock is defined as any airborne rock flying more than 200 feet horizontally or 12 meters 40 feet vertically from the blast or if flyrock travels more than one-half the distance between the blast and the Contractor work limits, whichever distance is the lesser.

1.4.3 Green Concrete

Concrete that has undergone initial setting but has not hardened to design strength. Green concrete also includes cementitious grouts. Each Individual Shot Plan is required to

consider vibrations emanating from its blast reaching the location of the reported newly placed concrete to remain below allowable vibration levels depending upon the age of the concrete.

1.4.4 Line Drilling

Line drilling is defined as a controlled excavation technique consisting of a series of closely spaced holes (spacing minimum of twice the hole diameter) that are either not loaded with explosives or lightly loaded and are drilled along the excavation line. The line drill hole spacing must be no greater than twice the hole diameter.

1.4.5 Pre-Splitting

Precision pre-splitting is defined as a special pre-splitting method which utilizes closely spaced blastholes with light explosives loads to supply only sufficient energy to shear the web of rock between holes without any damage to the Presplit wall.

1.4.6 Airblast

Airblast is the overpressure waveforms that move through the air as audible and sub-audible sound waves, also called compression waves.

1.4.7 Vibrations

Vibrations are one of the three, primary adverse impacts from blasting. Vibrations are the result of various wave forms emanating from the detonation or deflagration of ignited materials from a shot pattern. Peak particle velocity (PPV) is defined as the maximum absolute value among the three ground vibration velocities measured in the vertical, longitudinal and transverse directions over the period of a record. Peak, total vector-sum particle velocity is the peak value over the full-time history of each time-unit's value of the square-root sum of the squared, component velocities. Velocity units are expressed in centimeters per second (cps)

1.5 SUBMITTALS

Submittals shall follow the requirements of Maine DOT Standard Spec Section 203.42 Including :

Blasting Plan

Survey Control Plan;
Flyrock Control

Peak particle velocity (PPV) limits to avoid damage to adjacent facilities
Test-Blast Plan;
Pre-Blast Surveys;
Public Notice Of Blasting Operations

Daily Blasting Logs
Blast Vibration Control and Monitoring reports
Post-Blast Surveys

1.6 COORDINATION

Blasting for this project will be in the vicinity of the Owner's facility, the existing adjacent highway, and related utilities. Their operation must not be impeded or delayed beyond that which has been coordinated with the Maine Department of Transportation, local government entities, regional or local utilities, and/private businesses. Include a coordination and traffic control sub-plan with the appropriate authorities that mitigates traffic delays.

Coordinate, with the Owner and other Contractors working onsite to minimize work stoppages during blasting.

1.7 LIABILITY

Compliance with provisions in the contract will not relieve the Contractor of their responsibility for any damages or injuries caused by, related to or arising out of blasting or associated blasting activities. The Contractor assumes all liability and hold and save the Government, its agents, officers, and employees harmless for any and all claims for personal injuries, property damage, or other claims arising out of or in connection with the handling of explosives or blasting under this contract.

PART 2 PRODUCTS

2.1 STORAGE AND USE OF EXPLOSIVES

Store, transport, handle, use, and otherwise secure explosives in accordance with best practices as approved by the Owner and in accordance with all Federal, State and Local laws and regulations.Comply with all special rules, regulations and ordinances that may be made by the authorities having jurisdiction, or by the Owner, regarding construction of, and storage in, magazines and precautions in handling and transporting explosives for blasting. Times and imposed restrictions concerning the use of explosives must be conducted in accordance with local, State, and Federal regulations.

2.1.2 Magazines

Explosives must be stored offsite. There must be no permanent explosive storage or overnight explosive storage on site. Procure off-site explosive storage and expect to have daily explosives deliveries to the site. Secure a permit to transport explosives in accordance with legal limits when carried on public highways.

PART 3 EXECUTION

3.1 GENERAL

Comply with Comply with Maine DOT Section 203.42 Rock Excavation and 105.2.7 Use of Explosives and all related sections.

Obtain approval, or revise for approval, of the submitted Blasting Plan.

Acquire all required permits, and

Comply with all laws, regulations, ordinances, applicable safety code requirements, and regulations relative to the transportation, handling, storage, and use of explosives and the protection of life and property.

Perform vibration and airblast monitoring at the Owner's Representative specified locations to record blast effects. The peak particle velocity must be limited to the values defined in the Blast Plan. Minimize rock over-break and blast damages beyond the design excavation line. The Owner's Representative will, always, have the authority to prohibit or halt the blasting operations, if it is apparent that the required lines and grades and stable rock slopes are not being obtained with the methods being employed.

3.2 SAFETY PROCEDURES

3.2.1 Weekly Coordination Meeting

Coordinate all blasting schedules with the Owner's Office at least one week in advance and hold a weekly blasting coordination meeting with the Resident Office. Provide an agenda for the blasting coordination meeting that lists the prior week's shots, the forecasted shot schedule and displays a scale site plan showing the locations of the scheduled shots.

3.2.2 Public Notice of Blasting Operations

At least thirty calendar days, and prior to any blasting operations, prepare and submit to the Owner a notification letter of the proposed blasting activities. The Owner will distribute copies of this notification letter by certified mail to law enforcement, local governments, public utilities, and residents and commercial interests located within one half mile of the blast site. This notification letter must contain at minimum:

a. Plan maps identifying the specific areas in which blasting will take place, and major and secondary roads, geographic features and auxiliary features;

c. Proposed duration of blasting activities, and on which days of the week and hours of the day that blasts can be expected to occur;

d. Vehicular and pedestrian traffic control measures to be taken;

e. Methods to limit access to the blasting area; and,

f. Types, patterns and duration of audible warning and all clear signals to be used before and after blasting

3.2.3 Warnings and Signals

Establish a method of warning all employees on the job site of an impending blast. The signal must consist of a five-minute warning signal to notify all in the area that a blast will be fired in five minutes. A second warning signal must be sounded one minute before the blast. After the blast is over, sound an all-clear signal, after the blast site has been inspected for misfires by the Blaster in charge to provide notification to all personnel in the area that the blasting operation is finished. No personnel other than the Blaster in charge must enter the blast area until it has been determined to be all clear.

3.2.5 Time Restrictions for Blasting

Blast only during daylight hours, one-half hour before sunrise and one-half hour after sunset, and between 7 AM and 7 PM, local time, on weekdays and only during the approved time periods each day and at the same time each day, in concert with the approved closure time for area roads. No blasting is allowed on Saturdays, Sundays, or official holidays recognized by the Federal Government or the State of Maine unless consent is granted by the State Fire Marshal. Drilling activities and blast hole loading are not time restricted,

3.2.6 Traffic Control During Blasting

During blasting operations traffic may need to be temporarily halted to allow safe execution of blasting and possible removal of rock fragments and debris. Traffic control, including such delays must be the sole responsibility of the Contractor. Traffic control must be in close coordination with the Maine Department of Transportation and the town of Richmond. Include the traffic control plans with the Blasting Plan.

3.2.7 Misfire Handling Procedures

Should a visual inspection indicate that complete detonation of all charges did not occur, only critical personnel involved in the blasting operation or excavation of the unexploded material are allowed within the established blasting area. Restrict the site until the Blaster in Charge indicates the site is safe. If the misfire poses problems that cannot be safely corrected by the Blaster in Charge , a consultant or an explosives company representative skilled in correcting misfires must be called to resolve the problem. Compliance with this or any other provision in the Contract must not relieve the Contractor of responsibility for any damages or injuries caused by, related to, or arising out of blasting or associated blasting activities. Detail the misfire procedures in the Blasting Safety Plan including the distance of the restricted area when a misfire is discovered.

END OF SECTION

APPENDIX A **PERMITS**

Maine DOT Entrance Permit

Maine State Fire Marshalls Permits

Town of Richmond Building Permit

Maine Department of Transportation

Janet T. Mills
Governor

Driveway/Entrance Permit

Bruce A. Van Note
Commissioner

Permit Number: 29290 - **Entrance ID:** 1

OWNER

Name:	**State of Maine / DACF**
Address:	**#22 State House Station**
	Augusta, ME 04333
Telephone:	**(207)287-4964**

Date Printed: **March 31, 2021**

LOCATION

Route:	**0201X, Brunswick Road**
Municipality:	**Richmond**
County:	**Sagadahoc**
Tax Map:	**R9** Lot Number: **008**
Culvert Size:	**15 inches**
Culvert Type:	**metal/plastic**
Culvert Length:	**38 feet**
Date of Permit:	**March 31, 2021**
Approved Entrance Width:	**22 feet**

In accordance with rules promulgated under 23 M.R.S.A., Chapter 13, Subchapter I, Section 704, the Maine Department of Transportation (MaineDOT) approves a permit and grants permission to perform the necessary grading to construct, in accordance with sketch or attached plan, **a Driveway** to **Boat Yard** at a point **658** feet **North** from **Beedle Road**, subject to the Chapter 299 Highway Driveway and Entrance Rules, standard conditions and special conditions (if any) listed below.

Conditions of Approval:

This Permittee acknowledges and agrees to comply with the Standard Conditions and Approval attached hereto and to any Specific Conditions of Approval shown here.

(G = GPS Location; W = Waiver; S = Special Condition)

G - THE ENTRANCE SHALL BE LOCATED AT GPS COORDINATES: 44.156711N, -69.863578W.

S - THE PERMITTEE MUST PAVE THE APRON TO APPROXIMATLEY TWO (2) FEET TO PROTECT THE EDGE OF PAVEMENT. OWNER MUST RAISE GRADE OF THE DRIVE TWELVE (12) INCHES IN THE FIRST TWENTY (20) FEET FOR SIGHT DISTANCE TO THE LEFT.

S - SHOULD USE INCREASE TO MORE THAN FIFTY (50) ONE WAY TRIPS A DAY THE PERMITTEE MUST SEEK ADDITIONAL APPROVAL FROM MaineDOT.

S - THE ENCLOSED NOTICE OF AUTHORIZATION TO PROCEED MUST BE POSTED IN A LOCATION CLEARLY VISIBLE FROM THE ROADWAY FROM AT LEAST 24 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION TO ONE MONTH AFTER THE CONCLUSION OF THE CONSTRUCTION.

S - OWNER IS RESPONSIBLE FOR ANY AND ALL CULVERT(S) AND MUST DITCH TO ENSURE WATER FLOWS ADEQUATELY THRU CULVERT(S) AND AT NO TIME ALLOW WATER TO FLOW INTO OR ONTO THE HIGHWAY.

S - PERMITTEE MUST KEEP BUSHES & ALL VEGETATION CUT BACK AND CLEARED AS GENERAL MAINTENANCE OF SIGHT DISTANCE FOR DRIVEWAYS OR ENTRANCES.

S - ENTRANCE MUST NOT BE USED TO PROVIDE ACCESS TO ANY PORTION OF A SUBDIVISION.

Approved by: _____ Date: 4/1/21

STANDARD CONDITIONS AND APPROVAL

1. Provide, erect and maintain all necessary barricades, lights, warning signs and other devices as directed by MaineDOT to properly safeguard traffic while the construction is in progress.

2. At no time cause the highway to be closed to traffic

3. Where the driveway is located within a curb, curb and gutter, and/or sidewalk section, completely remove the existing curb, curb and gutter, and/or sidewalk as may be required to create the driveway and restore drainage. All driveways abutting sidewalk sections shall meet the requirements set forth in the Americans with Disabilities Act of 1990, 42 U.S.C. Sec. 12131 et seq.

4. Obtain, have delivered to the site, and install any culverts and/or drainage structures which may be necessary for drainage, the size, type and length as called for in the permit pursuant to 23 M.R.S.A. Sec. 705. All culverts and/or drainage structures shall be new.

5. Start construction of the proposed driveway within twenty-four (24) months of the date of permit issuance and substantially complete construction of the proposed driveway within twelve months of commencement of construction.

6. Comply with all applicable federal, state and municipal regulations and ordinances.

7. Do not alter, without the express written consent of the MaineDOT, any culverts or drainage swales within the MaineDOT right of way.

8. File a copy of the approved driveway permit with the affected municipality or LURC, as appropriate within 5 business days of receiving the MaineDOT approval.

9. Construct and maintain the driveway side slopes to be no steeper than the adjacent roadway side slopes, but in no case to be steeper than 3 horizontal to 1 vertical, unless the side slope is behind existing roadway guardrail, in which case it shall be no steeper than 2 horizontal to 1 vertical.

10. Notify the MaineDOT of a proposed change of use served by the driveway when increase in traffic flow is expected to occur. This does not exempt the need for obtaining a Traffic Movement Permit (TMP) if trip generation meets or exceeds 100 passenger car equivalents (PCE) during the peak hour of the day.

11. Construct or implement and maintain erosion and sedimentation measures sufficient to protect MaineDOT facilities.

12. Driveways shall be designed such that all maneuvering and parking of any vehicles will take place outside the highway right-of-way and where vehicles will exit the premises without backing onto the highway traveled way or shoulders. All driveways will have a turnaround area to accomodate vehicles using the premises.

13. Closing any portion of a highway or roadway including lanes, shoulders, sidewalks, bike lanes, or ATV access routes is not permitted without MaineDOT approval.

FURTHER CONDITION OF THE PERMIT

The owner shall assume, the defense of, and pay all damages, fines, and penalties for which he/she shall become liable, and shall indemnify and safe harmless said Department, its representatives, agents and employees from liability, actions against all suits, claims, damages for wrongful death, personal injuries or property damage suffered by any person or association which results from the willful or negligent action or inaction of the owner/applicant (agent) and in proceedings of every kind arising out of the construction and maintenance of said entrance(s), including snow removal.

Nothing herein shall, nor is intended to, waive any defense, immunity or limitation of liability which may be available to the MaineDOT, their officers, agents or employees under the Maine Tort Claims Act or any other privileges and/or immunities provided by law. It is a further condition that the owner will agree to keep the right of way inviolate for public highway purposes and no signs (other than traffic signs and signals), posters, billboards, roadside stands, culvert end walls or private installations shall be permitted within Right of Way limits.

State of Maine
Department of Transportation
Mid Coast Region
98 State House Station, Augusta, Maine 04333
Telephone (207) 624-8200 Fax (207) 287-4753

NOTICE OF AUTHORIZATION TO PROCEED

THIS CERTIFICATE MUST BE POSTED IN A VISIBLE LOCATION AT THE DEVELOPMENT SITE

A Maine Department of Transportation, Mid Coast Region permit has been issued for this location. Descriptions of the approved development, including conditions of approval, are as specified in Department of Transportation, Mid Coast Region Permit identified below. Copies of the actual permit have been provided to the Permittee and are available for inspection at the Mid Coast Region, Augusta office.

Permit No: 29290

Issued To: State of Maine / DACF

Effective Date: March 31, 2021

Expiration for Start Up: March 2023

Authorized Activity: Driveway Boat Yard

Location: Richmond County: Sagadahoc

Route No. and Road Name: 0201X, Brunswick Road

Route Log Mile(s): 18.11 RT

Culvert Required: 15"X38' Metal or Plastic

Signed:

Brian Reeves, Region Engineer
Maine Department of Transportation, Region 2

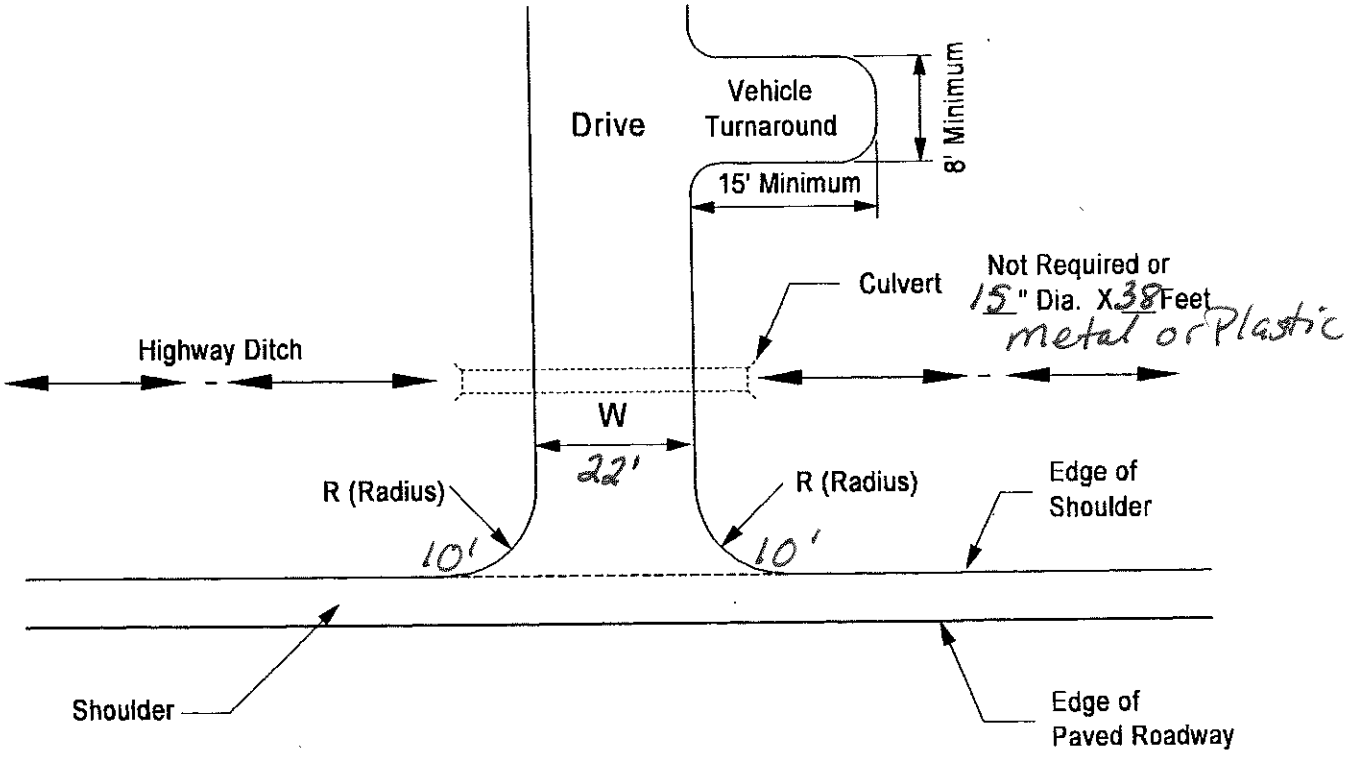
(THIS CERTIFICATE IS NOT A PERMIT)
(This notice is printed on weather proof paper)

MaineDOT

State of Maine
Department of Transportation

Entrance / Driveway Details

PLAN

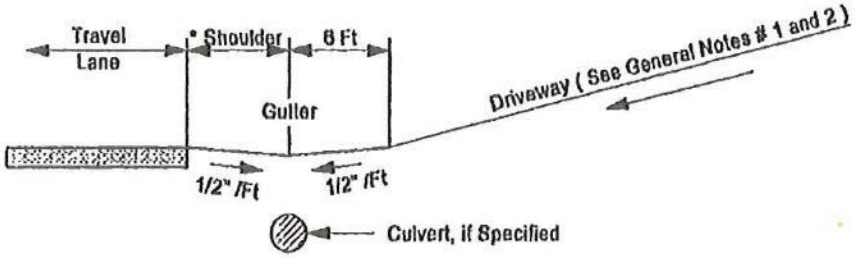


GENERAL NOTES -

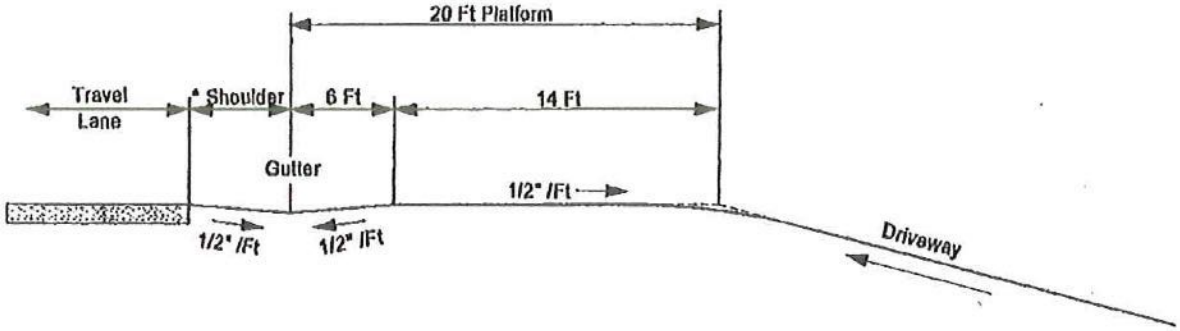
1. ALL RESIDENTAL OR COMMERCIAL DRIVES WITH 10% GRADE OR MORE SLOPING DOWN TOWARDS THE HIGHWAY SHALL BE PAVED TO THE RIGHT OF WAY LINE, AS A MINIMUM, INCUDING SHOULDER, IF GRAVEL AND HAVE DITCHES TO CONTROL RUNOFF.
2. DRIVES SLOPING TO THE HIGHWAY SHALL BE CROWNED (1/2" PER FT. MINIMUM).
3. TO THE MAXIMUM EXTENT PRACTICAL, THE ENTRANCE MUST BE CONSTRUCTED PERPENDICULAR TO THE HIGHWAY AT THE POINT OF ACCESS. EXCEPT WHERE CURBING EXISTS OR IS PROPOSED, THE MINIMUM RADIUS ON THE EDGES OF THE ENTRANCE MUST BE 10 FEET OR AS OTHERWISE REQUIRED AS SHOWN.
4. ENTRANCES/DRIVEWAYS WILL BE BUILT WITH AN ADEQUATE TURN-AROUND AREA ON SITE TO ALLOW ALL VEHICLES TO MANUVER AND PARK WITHOUT BACKING ONTO THE HIGHWAY. THIS TURN-AROUND SHALL BE AT LEAST 8 FEET WIDE BY 15 FEET LONG.
5. ENTRANCES/DRIVEWAYS AND OTHER ASSOCIATED SITE WORK WHICH DIRECTS WATER (RUNOFF) TOWARD THE HIGHWAY MUST BE CONSTRUCTED, CROWNED STABILIZED AND MAINTAINED WITH MATERIALS AND APPROPRIATE TEMPORARY/PERMANENT EROSION CONTROL MATERIALS IN ACCORDANCE WITH MDOT BEST MANAGEMENT PRACTICES.
6. THE PROFILE OF THE ENTRANCES MUST COMPLY WITH THE DETAILS SHOWN ON PAGE 2.

MaineDOT Entrance/Driveway Details, Continued

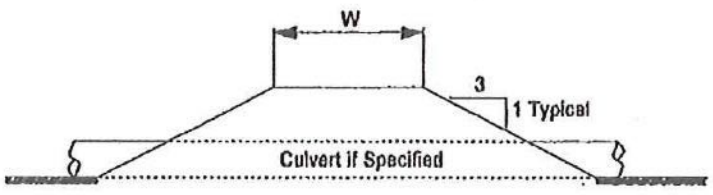
PROFILE
Details



NOTE :
Grade of Existing Shoulder Should Be Maintained To Create A Gutter With a Minimum Of Three Inches Below The Edge Of Traveled Way.
* Distance Of The Gutter From The Edge Of Traveled Way Should Be The Same As Existing Shoulder Or A Minimum Of 4 Feet.



Driveway Cross Section



STATE OF MAINE - DEPARTMENT OF PUBLIC SAFETY
OFFICE OF STATE FIRE MARSHAL
45 COMMERCE DR STE 1
AUGUSTA, ME 04333-0001

Construction Permit

No. 28280

In accordance with the provisions of M.R.S.A. Title 25, Chapter 317, Sec.317 and Title 5, Section 4594-F, permission is hereby granted to construct or alter the following referenced building according to the plans hitherto filed with the Commissioner and now approved. No departure from application form/plans shall be made without prior approval in writing. Nothing herein shall excuse the holder of this permit for failure to comply with local ordinances, zoning laws, or other pertinent legal restrictions.

Each permit issued shall be displayed at the site of construction.

Building: RICHMOND MAINTENANCE FACILITY BUILDINGS - CARPENTRY SHOP
Location: 1009 BRUNSWICK ROAD (RT 201), RICHMOND, ME 04357
Owner: STATE OF MAINE, DACF, BPL-BOATING
Owner Address: STATE OF MAINE, DACF, BPL-BOATING
22 SHS
AUGUSTA, ME 04333-0022

Occupancy Type: Industrial
Secondary Use:
No Sprinkler System
Monitored Fire Alarm System
Barrier Free
Construction Mode: New Building
Unprotected Wood Frame: Type V (000)
Final Number of Stories: 1

Permit Date: 01/20/2022 **Expiration Date:** 07/19/2022

COMMISSIONER OF PUBLIC SAFETY

Copy 1 - Owner

STATE OF MAINE - DEPARTMENT OF PUBLIC SAFETY
OFFICE OF STATE FIRE MARSHAL
45 COMMERCE DR STE 1
AUGUSTA, ME 04333-0001

Construction Permit

No. 28278

In accordance with the provisions of M.R.S.A. Title 25, Chapter 317, Sec.317 and Title 5, Section 4594-F, permission is hereby granted to construct or alter the following referenced building according to the plans hitherto filed with the Commissioner and now approved. No departure from application form/plans shall be made without prior approval in writing. Nothing herein shall excuse the holder of this permit for failure to comply with local ordinances, zoning laws, or other pertinent legal restrictions.

Each permit issued shall be displayed at the site of construction.

Building: RICHMOND MAINTENANCE FACILITY BUILDINGS-NAVIGATION AIDS BUILDING
Location: 1009 BRUNSWICK ROAD (RT 201), RICHMOND, ME 04357
Owner: STATE OF MAINE, DACF, BPL-BOATING
Owner Address: STATE OF MAINE, DACF, BPL-BOATING
22 SHS
AUGUSTA, ME 04333-0022

Occupancy Type: Storage
Secondary Use:
Use Layout: Single Use
No Sprinkler System
Monitored Fire Alarm System
Barrier Free
Construction Mode: New Building
Unprotected Wood Frame: Type V (000)
Final Number of Stories: 1

Permit Date: 01/20/2022 **Expiration Date:** 07/19/2022

COMMISSIONER OF PUBLIC SAFETY

Copy 1 - Owner

Town of Richmond Planning Board
Notice of Development Review Decision

To: State of Maine, Dept. of Agriculture, Conservation & Forestry

Date: _____

On September 28, 2021, the Planning Board acted on your application for a development review approval and made the following findings and conclusions:

Findings of Fact

1. The owner of the property is State of Maine, Dept. of Agriculture, Conservation & Foresty.

2. The property is located at 1009 Brunswick Road Richmond, Maine 04357. It is in the AG underlying zoning district and is not located in the Shoreland District. The property is not located in the Resource Protection/Stream Protection District. The property is further identified as Assessor's Tax Map R09, Lot 008-00. It contains 53 Acres.

3. The applicant is The State of Maine, who has demonstrated a legal interest in the property by providing a copy of Deed.

4. The applicant proposes to expand the existing boat storage and carpentry shop.

5. The property will be served by a private septic system.

6. The property will have individual private wells.

7. A complete application was submitted on August 8, 2021.

8. The Planning Board conducted a site walk of the property on August 16, 2021.

9. A Public Hearing was held on September 28, 2021.

Conclusions

Based on the above stated facts, the Planning Board makes the following conclusions.

Under Article 8 of the Land Use Ordinance (Development Review):

1. *Compliance with Applicable Performance Standards.* The proposed development will meet the applicable general performance standards set forth Article 5 of the Land Use Ordinance:

Art. 5, Sec. A: Accessory Buildings
(*Applicable*: NO)

Art. 5, Sec. B: Automobile Graveyards and Junkyards
(*Applicable*: NO)

Art. 5, Sec. C: Back Lots
(*Applicable*: NO)

Art. 5, Sec. D: Bed and Breakfast
(*Applicable*: NO)

Art. 5, Sec. E: Filling, Grading, Lagooning, Dredging or other Earth Moving Activity
(*Applicable*: NO)

Art. 5, Sec. F: Development in Areas of Special Flood Hazard
(*Applicable*: NO)

Art. 5, Sec. G: Glare
(*Applicable*: NO)

Art. 5, Sec. H: Hazardous, Special and Radioactive Materials
(*Applicable*: NO)

Art. 5, Sec. I: Height of Buildings
(*Applicable*: YES)
See Plans.

Art. 5, Sec. J: Demolition/Removal of Buildings of Historic Significance
(*Applicable*: NO)

Art. 5, Sec. K: Home Occupations
(*Applicable*: NO)

Art. 5, Sec. L: Hotels/Motels and Inns
(*Applicable*: NO)

Art. 5, Sec. M: Kennels and Veterinary Hospitals
(*Applicable*: NO)

Art. 5, Sec. N: Manufactured Housing – Individual Units
(*Applicable*: NO)

Art. 5, Sec. O: Mobile Home Parks
(*Applicable*: NO)

Art. 5, Sec. P: Multifamily Dwelling Units
(*Applicable*: NO)

Art. 5, Sec. Q: Noise
(*Applicable*: NO)

Art. 5, Sec. R: Off-Street Parking and Loading Requirements
(*Applicable*: YES)

The addition of a new entrance will improve the current parking and deliveries. There is an estimate of only 14 deliveries per year for the existing facility.

Art. 5, Sec. S: Private Roads
(*Applicable*: NO)

Art. 5, Sec. T: Phosphorous Control – Pleasant Pond
(*Applicable*: NO)

Art. 5, Sec. U: Refuse Disposal
(*Applicable*: NO)

Art. 5, Sec. V: Sanitary Standards
(*Applicable*: YES)

Existing.

Art. 5, Sec. W: Signs
(*Applicable*: NO)

Art. 5, Sec. X: Storage of Materials
(*Applicable*: NO)

Art. 5, Sec. Y: Wildlife Habitat
(*Applicable*: NO)

2. *Compliance with Applicable Ordinances.* The application **does** comply fully with all applicable requirements and standards of the Land Use Ordinance and any other applicable Town ordinances.

3. *Compliance with Shoreland and Resource Protection District Standards.* If applicable, the application **does** comply fully with Article 8, Section C(2) and C(3).

4. *Utilization of the Site.*

Proposed buildings and support facilities **will** be placed in those portions of the site that have the most suitable conditions for development.

The application **does** include appropriate measures for protecting environmentally sensitive areas including but not limited to wetlands, steep slopes, flood plains, significant wildlife habitats, fisheries, habitat for rare and endangered plants and animals, unique natural communities and natural areas, sand and gravel aquifers and natural drainage areas, to the maximum extent.

5. *Access to the Site.*

Vehicular access to the site **will** be on roads that have adequate capacity to accommodate the additional traffic generated by the development.

Vehicular access to the site **will** be arranged to avoid the need to use local residential streets.

6. *Access into the Development.* Vehicular access into the development **will** meet the standards set forth in Article 8, Section C(6) of the Land Use Ordinance.

7. *Access Design.* The design of driveways or streets providing access to the site **will/will not** comply with the standards contained in the Maine Department of Transportation Highway Design Manual, 1990 (as may be amended from time to time), and **will/will not** provide for safe and efficient movement of vehicles into and out of the development: N/A.

8. *Access Way Location and Spacing.*

Private access ways **will/will not** be located at least fifty (50) feet from the closest unsignalized intersection and one hundred fifty (150) feet from the closest signalized intersection as measured from the point of tangency for the corner to the point of tangency for the access way: N/A.

Public streets **will/will not** be located at least one hundred fifty (150) feet from the closest intersection as measured from the point of tangency for the corner to the point of tangency for the new street: N/A.

Private access ways into the development **will/will not** be separated by a minimum of seventy-five (75) feet: N/A.

9. *Construction Materials/Paving.* The application **will/will not** meet the standards set forth in Article 8, Section C(9) of the Land Use Ordinance: N/A.

10. *Internal Vehicular Circulation.* The layout of the site **will** provide for the safe movement of passenger, service and emergency vehicles through the site and **does** meet the standards set forth in Article 8, Section C(10) of the Land Use Ordinance.

11. *Pedestrian Circulation.* The development plan **will/will not** provide for a system of pedestrian circulation within and to the development by connecting with existing sidewalks (if they exist in the vicinity of the project) and by linking residential units with recreational and commercial facilities, other common facilities, school bus stops and existing sidewalks in the neighborhood: N/A

12. *Stormwater Management.* The development **will/will not** have adverse impacts on abutting or downstream properties and **does/does not** meet the standards set forth in Article 8, Section C(12)(a-h) of the Land Use Ordinance: N/A.

13. *Erosion Control.*

The development plan does/does not utilize existing topography and desirable natural surroundings to the fullest extent possible, and **does/does not** preserve and protect natural vegetation wherever possible: N/A.

During construction, erosion of soil and sedimentation of watercourses and water bodies **will/will not** be minimized by employing practices as set forth in Article 8, Section C(13)(a-h) of the Land Use Ordinance: N/A.

14. *Water Supply.* The development **will** be provided with a system of water supply that provides for an adequate supply of water meeting the standards of the State of Maine for drinking water, and **does** meet the standards set forth in Article 8, Section C(14) of the Land Use Ordinance.

15. *Utilities.* The development **will** be provided with electrical and telephone service adequate to meet the anticipated use of the project and **does** meet the standards set forth in Article 8, Section C(15)(a-c) of the Land Use Ordinance.

16. *Natural Features.* The development plan **will/will not** preserve the landscape in its natural state as much as is practical by minimizing tree removal, disturbance and compaction of soil, and by retaining existing vegetation as much as is practical during construction; and the application **does/does not** meet the standards set forth in Article 8, Section C(16)(a-c) of the Land Use Ordinance: N/A.

17. *Groundwater Protection.* The development and use **will not** adversely impact either the quality or quantity of groundwater available to abutting properties or public water supply systems.

18. *Water and Air Pollution.* The development **will not** result in undue water or air pollution.

19. *Exterior Lighting.* Proposed lighting **will** meet the standards set forth in Article 8, Section C(19)(i-iv) of the Land Use Ordinance.

20. *Waste Disposal.* The applicant **will** provide for the adequate disposal of all solid wastes at a licensed disposal facility having adequate capacity to accept the development's solid wastes; and, if applicable, **will** provide for the adequate disposal of all hazardous wastes at a licensed hazardous waste disposal facility under contract with the applicant.

21. *Landscaping.* The development plan **will/will not** provide for landscaping to define street edges, break up parking areas, soften the appearance of the development and protect abutting properties from adverse impacts of the development: N/A.

22. *Shoreland Relationship.* The development **will/will not** adversely affect the water quality or shoreline of any adjacent water body, and **will/will not** provide for access to any abutting navigable water bodies for the use of residents of the development: N/A.

23. *Technical and Financial Capacity.* The applicant **has** demonstrated the financial and technical capacity to carry out the project in accordance with the Land Use Ordinance and the approved plan, and **has** submitted evidence from a financial institution or other source of project funding, that demonstrates that adequate resources are available to complete the project in accordance with the approved plans.

24. *Buffering.* The application **does** meet the buffering requirements set forth in Article 8, Section C(24) of the Land Use Ordinance.

25. *Off-Street Parking.* The development plan **does** indicate that off-street parking or loading will be located in the required front setback.

26. *Historic and Archaeological Resource.* The development **is/is not** located on a site that has been identified as containing historic or archaeological resources; if yes, the development **will/will not** include appropriate measures for protecting these resources, including but not limited to, modification of the proposed design of site, timing of construction, and/or limiting extent of excavation: N/A.

Decision

Based on the above findings of fact and conclusions, the plans and supporting information submitted, testimony and evidence submitted at the public hearing, the Planning Board votes to:

___4___ approve the development plan application subject to the conditions of approval set forth below; or

___0___ deny the development plan application for the reasons set forth in the findings and conclusions.

Conditions of Approval

1. The property shown on this plan may be developed and used only as depicted on this approved plan. All elements and features of the plan and all representations made by the applicant in the record of the Planning Board proceedings are conditions of the approval. No change from the conditions of approval is permitted unless an amended plan is first submitted to and approved by the Planning Board.

2. Any proposed revision to, or expansion of, a project that received development approval in accordance with Article 8 of the Land Use Ordinance shall be required to be reviewed by the Planning Board in accordance with the requirements of Article 8.

Appeal

Any appeal from this decision must be made to the Board of Appeals within 30 days of the date of the Planning Board's written decision, in accordance with the Article 8, Section N(2) of the Land Use Ordinance.

Date of Decision: 11/09/21 By: _____
Chair

_____
Member

_____
Member

_____
Member

_____
Member

cc: Board of Selectmen
Code Enforcement Officer